Spook Hill ADMP Update

Flood Control District of Maricopa County

Appendix B
Volume 3

Level I - Hydrology

(05/11/2000 - 06/19/2000)

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Registered Professional Engineer (Civil)
CERTIFICATE NO.
28615
RICHARD L.
HINER
Date Signed 9-20-00
ARIZONA, U.S.A.

Spook Hill Area Drainage Master Plan Update

Flood Control District of Maricopa County

List of Appendices

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Phoenix, AZ 85009

Appendix A

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Appendix B

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FILE AND OPTION CROSS REFERENCE INDEX

McDowell Road alone

Option Name	Other Names Used	Description
MD1E	1A	This configuration is not modeled in HEC-1 as yet. Trapezoidal Earthen Channel with vertical drops. No storm drain system in Oak St. Two basins
MD1C	2A	This configuration is not modeled in HEC-1 as yet. Trapezoidal concrete channel with vertical drops. No basin at Oak St. & Hawes Rd. No storm drain system in Oak St. Two basins
MD2E	1B; S24CE17.dat Option 31	Based on S24CE10 a old 100Yr 24Hr Event since updated several times. Trapezoidal earthen channel with vertical drops. No storm drain in Oak St. west of Hawes Rd. Three basins
MD2C	2B	This configuration is not modeled in HEC-1 with concrete "n" values as of yet. Trapezoidal concrete channel with vertical drops. No storm drain in Oak St. west of Hawes Rd. Three basins
MD3E	1C; SPHFUAL2.dat Option 14	Based on obsolete 100Yr 24Hr event. More current Q's from combination with Pass Mtn. modeled but not applicable here. Trapezoidal earthen channel with vertical drops. Storm drain in Oak St. and McDowell Rd. Three basins
MD3C	2C	This configuration is not modeled in HEC-1 with concrete "n" values as of yet. Trapezoidal concrete channel with vertical drops. Storm drain in Oak St. & McDowell Rd. Three basins
MD4E	1D; Option 55; Option 56; S24CE46.dat S24CE47.dat	This configuration in not modeled in HEC-1 by itself; However, it was modeled with Pass Mtn. and again with Pass Mtn. & McKellips as a combination run. Trapezoidal earthen channel with verical drops. No storm drain in Oak St. west of Hawes Rd. No basin at 88th St. and McDowell. Two basins
MD4C	2D	This configuration is not modeled in HEC-1. Trapezoidal concrete channel with vertical drops. No storm drain in Oak St. west of Hawes Rd. No basin at 88th St. and McDowell. Two basins

FILE AND OPTION CROSS REFERENCE INDEX CONTINUED

McDowell Road alone

Option Name	Other Names Used	Description
MD5E	1E	This configuration is not modeled in HEC-1. Trapezoidal earthen channel with vertical drops. Storm drain in Oak St. & Hawes Rd. No basin at 88th St. and McDowell. Two basins.
MD5C	2E	This configuration is not modeled in HEC-1. Trapezoidal concrete channel with vertical drops. Storm drain in Oak St. & Hawes Rd. No basin at 88th St. and McDowell. Two basins.
MD6E	1F	This configuration is not modeled in HEC-1. Trapezoidal earthen channel with vertical drops. Southwest channel from Oak St. & Hawes Rd. to McDowell west of Sossaman. Two basins.
MD6C	2F	This configuration is not modeled in HEC-1. Trapezoidal concrete channel with vertical drops. Southwest channel from Oak St. & Hawes Rd. to McDowell west of Sossaman. Two basins.

FILE AND OPTION CROSS REFERENCE INDEX CONTINUED

McDowell Road with Pass Mountain

Option Name	Other Names Used	Description
MD2E PM4	1B; S24CE43.dat Option 52	Based on option 39 an outdated 100yr 24hr event since updated. Trapezoidal earthen channel with vertical drops. No storm drain in Oak St. west of Hawes Rd. three basins.
MD2C PM4	2B	This configuration is not modeled in HEC-1 with "n" values for concrete. Trapezoidal concrete channel with vertical drops. No storm drain in Oak St. west of Hawes Rd. Three basins
MD3E PM4	1C; S24CE45.dat Option 54	Based on option 39 an outdated 100yr 24hr event since updated. Trapezoidal earthen channel with vertical drops. Storm drain in Oak St. & McDowell Rd. Three basins.
MD3C PM4	2C	This configuration is not modeled in HEC-1 with concrete "n" values as of yet. Trapezoidal concrete channel with vertical drops. storm drain in Oak St. & McDowell Rd. Three basins.
MD4E PM4	1D; S24CE47.dat Option 56	Based on option 39 an outdated 100yr 24hr event since updated. Trapezoidal earthen channel with vertical drops. No storm drain in Oak St. west of Hawes Rd. No basin at 88th St. and McDowell. Two basins
MD4C PM4	2C	This configuration is not modeled in HEC-1 with concrete "n" values as of yet. Trapezoidal concrete channel with vertical drops. No Storm drain in Oak St. west of Hawes Rd. No basin at 88th & McDowell. Two basins.

FILE AND OPTION CROSS REFERENCE INDEX CONTINUED

McKellips Road alone

Option Name	Other Names Used	Description
MK1E	1A; S24CE24.dat Option 38	Based on option 24 an outdated 100yr 24hr event since updated. Trapezoidal earthen channel with vertical drops. Basin at the NE corner of Ellsworth Rd. & McKellips Rd. One basin.
MK1C	2A	This configuration is not modeled in HEC-1 with "n" values for concrete. Trapezoidal concrete channel with vertical drops. Basin at NE corner of Ellsworth & McKellips Rd. One basin.
MK2E	1B; S24CE15.dat Option 29	Based on option 24 an outdated 100yr 24hr event since updated. Trapezoidal earthen channel with vertical drops. Basins at Hawes & Ellsworth Rd. Two basins.
MK2C	2B	This configuration is not modeled in HEC-1 with concrete "n" values as of yet. Trapezoidal concrete channel with vertical drops. Basins at Hawes & Ellsworth Rd. Two basins.
MK3E	1C; S24CE23.dat Option 37	Based on option 24 an outdated 100yr 24hr event since updated. Trapezoidal earthen channel with vertical drops. Basin at Hawes Rd. One basin.
MK3C	2C	This configuration is not modeled in HEC-1 as of yet. Trapezoidal concrete channel with vertical drops. Basin at Hawes Rd. One basin.

FILE AND OPTION CROSS REFERENCE INDEX CONTINUED

McKellips Road with Pass Mountain

Option Name	Other Names Used	Description
MK2E PM4	1B; S24CE44.dat Option 53	Based on option 39 an outdated 100yr 24hr event since updated. Trapezoidal earthen channel with vertical drops. Basins at Hawes & Ellsworth Rd. Two basins.
MK2E PM4	2B	This configuration is not modeled in HEC-1 with "n" values for concrete. Trapezoidal concrete channel with vertical drops. Basins at Hawes & Ellsworth Rd. Two basins.
MK3E PM4	1B; S24CE46.dat Option 55	Based on option 39 an outdated 100yr 24hr event since updated. Trapezoidal earthen channel with vertical drops. Basins at Hawes & Ellsworth Rd. No channel across state land. Two basins.
MK3E PM4	2B	This configuration is not modeled in HEC-1 with concrete "n" values as of yet. Trapezoidal concrete channel with vertical drops. Basins at Hawes & Ellsworth Rd. No channel across state land. Two basins.

FILE AND OPTION CROSS REFERENCE INDEX CONTINUED

Culver Street alone

Option Name	Other Names Used	Description
C1E	1A; S24CE16.dat Option 30	Based on option 24 an outdated 100yr 24hr event since updated. Trapezoidal earthen channel with vertical drops. Basin at Hawes Rd. One basin.
C1C	2A	This configuration is not modeled in HEC-1 with "n" values for concrete. Trapezoidal concrete channel with vertical drops. Basin at Hawes Rd. One basin.
C1P	1B	This configuration is not modeled in HEC-1 with "n" values for pipe. Concrete Pipe along entire alignment. Basin at Hawes road. One basin.

FILE AND OPTION CROSS REFERENCE INDEX CONTINUED

Pass Mountain Diversion alone

Option Name	Other Names Used	Description
PM1	PM1; S24CE11.dat Option 25	Based on option 24 an outdated 100yr 24hr event. Earthen channel extending NW of current Pass Mtn. diversion. Additional levee placed upstream in sub-basin 350 to direct flow towards Pass Mtn. diversion.
PM2	PM2; S24CE20.dat Option 34	Based on option 24 an outdated 100yr 24hr event, and PM1 noted above. The removal of the levee placed upstream in sub-basin 350 is the only difference.
PM3	PM3; S24CE21.dat Option 35	Based on option 24 an outdated 100yr 24hr event, and PM2 noted above. Additional earthen channel added extending NW upstream into what was sub-basin 355.
PM4	PM4; S24CE22.dat Option 36; Pass Mountain full diversion.	Based on option 24 an outdated 100yr 24hr event, and PM3 noted above. Additional earthen channel added extending NW upstream into what was sub-basin 370. More current Q's are available in combination model runs mentioned earlier: options 49 - 56 being most current based on option 39 a recently outdated 100yr 24hr storm event model.

INDEX OF HEC-1 OPTIONS

1. Base 24-hr, 100-yr existing condition storm events:

   Index Numbers: 3, 4, 5, 6, 7 are obsolete and modeled prior to county comments. 15 is an update of previous runs to reflect county comments dated 3-30-00. 24 includes all previous runs & updates with additional sub-basin re-delineation. 39 includes all previous model runs. The updates to this model are re-alignment of sub-basins 385 (reduced) & 415 (enlarged), and utilization of split flow analysis results obtained for sub-basins 350 & 385. Options 58 through 60 are variations of 57 which have all of the d-theta values for all sub-basins changed to "dry", "normal", or "wet" respectively.

   Index Number: 57 is the current 100-yr 24-hr event model updated using: 1)No. of hydrograph ordinates increased to 2000; 2) SE, SV and SQ cards for three FRS's updated; 3) Sediment volumes subtracted from storage volumes; 4) Old elevation datum adjusted to NAVD 1988

2. Base 6-hr, 100-yr existing condition storm events:

   Index Numbers: 1, 2 are obsolete and modeled prior to county comments. 16 is an update of previous runs to reflect county comments dated 3-30-00. 27 was an update based on sub-basin redelineation but is no longer current.

   Index Number: 42 is the current 6-hr 100-yr existing condition model and includes all previous runs & updates with additional sub-basin re-delineation. 385 (Reduced) & 415 (Enlarged).

3. McDowell Road Options:

   Index Numbers: 13, 14 are based on 4 an outdated 24-hr, 100-Yr existing condition model since updated several times. 31 utilizes 24, which is no longer the current 24-hr 100-yr existing condition model along with additional collector channels in that area.

   Index Number: 40 and 41 are the latest Mcdowell options utilizing 40, the current 100yr 24hr storm, and RGRCP along certain routings.

INDEX OF HEC-1 OPTIONS

4. McKellips Road Option:

Index Number:	29 is not the current model for McKellips Rd and utilizes 24 which is not the current 24hr 100yr existing condition model.
Index Number:	37 and 38 are the current models for Mckellips Rd. and utilize 24 which is not the current 100-yr 24-hr model.

5. Culver Street Option:

Index Number:	30 is the current model for Culver St. and utilizes 24, which is the current 24-hr 100-yr existing condition model.

6. Pass Mountain Diversion Options:

Index Numbers:	18, 19 are based on 4 an outdated 24-hr, 100- yr existing condition model since updated. 20, 21, 22, 23 are based on 15 an outdated 24-hr 100-yr existing condition model since updated. 25, 34, 35, 36 are based on 24 the most current 24-hr 100-yr existing condition model.
Index Number:	28 is referred to as the current Pass Mountain Option utilizing 24 and 25 with additional levee and further division of sub-basins.

7. Eliminate Spook Hill FRS Options:

Index Numbers:	8, 9, 10, 11, 12 are obsolete and based on 4 an outdated 24-hr 100-yr existing condition model.
Index Number:	17 is the current Eliminate Spook Hill FRS Option utilizing 15 which is an outdated 24-hr 100-yr run that only reflects County comments dated 3-20-00. 17 has not been updated with the current 24-hr 100-yr run.

8. Combinations of various Options listed above:

Index Numbers:	48 through 56 utilize 39 the current 100-yr 24-hr model and are various combinations of Pass Mountain, Mcdowell Rd., and Mckellips Rd. options Options 26, 32, and 33 utilize 24 for their 100yr 24hr storm. Option 24 is no longer the current 100yr 24hr storm.

9. 24-hour, 10-year existing condition storm event

Index Number:	43 utilizes current sub-basin alignment

INDEX OF HEC-1 OPTIONS

10. 6-hour, 10-year existing condition storm event
    Index Number: 44 utilizes current sub-basin alignment

11. 24-hour, 100-year future conditions storm event.
    Index Number: 45 utilizes known future land use and development to reflect built out conditions.

12. 6-hour, 100-year future conditions storm event.
    Index Number: 46 utilizes known future land use and development to reflect built out conditions.

13. 24-hour, 100-year future conditions storm event.
    Index Number: 47 utilizes dummy detention basins within all sub-basins affected by future development.

SPOOK HILL ADMP FILE INDEX

File Directory Location: W:\1999Projects\99989-Spook Hill ADMP Update\Hydrology

	Date	File Name	Description
24.	5/12/00	S24CE10.DAT	HEC-1 Existing Conditions 100-Year, 24-Hour Storm
25.	5/12/00	S24CE11.DAT	HEC-1 Existing Condition 100-Year, 24-Hour Storm Levee added to Sub-Basin 350 diverting entire flow to Pass Mountain Diversion. Pass Mountain Diversion extended North-West creating Sub-Basins 295, 300 & 305 from 300. Offline Basins added to Sub-Basins 300 & 305.
26.	5/15/00	S24CE12.DAT	HEC-1Existing Condition 100-Year, 24-Hour Storm. Maintain Apache & Signal Butte FRS while eliminating Spook Hill FRS. Use an improved channel along McDowell with offline basins added to Sub-Basins 380, and 415; Max Storage of 60 AC-FT @ 3' Depth. Improved channel used heading west along Mclellan Rd. on the North side of Road. Pass Mountain Diversion alternative utilized in #25 above added as well.
27.	5/15/00	S6CE13.DAT	HEC-1 Existing Condition 100-Year, 6-Hour Storm
28.	5/17/00	S24CE14.DAT	HEC-1 Existing Condition 100-Year, 24-Hour Storm. Update of Pass Mountain Diversion. Additional diversions placed upstream creating new Sub-Basin boundaries: 383, 393, 365, & 353 from 385, 395, 370, & 355. Additional flow captured and routed to Pass Mountain Diversion and ultimately into Signal Butte FRS.
29.	5/24/00	S24CE15.DAT	HEC-1 Existing Condition 100-Year, 24-Hour Storm. Implementation of McKellips Road Channel extending from just East of Ellsworth Road to the Spook Hill FRS, and detention basins at the Northeast corners of the McKellips/Hawes and McKellips/Ellsworth intersections. The original sub-basins 340, 360, 380, and 400 are subdivided into 340, 341,342, 360, 361, 380, 381, 400, and 401.
30.	5/25/00	S24CE16.DAT	HEC-1 Existing Condition 100-Year, 24-Hour Storm. Model update based on improved channel along Culver street extending from Spook Hill FRS upstream along Culver street then turning North and ending at McDowell road near Ravens Roost. This will sub-divide existing Sub-Basins 380, 400, and 420 creating additional Sub-Basins 378, 398, 405, and 410.
31.	6/02/00	S24CE17.DAT	HEC-1 Existing condition 100-Year, 24-Hour Storm. Model update based on improved natural channels along Oak St. between Sossaman & Thunder Mtn., along McDowell between Power & Ellsworth; Along Hawes north of Oak St.; and along Sossaman between McDowell and Oak St. This will generate new Sub-Basins 410, 411, and 413 from Sub-Basins 415 and 420. Detention Basins will be added to Sub-Basins 370 & 395, 385 & 411, and 455.

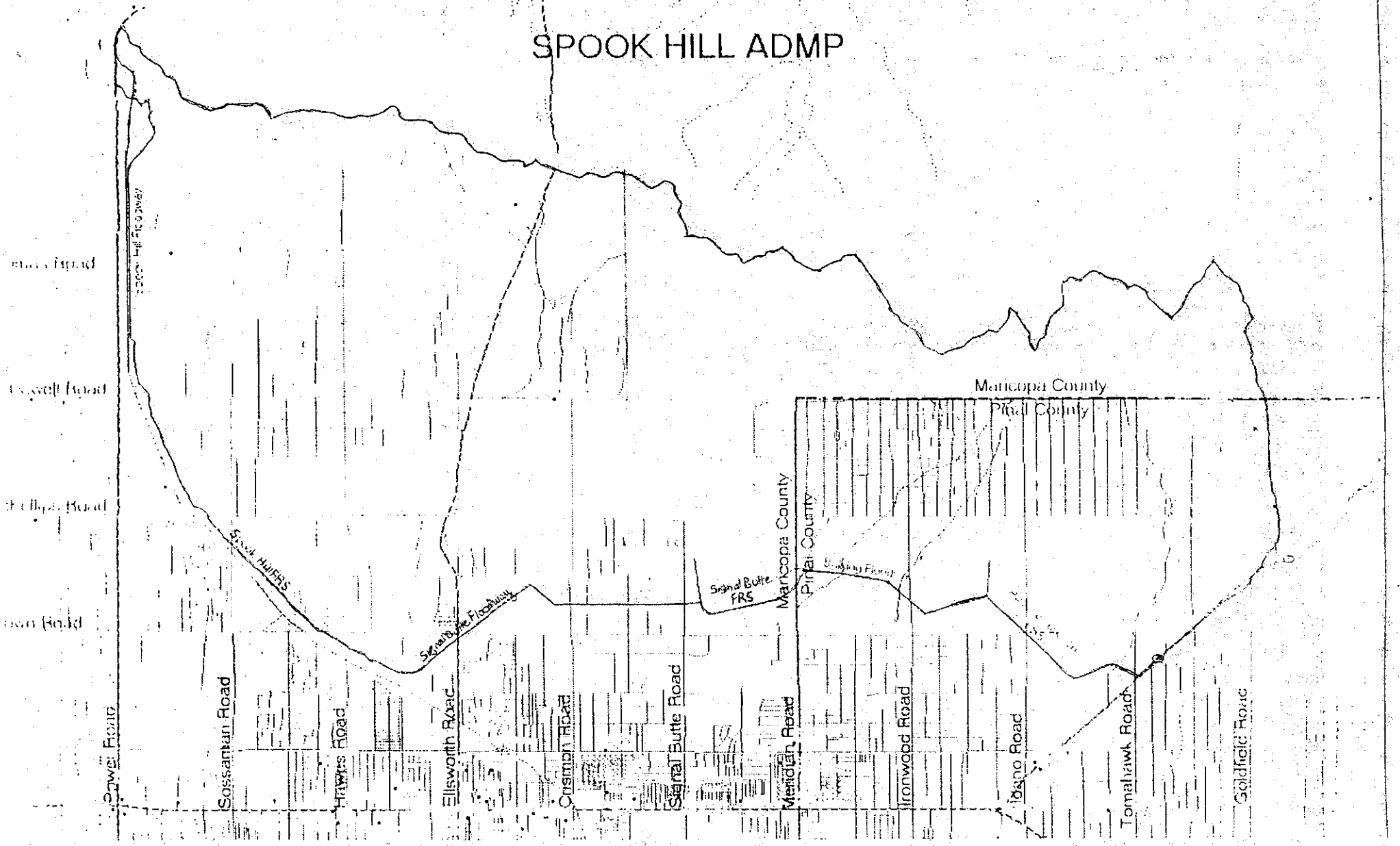
32.	6/06/00	S24CE18.DAT	HEC-1 Existing condition 100-Year, 24-Hour Storm. Model update based on combination of two previous alternatives: #28 (Pass Mtn. Diversion) and #31 (3-basin/Mcdowell) above.
33.	6/07/00	S24CE19.DAT	HEC-1 Existing Condition 100-Year, 24-Hour Storm. Model update based on combination of previous alternatives: #28 (Pass Mtn. Diversion), #29 (Mckellips Rd. channel), and #31 (3-basin/McDowell Rd.) Implementation of McKellips Road Channel extending from just East of Ellsworth Road to the Spook Hill FRS, and detention basins at the Northeast corners of the McKellips/Hawes and McKellips/Ellsworth intersections. The original sub-basins 340, 360, 380, and 400 are subdivided into 340, 341,342, 360, 361, 380, 381, 400, and 401. HEC-1 Existing Condition 100-Year, 24-Hour Storm. Update of Pass Mountain Diversion. Additional diversions placed upstream creating new Sub-Basin boundaries: 383, 393, 365, & 353 from 385, 395, 370, & 355. Additional flow captured and routed to Pass Mountain Diversion and ultimately into Signal Butte FRS. HEC-1 Existing condition 100-Year, 24-Hour Storm. Model update based on improved natural channels along Oak St. between Hawes & Thunder Mtn., along McDowell between Power & Ellsworth; Along Hawes north of Oak St to McDowell Rd. This will generate new Sub-Basins 410, 411, and 413 from Sub-Basins 415 and 420. Detention Basins will be added to Sub-Basins 370 & 395, 385 & 411, and 455.
34.	6/14/00	S24CE20.DAT	HEC-1 Existing Condition 100-Year, 24-Hour Storm S24CE10.DAT utilized To update Pass Mountain Diversion option. Pass Mountain Diversion extended North-West creating Sub-Basin 295, 300, and 305 from Sub-Basin 300. Offline basins added to sub-basin 300 and 305.
35.	6/14/00	S24CE21.DAT	HEC-1 Existing Condition 100-Year, 24-Hour Storm. Model update based on #34; with additional diversion added creating sub-basins 353 and 355 from sub-basin 355.
36.	6/14/00	S24CE22.DAT	HEC-1 Existing Condition 100-Year, 24-Hour Storm. Model update based on #35; with additional diversion added north-west of Pass Mountain Diversion creating sub-basins 365 and 370 from sub-basin 370.
37.	6/14/00	S24CE23.DAT	HEC-1 Existing Condition 100-year, 24-hour storm. Model update based on Mckellips interceptor channel extending from just east of Ellsworth to Spook Hill FRS. Detention basins located at intersection of Mckellips & Hawes. Original sub-basins: 340, 360, 380, and 400 are subdivided into 340, 341, 342, 360, 361, 380, 381, 400, and 401.
38.	6/14/00	S24CE24.DAT	HEC-1 Existing Condition 100-year, 24-hour storm. Model update based on Mckellips interceptor channel extending from just east of Ellsworth to Spook Hill FRS. Detention basins located at intersection of Mckellips & Ellsworth Original sub-basins: 340, 360, 380, and 400 are subdivided into 340, 341, 342, 360, 361, 380, 381, 400, and 401.

HEC-1 alternatives within this book utilize updated 100-Year, 24-Hour Storm. The base model was updated to reflect re-delineation of Sub-Basins near the Pass Mountain Diversion. The new Sub-Basin boundaries better reflect the concentration points at the Pass Mountain Diversion.

New File Structure: S24CE0.DAT

S	= Project Name Spook Hill
24	= Either 24 or 6. This indicates Storm duration evaluated 6-hr or 24-hr.
C	= Century indicating 100-year storm event used in evaluation of model.
E	= Existing condition model.
0	= This is the number of the alternative being analyzed. This number can be any two digit sequential number, with 0, 10, 20, etc. generally reserved for updates to the base 24-hr 100-Year storm event.

SPOOK HILL ADMP



HEC-1 Existing Conditions 100-Year, 24hr Storm

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1*************************************                    *************************************
 *                                   *                    *                                   *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *                    *   U.S. ARMY CORPS OF ENGINEERS    *
 *              JUN   1998           *                    *   HYDROLOGIC ENGINEERING CENTER   *
 *            VERSION 4.1            *                    *         609 SECOND STREET         *
 *                                   *                    *      DAVIS, CALIFORNIA 95616      *
 *  RUN DATE   18MAY00  TIME  11:45:59  *                    *         (916) 756-1104          *
 *                                   *                    *                                   *
*************************************                    *************************************

X     X  XXXXXXX   XXXXX           X
X     X  X        X     X         XX
X     X  X        X                X
XXXXXXX  XXXX     X        XXXXX   X
X     X  X        X                X
X     X  X        X     X          X
X     X  XXXXXXX   XXXXX          XXX

THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL   LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

1                                          HEC-1 INPUT                                                    PAGE  1

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  1           ID   EXISTING LAND USE CALCULATIONS WERE BASED ON 1 YR. FROM 11/5/99
  2           ID   FOR LAS SENDAS       AND LANDISCOR JAN.1999 AERIAL PHOTOGPRAPHS
  3           ID
  4           ID   ALL DAMS WERE ANALYZED WITH NO STORAGE BELOW PRINCIPLE SPILLWAY ELEVATIONS
  5           ID
  6           ID   A CONSERVATIVE ESTIMATE WAS USED FOR THE LOCATION OF THE CENTROID FOR
  7           ID   PRECIPITATION VALUES
  8           ID
  9           ID   ALL CHANNEL ROUTING INFORMATION WAS OBTAINED FROM MCFCD SPOOK HILL   SIGNAL
 10           ID   BUTTE        AND BULLDOG FLOODWAY PLANS
 11           ID
 12           ID   ANALYSIS PREPARED BY WOOD/PATEL - JCD; 11/05/99; FILE:  SPHEX1.DAT
 13           ID
 14           ID   MODEL UPDATE WITH LAS SENDAS WEST BASINS & ALL RETENTION BASINS
 15           ID   DRAINING BACK INTO THE SYSTEM WITHIN 36 HOURS
 16           ID   BY: JCD; 1/4/2000            FILE: SPHEX1RV.DAT
 17           ID
 18           ID   CURRENT MODEL UPDATED WITH ALL PREVIOUS MODEL RUNS
 19           ID   NOTED ABOVE, AND COUNTY COMMENTS DATED MARCH 20, 2000
 20           ID   BY: MW; 04/06/2000       FILE:  S24CE0.DAT
 21           ID
 22           ID   MODEL UPDATED TO ALIGN SUB-BASIN CONCENTRATION POINTS WITH PASS MOUNTAIN
 23           ID   DIVERSION.  NEW BOUNDARIES CREATED FOR SUB-BASINS 240, 220, & 200
 24           ID   ANALYSIS PERFORMED BY WOOD/PATEL; MW;  ON 05/12/2000;  FILE: S24CE10.DAT
 25           ID
 26           ID   DDM MCUHP1 SPOOK HILL AMDP - EXISTING CONDITIONS MODEL - 100YR, 24HR STORM
              *DIAGRAM
 27           IT       2                    1500
 28           IO       3
 29           IN      15
 30           JD    3.81    0.01
 31           PC    .000    .002    .005    .008    .011    .014    .017    .020    .023    .026
 32           PC    .029    .032    .035    .038    .041    .044    .048    .052    .056    .060
 33           PC    .064    .068    .072    .076    .080    .085    .090    .095    .100    .105
 34           PC    .110    .115    .120    .126    .133    .140    .147    .155    .163    .172
 35           PC    .181    .191    .203    .218    .236    .257    .283    .387    .663    .707
 36           PC    .735    .758    .776    .791    .804    .815    .825    .834    .842    .849
 37           PC    .856    .863    .869    .875    .881    .887    .893    .898    .903    .908
 38           PC    .913    .918    .922    .926    .930    .934    .938    .942    .946    .950
 39           PC    .953    .956    .959    .962    .965    .968    .971    .974    .977    .980
 40           PC    .983    .986    .989    .992    .995    .998   1.000
 41           JD    3.58   10.00
 42           JD    3.43   30.00
 43           JD    3.28   60.00
 44           JD    3.22   90.00
 45           JD    3.18  120.00
 46           JD    3.14  150.00
 47           JD    3.05  300.00
 48           JD    2.97  500.00
              * DDM   ***** Updated *****
1                                          HEC-1 INPUT                                                    PAGE  2

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 49           KK      10
 50           KM   SUB-BASIN 10
 51           KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 52           KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
 53           KM     L = 2.00  Kb = .044  Adj. Slope =  165.0
 54           BA    .702
 55           LG    .350    .320   7.600    .090  15.000
 56           UC    .421    .302
 57           UA       0       3       5       8      12      20      43      75      90      96
 58           UA     100
              * DDM   ***** Preserved *****

 59           KK     R10
 60           KM   ROUTING OF FLOW FROM SUB-BASIN 10 TO R12
 61           RS       4    FLOW      -1
 62           RC    .045     .03    .045    8700    .021
 63           RX       0       1       2      17      27      42      43      44
 64           RY       5       5       5       0       0       5       5       5
              * DDM   ***** Preserved *****
```

```
 65          KK     R12
 66          KM   ROUTING OF FLOW FROM R12 TO SUB-BASIN 20
 67          RS       6    FLOW      -1
 68          RC    .045     .03    .045    4500     .01
 69          RX       0       1      30    37.5    57.5      65      94      95
 70          RY       3     2.5     2.5       0       0     2.5     2.5       3
             * DDM   ***** Updated *****

 71          KK      20
 72          KM   SUB-BASIN 20
 73          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 74          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
 75          KM     L = 2.50  Kb = .041  Adj. Slope =   88.0
 76          BA   1.120
 77          LG    .350    .390   5.800    .190   1.000
 78          UC    .658    .454
 79          UA       0       3       5       8      12      20      43      75      90      96
 80          UA     100
             * DDM   ***** Preserved *****

 81          KK     C20
 82          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 10 AND 20
 83          HC       2
             * DDM   ***** Updated *****

 84          KK      40
 85          KM   SUB-BASIN 40
 86          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 87          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
 88          KM     L = 3.08  Kb = .036  Adj. Slope =  189.0
 89          BA   2.233
 90          LG    .340    .340   4.900    .280   5.000
 91          UC    .496    .264
 92          UA       0       3       5       8      12      20      43      75      90      96
1                                        HEC-1 INPUT                                          PAGE  3

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 93          UA     100
             * DDM   ***** Updated *****

 94          KK      60
 95          KM   SUB-BASIN 60
 96          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 97          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .990
 98          KM     L = 4.19  Kb = .038  Adj. Slope =  209.6
 99          BA   1.746
100          LG    .330    .350   5.800    .190   9.000
101          UC    .596    .477
102          UA       0       3       5       8      12      20      43      75      90      96
103          UA     100
             * DDM   ***** Preserved *****

104          KK     60C
105          KM   HYDROGRAPH COMBINATION FOR APACHE JUNCTION FRS
             *      1       2
106          HC       3
             * DDM   ***** Preserved *****

107          KK    SR60
108          KM   APACHE JUNCTION FRS AS-BUILT PLANS 12/19/88
109          KM   OUTLET PIPE=30"RCP; L=136.6'; INLET INV.=1783.5; OUTLET INV.=1783
110          KM   EMERGENCY SPILLWAY ELEV.=1799.77'; PRINCIPLE SPILLWAY ELEV.=1793.5'
111          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 100 ACRE-FEET
112          RS       1    STOR       0
113          SV       0       1     100     200     300     400
114          SQ       0      71      81      87    91.5      94
115          SE    83.5    93.5      96    97.7      99   99.77
             * DDM   ***** Preserved *****

116          KK     R60
117          KM        ROUTE FLOW THROUGH BULLDOG FLOODWAY FROM APACHE JUNCTION FRS
118          RS       1    FLOW      -1
119          RC    .016    .016    .016    2850    .012
120          RX       0       1       2     2.1     5.6     5.7       6       7
121          RY     3.5     3.5     3.5       0       0     3.5     3.5     3.5
             * DDM   ***** Preserved *****

122          KK    RR60
123          KM   ROUTE FLOW FROM BULLDOG FLOODWAY TO SUB-BASIN 80
124          RS       4    FLOW      -1
125          RC    .016    .016    .016    3500    .005
126          RX       0       1       2     2.1     7.1     7.2       8       9
127          RY     3.5     3.5     3.5       0       0     3.5     3.5     3.5
             * DDM   ***** Updated *****

128          KK      80
129          KM   SUB-BASIN 80
130          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
131          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .991
132          KM     L = 2.69  Kb = .039  Adj. Slope =  229.8
133          BA   1.475
134          LG    .330    .330   5.600    .210   4.000
1                                        HEC-1 INPUT                                          PAGE  4

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

135          UC    .433    .259
136          UA       0       3       5       8      12      20      43      75      90      96
137          UA     100
             * DDM   ***** Preserved *****

138          KK     80C
139          KM   HYDROGRAPH COMBINATION FOR FLOW FROM APACHE JUNCTION FRS & SUB-BASIN 80
140          HC       2   1.475
             * DDM   ***** Preserved *****

141          KK     R80
142          KM   ROUTE FLOW FROM SUB-BASIN 80 TO SUB-BASIN 100
143          RS       1    FLOW      -1
144          RC    .025    .016    .025    1200    .003
145          RX       0       2       6     6.1    41.1    41.2    56.2    58.2
146          RY     5.5     4.5     4.5       0       0     4.5     4.5     5.5
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            * DDM   ***** Updated *****

147         KK     100
148         KM   SUB-BASIN 100
149         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
150         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
151         KM     L = 1.94  Kb = .046  Adj. Slope =  108.0
152         BA    .484
153         LG    .320    .290   5.100    .260   3.000
154         UC    .533    .473
155         UA       0       5      16      30      65      77      84      90      94      97
156         UA     100
            * DDM   ***** Preserved *****

157         KK    100C
158         KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 80 & 100
159         HC       2
            * DDM   ***** Preserved *****

160         KK    R100
161         KM   ROUTE FLOW FROM SUB-BASIN 100 TO SUB-BASIN 120
162         RS       1    FLOW      -1
163         RC    .016    .016    .016     940    .005
164         RX       0       1       2     2.1    52.1    52.2      53      54
165         RY     4.5     4.5     4.5       0       0     4.5     4.5     4.5
            * DDM   ***** Updated *****

166         KK     120
167         KM   SUB-BASIN 120
168         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
169         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
170         KM     L = 3.07  Kb = .037  Adj. Slope =  239.0
171         BA   2.202
172         LG    .330    .280   6.800    .130  11.000
173         UC    .429    .226
174         UA       0       3       5       8      12      20      43      75      90      96
175         UA     100
            * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE  5

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

176         KK    120C
177         KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 100 & 120
178         HC       2
            * DDM   ***** Preserved *****

179         KK    R120
180         KM   ROUTE FLOW FROM SUB-BASIN 120 TO SIGNAL BUTTE FRS
181         RS       1    FLOW      -1
182         RC    .025    .016    .025    2100    .005
183         RX       0       6      10    10.1    60.1    60.2    74.2    80.2
184         RY       8       5       5       0       0       5       5       8
            * DDM   ***** Updated *****

185         KK     140
186         KM   SUB-BASIN 140
187         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
188         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
189         KM     L = 1.61  Kb = .044  Adj. Slope =  149.0
190         BA    .598
191         LG    .310    .280   4.200    .440   5.000
192         UC    .421    .278
193         UA       0       5      16      30      65      77      84      90      94      97
194         UA     100
            * DDM   ***** Updated *****

195         KK     150
196         KM   SUB-BASIN 150
197         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
198         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
199         KM     L = 1.50  Kb = .047  Adj. Slope =  315.0
200         BA    .408
201         LG    .350    .360   5.100    .260   7.000
202         UC   1.579   1.417
203         UA       0       3       5       8      12      20      43      75      90      96
204         UA     100
            * DDM   ***** Preserved *****

205         KK    R150
206         KM   ROUTING OF FLOW FROM SUB-BASIN 150 TO R152
207         RS       3    FLOW      -1
208         RC    .045     .04    .045    3100    .032
209         RX       0       1       2      23      33      54      55      56
210         RY       7       7       7       0       0       7       7       7
            * DDM   ***** Preserved *****

211         KK    R152
212         KM   ROUTING OF FLOW FROM R152 TO SUB-BASIN 160
213         RS       6    FLOW      -1
214         RC    .045     .03    .045    5900    .019
215         RX       0       1       2       8      33      39      40      41
216         RY       2       2       2       0       0       2       2       2
            * DDM   ***** Updated *****
1                                        HEC-1 INPUT                                          PAGE  6

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

217         KK     160
218         KM   SUB-BASIN 160
219         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
220         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
221         KM     L = 2.10  Kb = .047  Adj. Slope =  129.0
222         BA    .369
223         LG    .340    .330   4.150    .440   1.000
224         UC    .587    .655
225         UA       0       3       5       8      12      20      43      75      90      96
226         UA     100
            * DDM   ***** Updated *****

227         KK     180
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228          KM   SUB-BASIN 180
229          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
230          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
231          KM     L = 2.42  Kb = .041  Adj. Slope =  140.0
232          BA   1.000
233          LG    .350    .350   4.150    .430    .000
234          UC    .571    .403
235          UA       0       3       5       8      12      20      43      75      90      96
236          UA     100
             * DDM   ***** Preserved *****

237          KK    180C
238          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
239          HC       5
             * DDM   ***** Updated *****

240          KK     210
241          KM   SUB-BASIN 210
242          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
243          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
244          KM     L = 1.84  Kb = .045  Adj. Slope =  315.0
245          BA    .583
246          LG    .350    .350   7.000    .120   5.000
247          UC    .321    .232
248          UA       0       3       5       8      12      20      43      75      90      96
249          UA     100
             * DDM   ***** Preserved *****

250          KK    R210
251          KM   ROUTING OF FLOW FROM SUB-BASIN 210 TO SUB-BASIN 220
252          RS       2    FLOW      -1
253          RC    .045     .03    .045    5100    .022
254          RX       0       1       2      14      34      46      47      48
255          RY       4       4       4       0       0       4       4       4
             * DDM   ***** Updated *****
1                                    HEC-1 INPUT                                          PAGE  7

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

256          KK     240
257          KM   SUB-BASIN 240
258          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
259          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .992
260          KM     L = 3.50  Kb = .039  Adj. Slope =  298.6
261          BA   1.398
262          LG    .350    .370   5.200    .240   2.000
263          UC    .471    .361
264          UA       0       3       5       8      12      20      43      75      90      96
265          UA     100
             * DDM   ***** Preserved *****

266          KK    240C
267          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
268          HC       2
             * DDM   ***** Preserved *****

269          KK   SR240
270          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
271          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
272          RS       1    STOR       0
273          SA    1.38    14.2    36.5
274          SE     1.7       5      11
275          SS       5      42       3     1.5
             * DDM   ***** Updated *****

276          KK     220
277          KM   SUB-BASIN 220
278          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
279          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
280          KM     L = 1.92  Kb = .043  Adj. Slope =  315.0
281          BA    .725
282          LG    .350    .350   7.000    .120   4.000
283          UC    .317    .209
284          UA       0       3       5       8      12      20      43      75      90      96
285          UA     100
             * DDM   ***** Preserved *****

286          KK    220C
287          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
288          HC       2
             * DDM   ***** Preserved *****

289          KK   SR220
290          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
291          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
292          RS       1    STOR       0
293          SA     .78     4.1    13.7
294          SE       1       3      10
295          SS       3      65       3     1.5
             * DDM   ***** Updated *****
1                                    HEC-1 INPUT                                          PAGE  8

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

296          KK     190
297          KM   SUB-BASIN 190
298          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
299          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
300          KM     L = 1.91  Kb = .042  Adj. Slope =  315.0
301          BA    .918
302          LG    .350    .390   5.800    .190   8.000
303          UC    .321    .185
304          UA       0       3       5       8      12      20      43      75      90      96
305          UA     100
             * DDM   ***** Preserved *****

306          KK    R190
307          KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
308          RS       2    FLOW      -1
309          RC    .045     .03    .045    4740     .03
310          RX       0       1       2      17      37      52      53      54
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311          RY       5       5       5       0       0       5       5       5
             * DDM   ***** Preserved *****

312          KK    R192
313          KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
314          RS       2    FLOW      -1
315          RC    .045    .035    .045    2200    .018
316          RX       0       1      50      59      79      88     137     138
317          RY     3.5       3       3       0       0       3       3     3.5
             * DDM   ***** Updated *****

318          KK     200
319          KM   SUB-BASIN 200
320          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
321          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
322          KM     L = 1.58  Kb = .045  Adj. Slope =  305.6
323          BA    .535
324          LG    .350    .390   5.700    .200  10.000
325          UC    .300    .200
326          UA       0       3       5       8      12      20      43      75      90      96
327          UA     100
             * DDM   ***** Preserved *****

328          KK    200C
329          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 220 & 200
330          HC       3
             * DDM   ***** Preserved *****

331          KK   SR200
332          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
333          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
334          RS       1    STOR       0
335          SA    2.56     3.1     9.4
336          SE       0       3      10
337          SS       3     112       3     1.5
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

338          KK   200SR
339          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
340          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
341          RS       1    STOR       0
342          SA       8     9.2     9.2
343          SE       0       7      10
344          SS       7     251       3     1.5
             * DDM   ***** Preserved *****

345          KK    C180
346          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
             *      1       2
347          HC       2
             * DDM   ***** Preserved *****

348          KK   SR180
349          KM   SIGNAL BUTTE FRS DATED 1/28/85
350          KM   OUTLET PIPE=36"RCP; L= 147';  INLET INV.=1690; OUTLET INV.=1687
351          KM   EMERGENCY SPILLWAY ELEV.=1712.4; PRINCIPLE SPILLWAY ELEV.=1701
352          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 250 ACRE-FEET
353          RS       1    STOR       0
354          SV       0       1     250     500     750    1060
355          SQ       0   106.5   125.5   137.5     146     160
356          SE      90     101   104.5     107     109   112.4
             * DDM   ***** Preserved *****

357          KK    R180
358          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
359          KM   ROUTE FLOW FROM SIGNAL BUTTE FRS TO SUB-BASIN 260
360          RS       3    FLOW      -1
361          RC    .035    .025    .035    1500    .003
362          RX       0       1       2    22.6    38.6    59.2      60      61
363          RY     9.3     9.3     9.3       0       0     9.3     9.3     9.3
             * DDM   ***** Updated *****

364          KK     260
365          KM   SUB-BASIN 260
366          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
367          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
368          KM     L =  .81  Kb = .049  Adj. Slope =   68.0
369          BA    .267
370          LG    .300    .170   6.800    .160  15.000
371          UC    .363    .215
372          UA       0       5      16      30      65      77      84      90      94      97
373          UA     100
             * DDM   ***** Preserved *****

374          KK    260C
375          KM   HYDROGRAPH COMBINATION FOR OUTFLOW OF SIGNAL BUTTE FRS & SUB-BASIN 260
376          HC       2    .267
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

377          KK    R260
378          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
379          KM   ROUTE FLOW FROM SUB-BASIN 260 TO SUB-BASIN 280
380          RS       3    FLOW      -1
381          RC    .035    .025    .035    2300    .003
382          RX       0       1       2    23.4    43.4    64.8      65      66
383          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Updated *****

384          KK     280
385          KM   SUB-BASIN 280
386          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
387          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
388          KM     L =  .77  Kb = .049  Adj. Slope =   84.0
389          BA    .304
390          LG    .300    .250   5.300    .290  15.000
391          UC    .333    .175
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392          UA       0       5      16      30      65      77      84      90      94      97
393          UA     100
             * DDM   ***** Preserved *****

394          KK    280C
395          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 260 & SUB-BASIN 280
396          HC       2
             * DDM   ***** Preserved *****

397          KK    R280
398          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
399          KM   ROUTE FLOW FROM SUB-BASIN 280 TO SUB-BASIN 300
400          RS       2    FLOW      -1
401          RC    .035    .025    .035    2500    .003
402          RX       0       1       2    23.4    43.4    64.8      65      66
403          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Updated *****

404          KK     300
405          KM   SUB-BASIN 300
406          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
407          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
408          KM     L = 2.28  Kb = .041  Adj. Slope =  127.0
409          BA    .988
410          LG    .340    .320   4.500    .370   7.000
411          UC    .538    .362
412          UA       0       5      16      30      65      77      84      90      94      97
413          UA     100
             * DDM   ***** Preserved *****

414          KK    300C
415          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 280 & 300
416          HC       2
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 11

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

417          KK    R300
418          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
419          KM   ROUTE FLOW FROM SUB-BASIN 300 TO START OF FLOODWAY CONCRETE CHANNEL
420          RS       2    FLOW      -1
421          RC    .035    .025    .035    2200    .003
422          RX       0       1       2    23.4    55.4    76.8      77      78
423          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Preserved *****

424          KK   RR300
425          KM   CHANNEL GEOMETRY FOR SPOOK HILL FRS OBTAINED FROM AS-BUILTS PLANS.
426          KM   CONTINUE TO ROUTE FLOW WITHIN CONCRETE CHANNEL TO SPOOK HILL FRS
427          RS       2    FLOW      -1
428          RC    .016    .016    .016    6050   .0146
429          RX       0       1       2     2.1    16.1    16.2      17      18
430          RY     7.5     7.5     7.5       0       0     7.5     7.5     7.5
             *      1       2
             * DDM   ***** Updated *****

431          KK     350
432          KM   SUB-BASIN 350
433          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
434          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
435          KM     L = 2.22  Kb = .042  Adj. Slope =  315.0
436          BA    .970
437          LG    .350    .350   4.550    .340   4.000
438          UC    .367    .234
439          UA       0       3       5       8      12      20      43      75      90      96
440          UA     100
             * DDM   ***** Preserved *****

441          KK    D350
442          KM   DIVERT FLOW FROM SUB-BASIN 350. FOR MODELING PURPOSES THE SPLIT FLOW WILL
443          KM   BE ROUTED BETWEEN SUB-BASINS 355 & 310. THE MAIN FLOW WILL ROUTED TO 310
444          DT   SF350
445          DI       0   10000
446          DQ       0    6000
             * DDM   ***** Preserved *****

447          KK    350R
448          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING
449          KM   ROUTING OF MAIN FLOW FROM DIVERSION OF SUB-BASIN 350 TO SUB-BASIN 310
450          RS       7    FLOW      -1
451          RC    .045    .035    .045    5150    .025
452          RX       0       1      40      46      56      62     102     103
453          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

454          KK     310
455          KM   SUB-BASIN 310
456          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
457          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
458          KM     L = 2.70  Kb = .045  Adj. Slope =  283.5
459          BA    .555
1                                        HEC-1 INPUT                                          PAGE 12

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

460          LG    .350    .350   3.910    .480    .000
461          UC    .483    .511
462          UA       0       3       5       8      12      20      43      75      90      96
463          UA     100
             * DDM   ***** Preserved *****

464          KK    C310
465          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 350 & 310
466          HC       2    .943
             * DDM   ***** Preserved *****

467          KK    R310
468          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
469          KM   ROUTING OF FLOW FROM SUB-BASIN 310 TO 320
470          RS      11    FLOW      -1
471          RC    .045    .035    .045   10050    .022
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472          RX       0       1      40      46      56      62     102     103
473          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

474          KK     320
475          KM   SUB-BASIN 320
476          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
477          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
478          KM     L = 2.20  Kb = .042  Adj. Slope =  132.0
479          BA    .972
480          LG    .310    .300   4.550    .360  14.000
481          UC    .508    .333
482          UA       0       5      16      30      65      77      84      90      94      97
483          UA     100
             * DDM   ***** Preserved *****

484          KK    D320
485          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
486          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
487          KM   SIERRA HEIGHTS       FALCON RIDGE    & MARBLE CREEK
488          KM        MAXIMUM VOLUME DIVERSION = 12.27acre-feet
             *      1
489          DT   BS320   12.27
490          DI       0   10000
491          DQ       0   10000
             * DDM   ***** Preserved *****

492          KK   RT320
493          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
494          DR   BS320
             * DDM   ***** Preserved *****

495          KK   SR320
496          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
497          KM   12.27 ACRE-FEETx43560/36x3600=4.1cfs
             *      1
498          RS       1    STOR       0
499          SV       0     .01    12.3
500          SQ       0     4.2     4.2
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

501          KK    C320
502          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
503          HC       4
             * DDM   ***** Updated *****

504          KK     340
505          KM   SUB-BASIN 340
506          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
507          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .991
508          KM     L = 2.40  Kb = .042  Adj. Slope =  160.0
509          BA   1.449
510          LG    .280    .280   4.150    .520  21.000
511          UC    .512    .287
512          UA       0       5      16      30      65      77      84      90      94      97
513          UA     100
             * DDM   ***** Preserved *****

514          KK    D340
515          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
516          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
517          KM   GRANDVIEW ESTATES    BOULDER MOUNTAIN & 33% OF MESA HIGHLANDS
518          KM        MAXIMUM VOLUME DIVERSION = 56.0 acre-feet
             *      1
519          DT   BS340      56
520          DI       0   10000
521          DQ       0   10000
             * DDM   ***** Preserved *****

522          KK   RT340
523          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
524          DR   BS340
             * DDM   ***** Preserved *****

525          KK   SR340
526          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
527          KM    56.0 ACRE-FEETx43560/36x3600=18.8cfs
             *      1
528          RS       1    STOR       0
529          SV       0     .01      56
530          SQ       0    18.9    18.9
             * DDM   ***** Preserved *****

531          KK    C340
532          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
533          HC       3
             * DDM   ***** Preserved *****

534          KK   RT350
535          KM   RETRIEVE SPLIT FLOW FROM DIVERSION OF SUB-BASIN 350
536          DR   SF350
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

537          KK   RR350
538          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
539          KM   ROUTING OF FLOW FROM SPLIT OF SUB-BASIN 350 TO 355
540          RS       7    FLOW      -1
541          RC    .045    .035    .045    6050    .025
542          RX       0       1      40      46      56      62     102     103
543          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

544          KK     355
545          KM   SUB-BASIN 355
546          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
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547          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
548          KM     L = 3.00  Kb = .044  Adj. Slope =  284.0
549          BA    .659
550          LG    .340    .340   4.450    .370   4.000
551          UC    .488    .509
552          UA       0       3       5       8      12      20      43      75      90      96
553          UA     100
             * DDM   ***** Preserved *****

554          KK    C355
555          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 355 AND THE SPLIT FLOW FROM SUB-BASIN 350
556          HC       2    1.24
             * DDM   ***** Preserved *****

557          KK    R355
558          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
559          KM   ROUTING OF FLOW FROM SUB-BASIN 355 TO SUB-BASIN 360
560          RS       9    FLOW      -1
561          RC    .045    .035    .045   10100    .026
562          RX       0       1      40      46      56      62     102     103
563          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

564          KK     360
565          KM   SUB-BASIN 360
566          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
567          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
568          KM     L = 2.10  Kb = .048  Adj. Slope =  124.0
569          BA    .670
570          LG    .260    .270   4.100    .560  20.000
571          UC    .587    .466
572          UA       0       5      16      30      65      77      84      90      94      97
573          UA     100
             * DDM   ***** Preserved *****

574          KK    D360
575          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
576          KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
577          KM        MAXIMUM VOLUME DIVERSION = 28.6 acre-feet
             *      1
578          DT   BS360    28.6
579          DI       0   10000
1                                        HEC-1 INPUT                                                PAGE 15

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

580          DQ       0   10000
             * DDM   ***** Preserved *****

581          KK   RT360
582          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
583          DR   BS360
             * DDM   ***** Preserved *****

584          KK   SR360
585          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
586          KM    28.6 ACRE-FEETx43560/36x3600=9.6cfs
587          RS       1    STOR       0
588          SV       0     .01    28.6
589          SQ       0     9.6     9.6
             * DDM   ***** Preserved *****

590          KK    360C
591          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
592          HC       4
             * DDM   ***** Updated *****

593          KK     370
594          KM   SUB-BASIN 370
595          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
596          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
597          KM     L = 2.90  Kb = .044  Adj. Slope =  294.6
598          BA    .667
599          LG    .340    .320   4.650    .330   9.000
600          UC    .454    .455
601          UA       0       3       5       8      12      20      43      75      90      96
602          UA     100
             * DDM   ***** Updated *****

603          KK     395
604          KM   SUB-BASIN 395
605          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
606          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
607          KM     L = 1.60  Kb = .051  Adj. Slope =  215.8
608          BA    .198
609          LG    .330    .320   4.900    .300  10.000
610          UC    .383    .468
611          UA       0       3       5       8      12      20      43      75      90      96
612          UA     100
             * DDM   ***** Preserved *****

613          KK    370C
614          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
615          HC       2
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                                PAGE 16

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


616          KK    R370
617          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
618          KM   ROUTING OF FLOW FROM SUB-BASINS 370 AND 395 TO SUB-BASIN 380.
619          RS      11    FLOW      -1
620          RC    .045    .035    .045   10250    .023
621          RX       0       1      40      46      56      62     102     103
622          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

623          KK     380
624          KM   SUB-BASIN 380
625          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
626          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
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627          KM     L = 2.20  Kb = .048  Adj. Slope =  114.0
628          BA    .972
629          LG    .300    .310   4.150    .500   7.000
630          UC    .658    .444
631          UA       0       5      16      30      65      77      84      90      94      97
632          UA     100
             * DDM   ***** Preserved *****

633          KK    D380
634          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
635          KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
636          KM        MAXIMUM VOLUME DIVERSION = 28.6 acre-feet
             *      1
637          DT   BS380    28.6
638          DI       0   10000
639          DQ       0   10000
             * DDM   ***** Preserved *****

640          KK   RT380
641          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
642          DR   BS380
             * DDM   ***** Preserved *****

643          KK   SR380
644          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
645          KM    28.6 ACRE-FEETx43560/36x3600=9.6cfs
646          RS       1    STOR       0
647          SV       0     .01    28.6
648          SQ       0     9.6     9.6
             * DDM   ***** Preserved *****

649          KK    380C
650          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
651          HC       4
             * DDM   ***** Updated *****
1                                    HEC-1 INPUT                                          PAGE 17

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


652          KK     390
653          KM   SUB-BASIN 390
654          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
655          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
656          KM     L =  .70  Kb = .050  Adj. Slope =  299.4
657          BA    .244
658          LG    .300    .250   4.700    .380  18.000
659          UC    .204    .107
660          UA       0       5      16      30      65      77      84      90      94      97
661          UA     100
             * DDM   ***** Preserved *****

662          KK    D390
663          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
664          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THUNDER MOUNTAIN ESTATES
665          KM        MAXIMUM VOLUME DIVERSION  = 3.5 acre-feet
             *      1
666          DT   BS390     3.5
667          DI       0   10000
668          DQ       0   10000
             * DDM   ***** Preserved *****

669          KK   RT390
670          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
671          DR   BS390
             * DDM   ***** Preserved *****

672          KK   SR390
673          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
674          KM     3.5 ACRE-FEETx43560/36x3600=1.2cfs
675          RS       1    STOR       0
676          SV       0     .01     3.5
677          SQ       0     1.2     1.2
             * DDM   ***** Preserved *****

678          KK    390C
679          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
680          HC       2
             * DDM   ***** Preserved *****

681          KK   RR390
682          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
683          KM   FROM SUB-BASIN 390 TO SUB-BASIN 400
684          RS      14    FLOW      -1
685          RC    .045    .045    .045    8800    .020
686          RX       0       1      40      46      56      62     102     103
687          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****
1                                    HEC-1 INPUT                                          PAGE 18

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


688          KK     400
689          KM   SUB-BASIN 400
690          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
691          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
692          KM     L = 1.64  Kb = .046  Adj. Slope =  110.0
693          BA    .616
694          LG    .320    .320   3.130    .930   6.000
695          UC    .592    .405
696          UA       0       5      16      30      65      77      84      90      94      97
697          UA     100
             * DDM   ***** Preserved *****

698          KK    D400
699          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
700          KM   DETENTION/RETENTION BASIN LOCATED WITHIN SAGUARO VISTA SUBDIVISION
701          KM        MAXIMUM VOLUME DIVERSION = 5.6 ACRE-FEET
             *      1
702          DT   BS400     5.6
703          DI       0   10000
704          DQ       0   10000
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            * DDM   ***** Preserved *****

705         KK   RT400
706         KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
707         DR   BS400
            * DDM   ***** Preserved *****

708         KK   SR400
709         KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
710         KM     5.6 ACRE-FEETx43560/36x3600 = 2 cfs
711         RS       1    STOR       0
712         SV       0     .01     5.6
713         SQ       0       2       2
            * DDM   ***** Preserved *****

714         KK    C400
715         KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
716         HC       2
            * DDM   ***** Preserved *****

717         KK    400C
718         KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
719         HC       3
            * DDM   ***** Updated *****

720         KK     385
721         KM   SUB-BASIN 385
722         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
723         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
724         KM     L = 2.30  Kb = .044  Adj. Slope =  303.0
725         BA    .647
726         LG    .350    .370   5.600    .210  13.000
727         UC    .375    .311
728         UA       0       3       5       8      12      20      43      75      90      96
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

729         UA     100
            * DDM   ***** Preserved *****

730         KK    D385
731         KM   DIVERT FLOW INTO SUB-BASINS 415 & 420
732         DT   SF385
733         DI       0   10000
734         DQ       0    2500
            * DDM   ***** Preserved *****

735         KK    385R
736         KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
737         KM   ROUTING OF FLOW DIVERSION FROM SUB-BASIN 385 INTO SUB-BASIN 420
738         RS      14    FLOW      -1
739         RC    .045     .04    .045   10250    .022
740         RX       0       1      40      46      56      62     102     103
741         RY       3       2       2       0       0       2       2       3
            * DDM   ***** Updated *****

742         KK     420
743         KM   SUB-BASIN 420
744         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
745         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .995
746         KM     L = 1.91  Kb = .042  Adj. Slope =  120.0
747         BA    .849
748         LG    .310    .270   3.880    .580  12.000
749         UC    .512    .325
750         UA       0       5      16      30      65      77      84      90      94      97
751         UA     100
            * DDM   ***** Preserved *****

752         KK    D420
753         KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
754         KM   DETENTION/RETENTION BASINS LOCATED WITHIN GRAY FOX SUBDIVISION
755         KM        MAXIMUM VOLUME DIVERSION = 8.65 acre-feet
            *      1
756         DT   BS420    8.65
757         DI       0   10000
758         DQ       0   10000
            * DDM   ***** Preserved *****

759         KK   RT420
760         KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
761         DR   BS420
            * DDM   ***** Preserved *****

762         KK   SR420
763         KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
764         KM   38.55 ACRE-FEETx43560/36x3600=13cfs
765         RS       1    STOR       0
766         SV       0     .01   38.55
767         SQ       0      13      13
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

768         KK    420C
769         KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
770         HC       4   10.87
            * DDM   ***** Updated *****

771         KK     440
772         KM   SUB-BASIN 440
773         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
774         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
775         KM     L =  .40  Kb = .039  Adj. Slope =  315.0
776         BA    .080
777         LG    .190    .380   6.400    .140  13.000
778         UC    .129    .077
779         UA       0       3       5       8      12      20      43      75      90      96
780         UA     100
            * DDM   ***** Preserved *****
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781          KK     R70
782          KM   ROUTE FLOW FROM SUB-BASIN 440 TO C108
783          RS       1    FLOW      -1
784          RC     .05    .035     .05    2250     .08
785          RX    1000    1025    1050    1070    1075    1095    1120    1145
786          RY      30    22.9    15.7      10      10    15.7    22.9      30
             * DDM   ***** Updated *****

787          KK     441
788          KM   SUB-BASIN 441
789          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
790          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
791          KM     L =  .28  Kb = .069  Adj. Slope =  315.0
792          BA    .010
793          LG    .300    .250   5.600    .220   5.000
794          UC    .150    .225
795          UA       0       5      16      30      65      77      84      90      94      97
796          UA     100
             * DDM   ***** Preserved *****

797          KK    C108
798          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 440 & 441
799          HC       2
             * DDM   ***** Preserved *****

800          KK    DIV4
801          KM        SPLIT FLOW WITH TWO 42 INCH PIPES TO WEST AND SOUTH
             *      1
802          DT   SPLIT
803          DI       0      14      40      82     120     154     180
804          DQ       0       7      20      41      60      77      90
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

805          KK    R108
806          KM        ROUTE FLOW FROM SUB-BASIN C108 TO C67
807          RS       2    FLOW      -1
808          RC     .05    .035     .05    3200      .1
809          RX    1000    1025    1050    1070    1075    1095    1120    1145
810          RY      30    22.9    15.7      10      10    15.7    22.9      30
             * DDM   ***** Updated *****

811          KK     442
812          KM   SUB-BASIN 442
813          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
814          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
815          KM     L =  .83  Kb = .055  Adj. Slope =  274.2
816          BA    .100
817          LG    .300    .270   3.290    .770   5.000
818          UC    .258    .264
819          UA       0       5      16      30      65      77      84      90      94      97
820          UA     100
             * DDM   ***** Preserved *****

821          KK     C67
822          KM   COMBINE FLOW FROM SUB-BASIN 442 & DIV4
823          HC       2
             * DDM   ***** Preserved *****

824          KK    DIV6
825          KM        OFFLINE BASIN WITH 25 FOOT WEIR SET AT 2.5 FEET ABOVE BOTTOM OF CHANNEL
826          KM        FLOW CONTINUES BEYOND BASIN THROUGH 2-30" PIPES
             *      1
827          DT  BASIN4
828          DI       0      10      32      44    79.9   132.5     198   272.9   356.8
829          DQ       0       0       0       0    23.9    67.5     124   190.9   266.8
             * DDM   ***** Preserved *****

830          KK  RTDIV6
831          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
832          DR  BASIN4
             * DDM   ***** Preserved *****

833          KK  RFDIV6
834          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
835          KM     3.3 ACRE-FEETx43560/36x3600=1.1cfs
             *      1
836          RS       1    STOR       0
837          SV       0     .01     3.3
838          SQ       0     1.1     1.1
             * DDM   ***** Preserved *****

839          KK   CDIV6
840          KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
841          HC       2
             * DDM   ***** Updated *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

842          KK     443
843          KM   SUB-BASIN 443
844          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
845          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
846          KM     L =  .71  Kb = .050  Adj. Slope =  315.0
847          BA    .080
848          LG    .250    .190   8.000    .080  10.000
849          UC    .196    .194
850          UA       0       5      16      30      65      77      84      90      94      97
851          UA     100
             * DDM   ***** Preserved *****

852          KK   DIV66
853          KM        DIVERT FLOW INTO 3 NATURAL WASHES WITH ONE 24" PIPE IN EACH WASH.
854          KM        EACH PIPE CAPACITY BASED ON 4 FEET OF HEAD
855          DT   WSH66
856          DI       0      78     100     200
857          DQ       0      78      78      78
             * DDM   ***** Preserved *****
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858          KK    R113
859          KM        ROUTE FLOW FROM C113 TO C114
860          RS       1    FLOW      -1
861          RC    .019    .019    .019    1300    .029
862          RX    1000    1004    1008    1012    1018    1022    1026    1030
863          RY      17   15.33   12.67      10      10   12.67   15.33      17
             * DDM   ***** Preserved *****

864          KK    C114
865          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 67 AND C113
866          HC       2
             * DDM   ***** Updated *****

867          KK     444
868          KM   SUB-BASIN 444
869          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
870          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
871          KM     L =  .33  Kb = .034  Adj. Slope =  315.0
872          BA    .040
873          LG    .130    .350   4.450    .320   1.000
874          UC    .112    .084
875          UA       0       3       5       8      12      20      43      75      90      96
876          UA     100
             * DDM   ***** Preserved *****

877          KK     R58
878          KM   ROUTE FLOW FROM SUB-BASIN 444 TO C107
879          RS       1    FLOW      -1
880          RC     .05    .035     .05    2370   .0516
881          RX    1000    1010    1020    1050    1055    1085    1095    1105
882          RY      19      18      17      10      10      17      18      19
             * DDM   ***** Updated *****
1                                    HEC-1 INPUT                                    PAGE 23

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

883          KK     445
884          KM   SUB-BASIN 445
885          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
886          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
887          KM     L =  .82  Kb = .036  Adj. Slope =  315.0
888          BA    .190
889          LG    .170    .320   3.470    .590   3.000
890          UC    .192    .130
891          UA       0       5      16      30      65      77      84      90      94      97
892          UA     100
             * DDM   ***** Preserved *****

893          KK    C107
894          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 444 & 445
895          HC       2
             * DDM   ***** Preserved *****

896          KK    R107
897          KM        ROUTE FLOW FROM C107 TO C109
898          RS       1    FLOW      -1
899          RC     .05    .035     .05     700   .0516
900          RX    1000    1010    1020    1050    1055    1085    1095    1105
901          RY      19      18      17      10      10      17      18      19
             * DDM   ***** Preserved *****

902          KK    RTB2
903          KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
             *      1
904          DR   SPLIT
             * DDM   ***** Preserved *****

905          KK  RSPLIT
906          KM        ROUTE FLOW FROM SPLIT TO C109
907          RS       1    FLOW      -1
908          RC     .05    .035     .05     800     .05
909          RX    1000    1025    1050    1070    1075    1095    1120    1145
910          RY      30    22.9    15.7      10      10    15.7    22.9      30
             * DDM   ***** Updated *****

911          KK     446
912          KM   SUB-BASIN 446
913          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
914          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
915          KM     L =  .46  Kb = .061  Adj. Slope =  303.9
916          BA    .040
917          LG    .270    .250   4.500    .400  19.000
918          UC    .183    .189
919          UA       0       5      16      30      65      77      84      90      94      97
920          UA     100
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                    PAGE 24

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

921          KK    C109
922          KM        COMBINE HYDROGRAPHS FROM COMBINES C107 AND C108
923          HC       3
             * DDM   ***** Preserved *****

924          KK    DIV5
925          KM        DIVERT FLOW INTO WASHES TOWARDS WEST
926          KM        DIVERSION THROUGH 36" PIPE WITH 3 FEET OF HEAD
             *      1
927          DT  WSH404
928          DI       0    40.7    71.2   121.6     190     276   379.4   500.6
929          DQ       0      35      35      35      35      35      35      35
             * DDM   ***** Preserved *****

930          KK    R109
931          KM        ROUTE FLOW FROM C109 TO C110
932          RS       1    FLOW      -1
933          RC    .019    .019    .019    3080     .05
934          RX    1000    1005    1010    1015    1025    1030    1035    1040
935          RY   13.75    12.5   11.25      10      10   11.25    12.5   13.75
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          * DDM   ***** Updated *****

936       KK     447
937       KM   SUB-BASIN 447
938       KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
939       KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
940       KM     L =  .49  Kb = .056  Adj. Slope =  221.0
941       BA    .090
942       LG    .250    .270   3.350    .870  30.000
943       UC    .208    .145
944       UA       0       5      16      30      65      77      84      90      94      97
945       UA     100
          * DDM   ***** Preserved *****

946       KK   RT404
947       KM        RETRIEVE DIVERTED FLOW FOR WASH 109
948       DR  WSH404
          * DDM   ***** Preserved *****

949       KK    R404
950       KM        ROUTE FLOW FROM C110 TO C110
951       RS       5    FLOW      -1
952       RC    .019    .019    .019    3540     .03
953       RX    1000    1012    1016    1020    1025    1029    1033    1045
954       RY      15      12      11      10      10      11      12      15
          * DDM   ***** Preserved *****

955       KK    C110
956       KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 447 AND R404
957       HC       3
          * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 25

LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

958       KK    R110
959       KM        ROUTE FLOW FROM C110 TO C115
960       RS       1    FLOW      -1
961       RC    .019    .019    .019     580   .0291
962       RX    1000    1012    1016    1020    1035    1039    1043    1055
963       RY      15      12      11      10      10      11      12      15
          * DDM   ***** Preserved *****

964       KK    C115
965       KM        COMBINE HYDROGRAPHS FROM C114 AND C110
966       HC       2
          * DDM   ***** Preserved *****

967       KK    R115
968       KM        ROUTE FLOW FROM C115 TO C119
969       RS       1    FLOW      -1
970       RC    .019    .019    .019    2125    .029
971       RC    .019    .019    .019     580   .0291
972       RX    1000    1012    1016    1020    1035    1039    1043    1055
973       RY      15      12      11      10      10      11      12      15
          * DDM   ***** Updated *****

974       KK     448
975       KM   SUB-BASIN 448
976       KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
977       KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
978       KM     L =  .36  Kb = .042  Adj. Slope =  315.0
979       BA    .045
980       LG    .170    .310   4.200    .390  11.000
981       UC    .133    .102
982       UA       0       5      16      30      65      77      84      90      94      97
983       UA     100
          * DDM   ***** Updated *****

984       KK     449
985       KM   SUB-BASIN 449
986       KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
987       KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
988       KM     L =  .40  Kb = .054  Adj. Slope =  315.0
989       BA    .050
990       LG    .260    .280   3.500    .640   6.000
991       UC    .167    .134
992       UA       0       5      16      30      65      77      84      90      94      97
993       UA     100
          * DDM   ***** Preserved *****

994       KK   C6364
995       KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 448 & 449
996       HC       2
          * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 26

LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

997       KK   R6364
998       KM   ROUTE FLOW FROM C116 AND SUB-BASINS 448 AND 449
999       RS       4    FLOW      -1
1000      RC     .05    .035     .05    4375   .0333
1001      RX    1000    1027    1053    1080    1090    1117    1143    1170
1002      RY      15   13.33   11.67      10      10   11.67   13.33      15
          * DDM   ***** Updated *****

1003      KK     450
1004      KM   SUB-BASIN 450
1005      KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1006      KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1007      KM     L =  .85  Kb = .057  Adj. Slope =  210.5
1008      BA    .070
1009      LG    .340    .350   3.630    .570   4.000
1010      UC    .296    .383
1011      UA       0       3       5       8      12      20      43      75      90      96
1012      UA     100
          * DDM   ***** Updated *****

1013      KK     451
1014      KM   SUB-BASIN 451
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1015        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1016        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1017        KM     L =  .57  Kb = .063  Adj. Slope =  175.0
1018        BA    .025
1019        LG    .340    .340   3.290    .750   3.000
1020        UC    .271    .453
1021        UA       0       3       5       8      12      20      43      75      90      96
1022        UA     100
            * DDM   ***** Preserved *****

1023        KK    RT66
1024        KM        RETRIEVE DIVERTED FLOW FROM SUB-BASIN 66
1025        DR   WSH66
            * DDM   ***** Updated *****

1026        KK     452
1027        KM   SUB-BASIN 452
1028        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1029        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1030        KM     L =  .43  Kb = .055  Adj. Slope =  315.0
1031        BA    .040
1032        LG    .260    .280   3.700    .550   9.000
1033        UC    .171    .166
1034        UA       0       5      16      30      65      77      84      90      94      97
1035        UA     100
            * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 27

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1036        KK   C6465
1037        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 443 AND 452
1038        HC       2
            * DDM   ***** Preserved *****

1039        KK   R6566
1040        KM        ROUTE FLOW FROM DIVERSIONS 65 AND 66 TO C116
1041        RS       2    FLOW      -1
1042        RC     .05    .035     .05    2435   .0282
1043        RX    1000    1045    1090    1150    1160    1220    1265    1310
1044        RY      25      23      20      10      10      20      23      25
            * DDM   ***** Preserved *****

1045        KK    C116
1046        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 450 & 451 AND R6364 & R6465
1047        HC       4
            * DDM   ***** Preserved *****

1048        KK  BASIN5
1049        KM        RESERVOIR WITHIN PARCEL 31      2-48 INCH PIPES AT OUTFALL
1050        KM        BASIN 5 FEET DEEP
1051        RS       1    ELEV       0
1052        SV       0     4.5     9.9
1053        SQ       0      69     190
1054        SE       0     2.5       5
            * DDM   ***** Preserved *****

1055        KK    R116
1056        KM   ROUTE FLOW FROM C116 TO C117
1057        RS       2    FLOW      -1
1058        RC     .05    .035     .05    1300   .0333
1059        RX    1000    1100    1200    1300    1320    1420    1520    1620
1060        RY      13      12      11      10      10      11      12      13
            * DDM   ***** Updated *****

1061        KK     453
1062        KM   SUB-BASIN 453
1063        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1064        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1065        KM     L =  .58  Kb = .058  Adj. Slope =  138.0
1066        BA    .060
1067        LG    .290    .300   3.290    .820  18.000
1068        UC    .275    .284
1069        UA       0       5      16      30      65      77      84      90      94      97
1070        UA     100
            * DDM   ***** Preserved *****

1071        KK    C117
1072        KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 453 AND R116
1073        HC       2
            * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 28

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1074        KK    C118
1075        KM   COMBINE HYDROGRAPHS FROM R115 AND C117
1076        HC       2
            * DDM   ***** Preserved *****

1077        KK    R118
1078        KM        ROUTE FLOW FROM C118 TO  DIV7
1079        RS       1    FLOW      -1
1080        RC    .019    .019    .019    1500    .024
1081        RX    1000    1012    1016    1020    1035    1039    1043    1055
1082        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Preserved *****

1083        KK    DIV7
1084        KM        OFFLINE BASIN AT NORTH MOUNTAIN RIDGE   FLOWS ENTER BASIN OVER
1085        KM        30' WEIR SET AT 5.3' ABOVE THE CHANNEL BOTTOM
            *      1
1086        DT  BASIN6
1087        DI       0     363     487     563     645     844
1088        DQ       0       3      47      83     125     244
            * DDM   ***** Preserved *****

1089        KK  RTDIV7
1090        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1091        DR  BASIN6
            * DDM   ***** Preserved *****
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1092        KK  RFDIV7
1093        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1094        KM     3.6 ACRE-FEETx43560/36x3600=1.2cfs
1095        RS       1    STOR       0
1096        SV       0     .01     3.6
1097        SQ       0     1.2     1.2
            * DDM   ***** Preserved *****

1098        KK   CDIV7
1099        KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1100        HC       2
            * DDM   ***** Updated *****

1101        KK     454
1102        KM   SUB-BASIN 454
1103        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1104        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1105        KM     L = 1.23  Kb = .051  Adj. Slope =  163.0
1106        BA    .180
1107        LG    .300    .310   3.780    .560  14.000
1108        UC    .379    .395
1109        UA       0       5      16      30      65      77      84      90      94      97
1110        UA     100
            * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 29

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1111        KK    C119
1112        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 454 AND C119
            *      1       2
1113        HC       2
            * DDM   ***** Preserved *****

1114        KK    R454
1115        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1116        KM   ROUTE FLOW FROM C119 TO 415C
1117        RS       2    FLOW      -1
1118        RC    .045    .035    .045    2200    .009
1119        RX       0      .5       1      33      42      67    67.5      68
1120        RY       5       4       4       0       0       6       6       6
            * DDM   ***** Updated *****

1121        KK     415
1122        KM   SUB-BASIN 415
1123        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1124        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
1125        KM     L = 2.10  Kb = .046  Adj. Slope =  266.0
1126        BA    .448
1127        LG    .310    .270   4.250    .480  15.000
1128        UC    .404    .387
1129        UA       0       5      16      30      65      77      84      90      94      97
1130        UA     100
            * DDM   ***** Preserved *****

1131        KK   RT385
1132        KM   RETRIEVE FLOW FROM DIVERSION OF SUB-BASIN 385 INTO SUB-BASIN 415
1133        DR   SF385
            * DDM   ***** Preserved *****

1134        KK   RR385
1135        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1136        KM   ROUTING OF SPLIT FLOW FROM SUB-BASIN 385 TO SUB-BASIN 415
1137        RS       5    FLOW      -1
1138        RC    .045     .04    .045    5878    .024
1139        RX       0       1      40      46      56      62     102     103
1140        RY       3       2       2       0       0       2       2       3
            * DDM   ***** Preserved *****

1141        KK    415C
1142        KM   HYDROGRAPH COMBINATION OF SUB-BASINS 415, R454 & SPLIT FLOW FROM 385
1143        HC       3    1.71
            * DDM   ***** Preserved *****

1144        KK    R415
1145        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1146        KM   ROUTING OF FLOW FROM 415C TO 455C
1147        RS       2    FLOW      -1
1148        RC    .045     .03    .045    4100    .024
1149        RX       0      .5       1       8      16      23    23.5      24
1150        RY       8       8       8       0       0       8       8       8
            * DDM   ***** Updated *****
1                                    HEC-1 INPUT                                          PAGE 30

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1151        KK     455
1152        KM   SUB-BASIN 455
1153        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1154        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
1155        KM     L = 1.70  Kb = .041  Adj. Slope =  146.0
1156        BA   1.111
1157        LG    .270    .280   3.700    .640  24.000
1158        UC    .421    .204
1159        UA       0       5      16      30      65      77      84      90      94      97
1160        UA     100
            * DDM   ***** Preserved *****

1161        KK    D455
1162        KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1163        KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1164        KM   FOR BASIN #: 30      34      43      47&58
1165        KM        MAXIMUM VOLUME DIVERSION = 74.1 acre-feet
            *      1
1166        DT   BS455    74.1
1167        DI       0   10000
1168        DQ       0   10000
            * DDM   ***** Preserved *****

1169        KK   RT455
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1170        KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1171        DR   BS455
            * DDM   ***** Preserved *****

1172        KK   SR455
1173        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1174        KM    74.1 ACRE-FEETx43560/36x3600=25cfs
1175        RS       1    STOR       0
1176        SV       0     .01    74.1
1177        SQ       0      25      25
            * DDM   ***** Preserved *****

1178        KK    C455
1179        KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 455 AND DIVERTED BASIN STORAGE OF 455
1180        HC       2
            * DDM   ***** Preserved *****

1181        KK    455C
1182        KM  HYDROGRAPH COMBINATION OF 420C, R415 AND C455
            *      1       2
1183        HC       3
            * DDM   ***** Preserved *****

1184        KK   SR440
1185        KM   SPOOK HILL FRS PLANS DATED 6/15/77
1186        KM   OUTLET PIPE=7'x7.5'RCBC; L=70 INLET INV.=1566; OUTLET INV.=1566
1187        KM   EMERGENCY SPILLWAY ELEV.=1582; PRINCIPLE SPILLWAY ELEV.=1577.5
1188        KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 200 ACRE-FEET
1189        RS       1    STOR       0
1190        SV       0      10     100     300     500     680
1            HEC-1 INPUT                                                    PAGE 31

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1191        SQ       0     640     720     780     825     860
1192        SE      66    77.5      79    80.2    81.2      82
            * DDM   ***** Preserved *****

1193        KK   RR455
1194        KM   ROUTE FLOW FROM SPOOK HILL FRS TO SUB-BASIN 462
1195        RS       9    FLOW      -1
1196        RC    .035    .025    .035    9200    .002
1197        RX       0       1       2      28      58      84      85      86
1198        RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
            * DDM   ***** Updated *****

1199        KK     456
1200        KM   SUB-BASIN 456
1201        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1202        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1203        KM     L =  .94  Kb = .045  Adj. Slope =  315.0
1204        BA    .260
1205        LG    .300    .380   5.600    .200  12.000
1206        UC    .217    .139
1207        UA       0       5      16      30      65      77      84      90      94      97
1208        UA     100
            * DDM   ***** Preserved *****

1209        KK    DIV1
1210        KM        DIVERT FLOW INTO OFFLINE DETENTION BASIN
1211        KM        WEIR FOR BASIN SET AT 4 FEET ABOVE CHANNEL BOTTOM
            *      1
1212        DT  BASIN1
1213        DI       0    11.1   127.9   234.4   577.7   789.9  1025.5  1280.9  1555.7
1214        DQ       0       0       0    47.7     248   381.8   533.6   701.5     884
            * DDM   ***** Preserved *****

1215        KK    DIV2
1216        KM        SPLIT OUT FLOW FOR WASHES THAT FLOW TO THE SOUTH FROM
1217        KM        WASHES THAT DRAIN TO THE WES, SOUTHERN WASHES FED BY 30" & 24" PIPE
1218        DT    WA30
1219        DI       0    11.1   127.9   189.6   329.7     408   491.9   579.4   671.7
1220        DQ       0    11.1    38.4    48.2      63    69.5      76      81      86
            * DDM   ***** Preserved *****

1221        KK    R456
1222        KM        ROUTE FLOW FROM SUB-BASIN 51 TO C101
1223        RS       2    FLOW      -1
1224        RC     .05    .035     .05    3800    .044
1225        RX    1000    1010    1020    1036    1041    1057    1067    1077
1226        RY   14.88   14.44      14      10      10      14   14.44   14.88
            * DDM   ***** Updated *****

1227        KK     457
1228        KM   SUB-BASIN 457
1229        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1230        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1231        KM     L = 1.01  Kb = .045  Adj. Slope =  308.8
1232        BA    .190
1            HEC-1 INPUT                                                    PAGE 32

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1233        LG    .270    .330   3.950    .460   6.000
1234        UC    .237    .195
1235        UA       0       5      16      30      65      77      84      90      94      97
1236        UA     100
            * DDM   ***** Preserved *****

1237        KK    C101
1238        KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 50 AND 51
1239        HC       2
            * DDM   ***** Preserved *****

1240        KK    DIV3
1241        KM        RESERVOIR AT THE EDGE OF THE PROPERTY   FLOW FROM CHANNEL
1242        KM        DIVERTED  INTO OFFLINE BASIN A 25' WEIR SET AT ELEVATION 1808 FT
            *      1
1243        DT  BASIN2
1244        DI       0      36      70     110     180   313.5     402   500.9
1245        DQ       0       0       0       0       0    67.5     124   190.9
            * DDM   ***** Preserved *****
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1246          KK  RTDIV3
1247          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1248          DR  BASIN2
              * DDM   ***** Preserved *****

1249          KK  RFDIV3
1250          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1251          KM     5.0 ACRE-FEETx43560/36x3600=1.7cfs
1252          RS       1    STOR       0
1253          SV       0     .01       5
1254          SQ       0     1.7     1.7
              * DDM   ***** Preserved *****

1255          KK   CDIV3
1256          KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1257          HC       2
              * DDM   ***** Preserved *****

1258          KK    R101
1259          KM        ROUTE FLOW FROM SUBBASIN C101 TO C103
1260          RS       1    FLOW      -1
1261          RC     .05    .035     .05    1450     .05
1262          RX    1000    1010    1020    1036    1041    1057    1067    1077
1263          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Updated *****

1264          KK     458
1265          KM   SUB-BASIN 458
1266          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1267          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1268          KM     L =  .76  Kb = .048  Adj. Slope =  299.0
1269          BA    .190
1270          LG    .290    .330   5.800    .190   6.000
1271          UC    .204    .131
1272          UA       0       5      16      30      65      77      84      90      94      97
1                                        HEC-1 INPUT                                          PAGE 33

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1273          UA     100
              * DDM   ***** Preserved *****

1274          KK    C103
1275          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 55 AND C101
1276          HC       2
              * DDM   ***** Preserved *****

1277          KK    R103
1278          KM        ROUTE FLOW FROM SUBBASIN C103 TO C106
1279          RS       1    FLOW      -1
1280          RC     .05    .035     .05     900     .03
1281          RX    1000    1010    1020    1030    1050    1060    1070    1080
1282          RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
              * DDM   ***** Preserved *****

1283          KK    RT30
1284          KM        RETRIEVE DIVERTED FLOW FOR WASH BELOW 30 INCH PIPE
1285          DR    WA30
              * DDM   ***** Preserved *****

1286          KK     R30
1287          KM        ROUTE FLOW FROM WASH DIVERSION TO COMBINE C52
1288          RS       1    FLOW      -1
1289          RC     .05    .035     .05    1630     .05
1290          RX    1000    1010    1020    1036    1041    1057    1067    1077
1291          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Preserved *****

1292          KK    RTB1
1293          KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
              *      1       2
1294          DR  BASIN1
              * DDM   ***** Preserved *****

1295          KK      B1
1296          KM        ROUTE FLOW THROUGH OFFLINE DETENTION BASIN
1297          KM        FLOW OUTLETS THROUGH A 30 INCH OUTLET PIPE
              *      1       2
1298          RS       1    ELEV       0
1299          SV              .7     1.4     2.3     2.7     3.2
1300          SQ       0       5      16      28    32.5      37
1301          SE       0       1       2       3     3.5       4
              * DDM   ***** Preserved *****

1302          KK     RB1
1303          KM        ROUTE FLOW FROM BASIN DIVERSION TO COMBINE C52
1304          RS       2    FLOW      -1
1305          RC     .05    .035     .05    1720     .05
1306          RX    1000    1010    1020    1036    1041    1057    1067    1077
1307          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 34

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1308          KK    CDIV
1309          KM        COMBINE FLOWS FROM WA30 AND BASIN 1
1310          HC       2     .12
              * DDM   ***** Updated *****

1311          KK     459
1312          KM   SUB-BASIN 459
1313          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1314          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1315          KM     L =  .35  Kb = .052  Adj. Slope =  251.6
1316          BA    .030
1317          LG    .220    .300   3.330    .710   8.000
1318          UC    .162    .157
1319          UA       0       5      16      30      65      77      84      90      94      97
1320          UA     100
              * DDM   ***** Preserved *****
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```
KK     C52
KM        COMBINE FLOWS FROM SUB-BASIN 52 WA30 AND BASIN 1
HC       2
* DDM   ***** Preserved *****

KK     R52
KM        ROUTE FLOW FROM SUBBASIN 52 TO C102
RS       2    FLOW      -1
RC     .05    .035     .05    2000     .05
RX    1000    1010    1020    1036    1041    1057    1067    1077
RY      15    14.5      14      10      10      14    14.5      15
* DDM   ***** Updated *****

KK     460
KM   SUB-BASIN 460
KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
KM     L =  .62  Kb = .058  Adj. Slope =  194.0
BA    .140
LG    .250    .260   3.740    .690  27.000
UC    .242    .160
UA       0       5      16      30      65      77      84      90      94      97
UA     100
* DDM   ***** Preserved *****

KK    C102
KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 52 AND 53
HC       2
* DDM   ***** Preserved *****

KK  BASIN3
KM        RESERVOIR AT CLUBHOUSE LOCATION 1-30 INCH PIPE AT OUTFALL
KM        BOTTOM OF BASIN AT 6 FEET ABOVE 1795 ELEVATION
RS       1    ELEV       0
SA       0       0       0       0     .34    1.59    1.81    1.96    2.13     2.3
*      0       0       0       0    1.14    3.25    5.52    9.23
SQ       0      22      45    47.4      48      51      57      62      67      73
```



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                                HEC-1 INPUT
LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

SE    1795  1797.5    1800  1800.4  1800.5    1801    1802    1803    1804  1805.5
* DDM   ***** Preserved *****

KK      R3
KM        ROUTE FLOW FROM C102 to C106
RS       4    FLOW      -1
RC     .05     .03     .05    2750   .0375
RX    1000    1010    1020    1052    1086    1118    1128    1138
RY    19.2    18.4      18      10      10      18    18.4    19.2
* DDM   ***** Updated *****

KK     461
KM   SUB-BASIN 461
KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
KM     L =  .83  Kb = .052  Adj. Slope =  181.0
BA    .120
LG    .270    .250   4.250    .450  21.000
UC    .271    .250
UA       0       5      16      30      65      77      84      90      94      97
UA     100
* DDM   ***** Preserved *****

KK    C104
KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 54 AND R102
HC       2
* DDM   ***** Preserved *****

KK    C106
KM        COMBINE HYDROGRAPHS FROM SUB-BASIN C103 AND C104
HC       2
* DDM   ***** Preserved *****

KK    R106
KM        ROUTE FLOW FROM C106 TO C49
RS       2    FLOW      -1
RC     .05    .035     .05    3950    .033
RX    1000    1010    1020    1030    1050    1060    1070    1080
RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
* DDM   ***** Updated *****

KK     462
KM   SUB-BASIN 462
KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
KM     L =  .97  Kb = .045  Adj. Slope =  297.7
BA    .301
LG    .300    .330   5.300    .240  12.000
UC    .225    .137
UA       0       5      16      30      65      77      84      90      94      97
UA     100
* DDM   ***** Preserved *****
```



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                                HEC-1 INPUT
LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

KK     C56
KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 56 AND C106
*      1       2
HC       2
* DDM   ***** Updated *****

KK     480
KM   SUB-BASIN 480
KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
KM     L = 1.21  Kb = .042  Adj. Slope =  165.0
BA    .731
LG    .270    .270   3.580    .730  27.000
UC    .325    .148
UA       0       5      16      30      65      77      84      90      94      97
```

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1400          UA     100
              * DDM   ***** Preserved *****

1401          KK    D480
1402          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1403          KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1404          KM   FOR BASIN #: 18 & 26
1405          KM        MAXIMUM VOLUME DIVERSION = 16.5 acre-feet
              *      1
1406          DT   BS480    16.5
1407          DI       0   10000
1408          DQ       0   10000
              * DDM   ***** Preserved *****

1409          KK   RT480
1410          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1411          DR   BS480
              * DDM   ***** Preserved *****

1412          KK   SR480
1413          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1414          KM    16.5 ACRE-FEETx43560/36x3600=5.5cfs
1415          RS       1    STOR       0
1416          SV       0     .01    16.5
1417          SQ       0     5.6     5.6
              * DDM   ***** Preserved *****

1418          KK    C480
1419          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1420          HC       2
              * DDM   ***** Preserved *****

1421          KK    480C
1422          KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1423          HC       3    2.09
              * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 37

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1424          KK   RR480
1425          KM   ROUTE FLOW FROM SUB-BASIN 480 TO SUB-BASIN 500
1426          RS       1    FLOW      -1
1427          RC    .025    .025    .025    6500     .05
1428          RX       0       1       2      28      58      84      85      86
1429          RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
              * DDM   ***** Updated *****

1430          KK     500
1431          KM   SUB-BASIN 500
1432          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1433          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
1434          KM     L = 2.77  Kb = .042  Adj. Slope =  286.8
1435          BA    .930
1436          LG    .350    .400   6.000    .170   9.000
1437          UC    .421    .333
1438          UA       0       3       5       8      12      20      43      75      90      96
1439          UA     100
              * DDM   ***** Preserved *****

1440          KK    500C
1441          KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1442          HC       2    3.02
1443          ZZ
```

SCHEMATIC DIAGRAM OF STREAM NETWORK

```
INPUT
 LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW
  NO.      (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

  49         10
              V
              V
  59        R10
              V
              V
  65        R12
              .
              .
  71          .          20
              .           .
              .           .
  81        C20............
              .
              .
  84          .          40
              .           .
              .           .
  94          .           .          60
              .           .           .
              .           .           .
 104        60C........................
              V
              V
 107       SR60
              V
              V
 116        R60
              V
              V
 122       RR60
              .
              .
 128          .          80
              .           .
              .           .
 138        80C............
              V
              V
 141        R80
              .
              .
 147          .         100
              .           .
              .           .
 157       100C............
              V
              V
 160       R100
              .
              .
 166          .         120
              .           .
              .           .
 176       120C............
              V
              V
 179       R120
              .
              .
 185          .         140
              .           .
              .           .
 195          .           .         150
              .           .           V
              .           .           V
 205          .           .        R150
              .           .           V
              .           .           V
 211          .           .        R152
              .           .           .
              .           .           .
 217          .           .           .         160
              .           .           .           .
              .           .           .           .
 227          .           .           .           .         180
              .           .           .           .           .
              .           .           .           .           .
 237       180C...............................................
              .
              .
 240          .         210
              .           V
              .           V
 250          .        R210
              .           .
              .           .
 256          .           .         240
              .           .           .
              .           .           .
 266          .        240C............
              .           V
              .           V
 269          .       SR240
              .           .
              .           .
 276          .           .         220
              .           .           .
              .           .           .
 286          .        220C............
              .           V
              .           V
 289          .       SR220
              .           .
              .           .
 296          .           .         190
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                .          .          V
                .          .          V
306             .          .       R190
                .          .          V
                .          .          V
312             .          .       R192
                .          .          .
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318             .          .          .        200
                .          .          .          .
                .          .          .          .
328             .       200C.......................
                .          V
                .          V
331             .      SR200
                .          V
                .          V
338             .      200SR
                .          .
                .          .
345          C180............
                V
                V
348         SR180
                V
                V
357          R180
                .
                .
364             .        260
                .          .
                .          .
374          260C............
                V
                V
377          R260
                .
                .
384             .        280
                .          .
                .          .
394          280C............
                V
                V
397          R280
                .
                .
404             .        300
                .          .
                .          .
414          300C............
                V
                V
417          R300
                V
                V
424         RR300
                .
                .
431             .        350
                .          .
                .          .
444             .          .-------->   SF350
441             .       D350
                .          V
                .          V
447             .       350R
                .          .
                .          .
454             .          .        310
                .          .          .
                .          .          .
464             .      C310............
                .          V
                .          V
467             .       R310
                .          .
                .          .
474             .          .        320
                .          .          .
                .          .          .
489             .          .          .-------->   BS320
484             .          .       D320
                .          .          .
                .          .          .
494             .          .          .          .<-------   BS320
492             .          .          .      RT320
                .          .          .          V
                .          .          .          V
495             .          .          .      SR320
                .          .          .          .
                .          .          .          .
501          C320.................................
                .
                .
504             .        340
                .          .
                .          .
519             .          .-------->   BS340
514             .       D340
                .          .
                .          .
524             .          .          .<-------   BS340
522             .          .      RT340
                .          .          V
                .          .          V
525             .          .      SR340
                .          .          .
                .          .          .
531          C340........................
                .
                .
536             .          .<-------   SF350
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534          .      RT350
             .         V
             .         V
537          .      RR350
             .         .
             .         .
544          .         .        355
             .         .          .
             .         .          .
554          .      C355............
             .         V
             .         V
557          .      R355
             .         .
             .         .
564          .         .        360
             .         .          .
             .         .          .
578          .         .          .-------->   BS360
574          .         .      D360
             .         .          .
             .         .          .
583          .         .          .          .<--------   BS360
581          .         .          .      RT360
             .         .          .          V
             .         .          .          V
584          .         .          .      SR360
             .         .          .          .
             .         .          .          .
590       360C...................................
             .
             .
593          .      370
             .         .
             .         .
603          .         .        395
             .         .          .
             .         .          .
613          .      370C............
             .         V
             .         V
616          .      R370
             .         .
             .         .
623          .         .        380
             .         .          .
             .         .          .
637          .         .          .-------->   BS380
633          .         .      D380
             .         .          .
             .         .          .
642          .         .          .          .<--------   BS380
640          .         .          .      RT380
             .         .          .          V
             .         .          .          V
643          .         .          .      SR380
             .         .          .          .
             .         .          .          .
649       380C...................................
             .
             .
652          .      390
             .         .
             .         .
666          .         .-------->   BS390
662          .      D390
             .         .
             .         .
671          .         .          .<--------   BS390
669          .         .      RT390
             .         .          V
             .         .          V
672          .         .      SR390
             .         .          .
             .         .          .
678          .      390C............
             .         V
             .         V
681          .      RR390
             .         .
             .         .
688          .         .        400
             .         .          .
             .         .          .
702          .         .          .-------->   BS400
698          .         .      D400
             .         .          .
             .         .          .
707          .         .          .          .<--------   BS400
705          .         .          .      RT400
             .         .          .          V
             .         .          .          V
708          .         .          .      SR400
             .         .          .          .
             .         .          .          .
714          .         .      C400............
             .         .          .
             .         .          .
717       400C.......................
             .
             .
720          .      385
             .         .
             .         .
732          .         .-------->   SF385
730          .      D385
             .         V
             .         V
735          .      385R
             .         .
             .         .
742          .         .        420
             .         .          .
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756          .          .          .
             .          .          .-------->  BS420
752          .          .       D420
             .          .          .
             .          .          .
761          .          .          .          .<-------  BS420
759          .          .          .      RT420
             .          .          .          V
             .          .          .          V
762          .          .          .      SR420
             .          .          .          .
             .          .          .          .
768       420C.................................
             .
             .
771          .       440
             .         V
             .         V
781          .       R70
             .          .
             .          .
787          .          .        441
             .          .          .
             .          .          .
797          .      C108............
             .          .
             .          .
802          .          .-------->  SPLIT
800          .      DIV4
             .         V
             .         V
805          .      R108
             .          .
             .          .
811          .          .        442
             .          .          .
             .          .          .
821          .       C67............
             .          .
             .          .
827          .          .-------->  BASIN4
824          .      DIV6
             .          .
             .          .
832          .          .          .<-------  BASIN4
830          .          .     RTDIV6
             .          .          V
             .          .          V
833          .          .     RFDIV6
             .          .          .
             .          .          .
839          .     CDIV6............
             .          .
             .          .
842          .          .        443
             .          .          .
             .          .          .
855          .          .          .-------->  WSH66
852          .          .      DIV66
             .          .          V
             .          .          V
858          .          .      R113
             .          .          .
             .          .          .
864          .      C114............
             .          .
             .          .
867          .          .        444
             .          .          V
             .          .          V
877          .          .        R58
             .          .          .
             .          .          .
883          .          .          .        445
             .          .          .          .
             .          .          .          .
893          .          .      C107............
             .          .          V
             .          .          V
896          .          .      R107
             .          .          .
             .          .          .
904          .          .          .          .<-------  SPLIT
902          .          .          .      RTB2
             .          .          .          V
             .          .          .          V
905          .          .          .     RSPLIT
             .          .          .          .
             .          .          .          .
911          .          .          .          .        446
             .          .          .          .          .
             .          .          .          .          .
921          .          .      C109........................
             .          .          .
             .          .          .
927          .          .          .-------->  WSH404
924          .          .      DIV5
             .          .          V
             .          .          V
930          .          .      R109
             .          .          .
             .          .          .
936          .          .          .        447
             .          .          .          .
             .          .          .          .
948          .          .          .          .          .<-------  WSH404
946          .          .          .          .      RT404
             .          .          .          .          V
             .          .          .          .          V
949          .          .          .          .      R404
             .          .          .          .          .
             .          .          .          .          .
955          .          .      C110........................
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                 V
                 V
958            R110
                 .
                 .
964       C115............
             V
             V
967       R115
                 .
                 .
974            448
                 .
                 .
984                449
                 .
                 .
994            C6364...........
                 V
                 V
997            R6364
                 .
                 .
1003               450
                 .
                 .
1013               .        451
                 .          .
                 .          .
1025             .          .          .<-------   WSH66
1023             .          .       RT66
                 .          .          .
                 .          .          .
1026             .          .          .         452
                 .          .          .           .
                 .          .          .           .
1036             .          .       C6465...........
                 .          .          V
                 .          .          V
1039             .          .       R6566
                 .          .          .
                 .          .          .
1045           C116.................................
                 V
                 V
1048           BASIN5
                 V
                 V
1055           R116
                 .
                 .
1061               453
                 .
                 .
1071           C117............
                 .
                 .
1074      C118............
             V
             V
1077      R118
                 .
                 .
1086             .-------> BASIN6
1083      DIV7
                 .
                 .
1091             .<-------  BASIN6
1089           RTDIV7
                 V
                 V
1092           RFDIV7
                 .
                 .
1098      CDIV7............
                 .
                 .
1101           454
                 .
                 .
1111      C119............
             V
             V
1114      R454
                 .
                 .
1121           415
                 .
                 .
1133             .          .<-------   SF385
1131             .       RT385
                 .          V
                 .          V
1134             .       RR385
                 .          .
                 .          .
1141      415C........................
             V
             V
1144      R415
                 .
                 .
1151           455
                 .
                 .
1166             .------->   BS455
1161           D455
                 .
                 .
1171             .          .<-------   BS455
1169             .       RT455
                 .          V
                 .          V
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1172          .          .          .      SR455
              .          .          .          .
              .          .          .          .
1178          .          .       C455............
              .          .          .
              .          .          .
1181       455C.......................
              V
              V
1184      SR440
              V
              V
1193      RR455
              .
              .
1199          .        456
              .          .
              .          .
1212          .          .-------> BASIN1
1209          .       DIV1
              .          .
              .          .
1218          .          .------->   WA30
1215          .       DIV2
              .          V
              .          V
1221          .       R456
              .          .
              .          .
1227          .          .        457
              .          .          .
              .          .          .
1237          .       C101............
              .          .
              .          .
1243          .          .-------> BASIN2
1240          .       DIV3
              .          .
              .          .
1248          .          .          .<------- BASIN2
1246          .          .     RTDIV3
              .          .          V
              .          .          V
1249          .          .     RFDIV3
              .          .          .
              .          .          .
1255          .      CDIV3............
              .          V
              .          V
1258          .       R101
              .          .
              .          .
1264          .          .        458
              .          .          .
              .          .          .
1274          .       C103............
              .          V
              .          V
1277          .       R103
              .          .
              .          .
1285          .          .          .<-------   WA30
1283          .          .       RT30
              .          .          V
              .          .          V
1286          .          .        R30
              .          .          .
              .          .          .
1294          .          .          .          .<------- BASIN1
1292          .          .          .       RTB1
              .          .          .          V
              .          .          .          V
1295          .          .          .         B1
              .          .          .          V
              .          .          .          V
1302          .          .          .        RB1
              .          .          .          .
              .          .          .          .
1308          .          .       CDIV............
              .          .          .
              .          .          .
1311          .          .          .        459
              .          .          .          .
              .          .          .          .
1321          .          .        C52............
              .          .          V
              .          .          V
1324          .          .        R52
              .          .          .
              .          .          .
1330          .          .          .        460
              .          .          .          .
              .          .          .          .
1340          .          .       C102............
              .          .          V
              .          .          V
1343          .          .     BASIN3
              .          .          V
              .          .          V
1350          .          .         R3
              .          .          .
              .          .          .
1356          .          .          .        461
              .          .          .          .
              .          .          .          .
1366          .          .       C104............
              .          .          .
              .          .          .
1369          .       C106............
              .          V
              .          V
1372          .       R106
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1378          .          .        462
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              .          .          .
1388          .        C56...........
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              .          .
1391          .          .        480
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              .          .          .
1406          .          .          .-------->   BS480
1401          .          .       D480
              .          .          .
              .          .          .
1411          .          .          .          .<--------   BS480
1409          .          .          .      RT480
              .          .          .          V
              .          .          .          V
1412          .          .          .      SR480
              .          .          .          .
              .          .          .          .
1418          .          .       C480...........
              .          .          .
              .          .          .
1421       480C......................
              V
              V
1424      RR480
              .
              .
1430          .        500
              .          .
              .          .
1440       500C...........
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(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT	10	951.	12.27	114.	31.	15.	.70		
+	ROUTED TO	R10	882.	12.40	114.	31.	15.	.70		
+	ROUTED TO	R12	833.	12.60	114.	31.	15.	.70		
+	HYDROGRAPH AT	20	959.	12.43	128.	32.	16.	1.12		
+	2 COMBINED AT	C20	1663.	12.53	240.	63.	30.	1.82		
+	HYDROGRAPH AT	40	2582.	12.30	252.	66.	32.	2.23		
+	HYDROGRAPH AT	60	1553.	12.40	228.	61.	29.	1.75		
+	3 COMBINED AT	60C	5274.	12.37	708.	188.	90.	5.80		
+	ROUTED TO	SR60	92.	14.40	92.	89.	70.	5.80		
+	ROUTED TO	R60	92.	14.40	92.	89.	70.	5.80		
+	ROUTED TO	RR60	92.	14.53	92.	89.	70.	5.80		
+	HYDROGRAPH AT	80	1868.	12.27	179.	46.	22.	1.48		
+	2 COMBINED AT	80C	1942.	12.27	266.	134.	92.	1.48		
+	ROUTED TO	R80	1919.	12.27	266.	134.	92.	1.48		
+	HYDROGRAPH AT	100	404.	12.20	58.	15.	7.	.48		
+	2 COMBINED AT	100C	2300.	12.27	321.	148.	99.	1.96		
+	ROUTED TO	R100	2292.	12.30	321.	148.	99.	1.96		
+	HYDROGRAPH AT	120	3232.	12.27	326.	88.	42.	2.20		
+	2 COMBINED AT	120C	5469.	12.27	636.	229.	141.	4.16		
+	ROUTED TO	R120	5397.	12.30	636.	229.	140.	4.16		
+	HYDROGRAPH AT	140	632.	12.13	64.	17.	8.	.60		
+	HYDROGRAPH AT	150	135.	13.20	47.	13.	6.	.41		
+	ROUTED TO	R150	134.	13.30	47.	13.	6.	.41		
+	ROUTED TO	R152	133.	13.50	47.	13.	6.	.41		
+	HYDROGRAPH AT	160	217.	12.40	35.	9.	4.	.37		
+	HYDROGRAPH AT	180	785.	12.37	90.	23.	11.	1.00		
+	5 COMBINED AT	180C	6707.	12.30	857.	286.	168.	6.54		
+	HYDROGRAPH AT	210	870.	12.20	80.	21.	10.	.58		
+	ROUTED TO	R210	815.	12.27	80.	21.	10.	.58		
+	HYDROGRAPH AT	240	1405.	12.30	155.	39.	19.	1.40		
+	2 COMBINED AT	240C	2185.	12.30	233.	60.	29.	1.98		
+	ROUTED TO	SR240	634.	12.77	186.	49.	23.	1.98		
+	HYDROGRAPH AT	220	1126.	12.17	98.	25.	12.	.73		
+	2 COMBINED AT	220C	1138.	12.20	279.	73.	35.	2.71		
+	ROUTED TO	SR220	914.	12.43	272.	71.	34.	2.71		

+	HYDROGRAPH AT 190	1403.	12.17	116.	31.	15.	.92
+	ROUTED TO R190	1348.	12.23	116.	31.	15.	.92
+	ROUTED TO R192	1267.	12.30	116.	31.	15.	.92
+	HYDROGRAPH AT 200	806.	12.17	69.	19.	9.	.54
+	3 COMBINED AT 200C	2624.	12.27	447.	119.	57.	4.16
+	ROUTED TO SR200	2493.	12.37	442.	115.	55.	4.16
+	ROUTED TO 200SR	1725.	12.60	320.	85.	41.	4.16
+	2 COMBINED AT C180	6707.	12.30	1170.	369.	208.	10.69
+	ROUTED TO SR180	138.	18.53	138.	137.	111.	10.69
+	ROUTED TO R180	138.	18.50	138.	137.	110.	10.69
+	HYDROGRAPH AT 260	418.	12.10	43.	12.	6.	.27
+	2 COMBINED AT 260C	527.	12.10	175.	148.	117.	.27
+	ROUTED TO R260	514.	12.20	175.	148.	117.	.27
+	HYDROGRAPH AT 280	478.	12.10	42.	12.	6.	.30
+	2 COMBINED AT 280C	945.	12.13	214.	158.	122.	.57
+	ROUTED TO R280	909.	12.20	214.	158.	122.	.57
+	HYDROGRAPH AT 300	875.	12.20	109.	29.	14.	.99
+	2 COMBINED AT 300C	1769.	12.20	319.	185.	135.	1.56
+	ROUTED TO R300	1732.	12.27	319.	185.	135.	1.56
+	ROUTED TO RR300	1699.	12.33	319.	184.	134.	1.56
+	HYDROGRAPH AT 350	1192.	12.20	103.	27.	13.	.97
+	DIVERSION TO SF350	715.	12.20	62.	16.	8.	.97
+	HYDROGRAPH AT D350	477.	12.20	41.	11.	5.	.97
+	ROUTED TO 350R	414.	12.43	41.	11.	5.	.97
+	HYDROGRAPH AT 310	376.	12.33	49.	12.	6.	.56
+	2 COMBINED AT C310	749.	12.40	89.	23.	11.	.94
+	ROUTED TO R310	679.	12.77	89.	23.	11.	.94
+	HYDROGRAPH AT 320	965.	12.20	123.	34.	17.	.97
+	DIVERSION TO BS320	377.	11.97	21.	6.	3.	.97
+	HYDROGRAPH AT D320	965.	12.20	109.	28.	14.	.97
+	HYDROGRAPH AT RT320	377.	11.97	21.	6.	3.	.97
+	ROUTED TO SR320	4.	4.13	4.	4.	3.	.97
+	4 COMBINED AT C320	2601.	12.33	514.	238.	161.	3.47
+	HYDROGRAPH AT 340	1471.	12.17	186.	55.	26.	1.45
+	DIVERSION TO BS340	1471.	12.17	104.	28.	14.	1.45
+	HYDROGRAPH AT D340	1199.	12.33	97.	27.	13.	1.45
+	HYDROGRAPH AT RT340	1471.	12.17	104.	28.	14.	1.45
+	ROUTED TO SR340	19.	9.00	19.	19.	14.	1.45

3 COMBINED AT	C340	3786.	12.33	624.	282.	186.	4.92
HYDROGRAPH AT	RT350	715.	12.20	62.	16.	8.	.97
ROUTED TO	RR350	630.	12.43	62.	16.	8.	.97
HYDROGRAPH AT	355	500.	12.33	69.	18.	9.	.66
2 COMBINED AT	C355	1080.	12.40	130.	34.	16.	1.24
ROUTED TO	R355	971.	12.70	130.	34.	16.	1.24
HYDROGRAPH AT	360	504.	12.23	84.	25.	12.	.67
DIVERSION TO	BS360	504.	12.23	53.	14.	7.	.67
HYDROGRAPH AT	D360	306.	12.63	38.	11.	5.	.67
HYDROGRAPH AT	RT360	504.	12.23	53.	14.	7.	.67
ROUTED TO	SR360	10.	9.83	10.	10.	7.	.67
4 COMBINED AT	360C	4013.	12.33	791.	332.	213.	6.83
HYDROGRAPH AT	370	588.	12.30	79.	21.	10.	.67
HYDROGRAPH AT	395	182.	12.23	25.	7.	3.	.20
2 COMBINED AT	370C	758.	12.30	103.	28.	13.	.87
ROUTED TO	R370	654.	12.67	103.	28.	13.	.87
HYDROGRAPH AT	380	666.	12.27	98.	26.	13.	.97
DIVERSION TO	BS380	666.	12.27	56.	14.	7.	.97
HYDROGRAPH AT	D380	472.	12.57	46.	12.	6.	.97
HYDROGRAPH AT	RT380	666.	12.27	56.	14.	7.	.97
ROUTED TO	SR380	10.	11.33	10.	10.	7.	.97
4 COMBINED AT	380C	4555.	12.63	938.	378.	238.	8.67
HYDROGRAPH AT	390	463.	12.03	33.	10.	5.	.24
DIVERSION TO	BS390	95.	11.73	6.	2.	1.	.24
HYDROGRAPH AT	D390	463.	12.03	30.	8.	4.	.24
HYDROGRAPH AT	RT390	95.	11.73	6.	2.	1.	.24
ROUTED TO	SR390	1.	.90	1.	1.	1.	.24
2 COMBINED AT	390C	464.	12.03	31.	9.	5.	.24
ROUTED TO	RR390	324.	12.50	31.	9.	5.	.24
HYDROGRAPH AT	400	351.	12.23	47.	13.	6.	.62
DIVERSION TO	BS400	262.	12.10	10.	3.	1.	.62
HYDROGRAPH AT	D400	351.	12.23	39.	10.	5.	.62
HYDROGRAPH AT	RT400	262.	12.10	10.	3.	1.	.62
ROUTED TO	SR400	2.	8.70	2.	2.	1.	.62
2 COMBINED AT	C400	353.	12.23	41.	12.	6.	.62
3 COMBINED AT	400C	4994.	12.63	1005.	398.	248.	9.53
HYDROGRAPH AT	385	782.	12.23	87.	24.	12.	.65
DIVERSION TO	SF385	195.	12.23	22.	6.	3.	.65

+	HYDROGRAPH AT	D385	586.	12.23	65.	18.	9.	.65
+	ROUTED TO	385R	475.	12.70	65.	18.	9.	.65
	HYDROGRAPH AT	420	752.	12.20	92.	26.	12.	.85
+	DIVERSION TO	BS420	269.	11.97	15.	4.	2.	.85
+	HYDROGRAPH AT	D420	752.	12.20	83.	22.	10.	.85
+	HYDROGRAPH AT	RT420	269.	11.97	15.	4.	2.	.85
+	ROUTED TO	SR420	13.	11.03	12.	4.	2.	.85
+	4 COMBINED AT	420C	5655.	12.63	1146.	435.	268.	10.87
+	HYDROGRAPH AT	440	180.	12.03	12.	3.	2.	.08
+	ROUTED TO	R70	176.	12.07	12.	3.	2.	.08
+	HYDROGRAPH AT	441	16.	12.03	1.	0.	0.	.01
+	2 COMBINED AT	C108	191.	12.07	14.	4.	2.	.09
+	DIVERSION TO	SPLIT	96.	12.07	7.	2.	1.	.09
+	HYDROGRAPH AT	DIV4	96.	12.07	7.	2.	1.	.09
+	ROUTED TO	R108	88.	12.13	7.	2.	1.	.09
+	HYDROGRAPH AT	442	102.	12.10	9.	2.	1.	.10
+	2 COMBINED AT	C67	187.	12.10	15.	4.	2.	.19
+	DIVERSION TO	BASIN4	115.	12.10	6.	1.	1.	.19
	HYDROGRAPH AT	DIV6	72.	12.10	10.	3.	1.	.19
+	HYDROGRAPH AT	RTDIV6	115.	12.10	6.	1.	1.	.19
+	ROUTED TO	RFDIV6	1.	11.90	1.	1.	1.	.19
+	2 COMBINED AT	CDIV6	74.	12.10	10.	4.	2.	.19
+	HYDROGRAPH AT	443	148.	12.07	14.	4.	2.	.08
+	DIVERSION TO	WSH66	78.	11.90	12.	3.	2.	.08
+	HYDROGRAPH AT	DIV66	70.	12.07	3.	1.	0.	.08
+	ROUTED TO	R113	69.	12.07	3.	1.	0.	.08
+	2 COMBINED AT	C114	140.	12.07	13.	4.	2.	.27
+	HYDROGRAPH AT	444	82.	12.03	5.	1.	1.	.04
+	ROUTED TO	R58	75.	12.07	5.	1.	1.	.04
+	HYDROGRAPH AT	445	296.	12.03	18.	5.	2.	.19
+	2 COMBINED AT	C107	365.	12.03	22.	6.	3.	.23
+	ROUTED TO	R107	365.	12.07	22.	6.	3.	.23
+	HYDROGRAPH AT	RTB2	96.	12.07	7.	2.	1.	.09
+	ROUTED TO	RSPLIT	95.	12.07	7.	2.	1.	.09
	HYDROGRAPH AT	446	65.	12.03	6.	2.	1.	.04
	3 COMBINED AT	C109	520.	12.07	35.	9.	4.	.27
+	DIVERSION TO	WSH404	35.	11.73	8.	2.	1.	.27
+	HYDROGRAPH AT	DIV5	485.	12.07	27.	7.	3.	.27

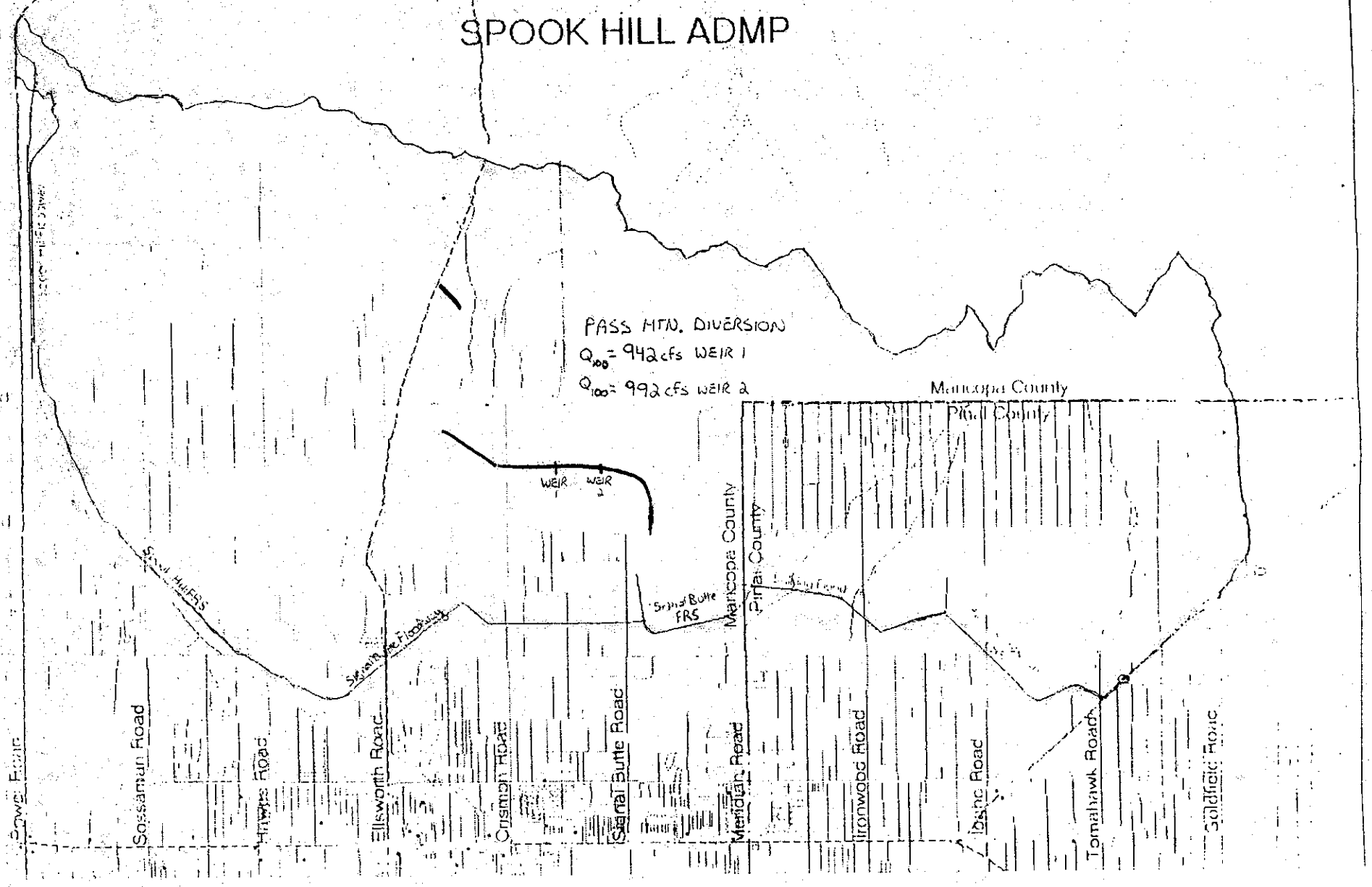
+	ROUTED TO	R109	469.	12.10	27.	7.	3.	.27
+	HYDROGRAPH AT	447	138.	12.07	12.	4.	2.	.09
+	HYDROGRAPH AT	RT404	35.	11.73	8.	2.	1.	.27
+	ROUTED TO	R404	35.	11.90	8.	2.	1.	.27
+	3 COMBINED AT	C110	635.	12.07	46.	13.	6.	.36
+	ROUTED TO	R110	632.	12.10	46.	13.	6.	.36
+	2 COMBINED AT	C115	764.	12.10	59.	17.	8.	.63
+	ROUTED TO	R115	767.	12.10	59.	17.	8.	.63
+	HYDROGRAPH AT	448	88.	12.03	6.	2.	1.	.05
+	HYDROGRAPH AT	449	80.	12.03	5.	1.	1.	.05
+	2 COMBINED AT	C6364	166.	12.03	11.	3.	1.	.09
+	ROUTED TO	R6364	137.	12.17	11.	3.	1.	.09
+	HYDROGRAPH AT	450	61.	12.20	6.	2.	1.	.07
+	HYDROGRAPH AT	451	18.	12.17	2.	1.	0.	.03
+	HYDROGRAPH AT	RT66	78.	11.90	12.	3.	2.	.08
+	HYDROGRAPH AT	452	62.	12.03	4.	1.	1.	.04
+	2 COMBINED AT	C6465	140.	12.03	16.	4.	2.	.04
+	ROUTED TO	R6566	135.	12.10	16.	4.	2.	.04
+	4 COMBINED AT	C116	341.	12.17	35.	9.	4.	.23
+	ROUTED TO	BASIN5	152.	12.47	35.	9.	4.	.23
+	ROUTED TO	R116	150.	12.53	35.	9.	4.	.23
+	HYDROGRAPH AT	453	62.	12.10	7.	2.	1.	.06
+	2 COMBINED AT	C117	169.	12.50	41.	11.	5.	.29
+	2 COMBINED AT	C118	852.	12.10	99.	28.	14.	.92
+	ROUTED TO	R118	842.	12.10	99.	28.	14.	.92
+	DIVERSION TO	BASIN6	243.	12.10	10.	2.	1.	.92
+	HYDROGRAPH AT	DIV7	599.	12.10	89.	25.	13.	.92
+	HYDROGRAPH AT	RTDIV7	243.	12.10	10.	2.	1.	.92
+	ROUTED TO	RFDIV7	1.	11.97	1.	1.	1.	.92
+	2 COMBINED AT	CDIV7	600.	12.10	90.	26.	13.	.92
+	HYDROGRAPH AT	454	157.	12.17	21.	6.	3.	.18
+	2 COMBINED AT	C119	748.	12.13	110.	32.	16.	1.10
+	ROUTED TO	R454	722.	12.20	110.	32.	16.	1.10
+	HYDROGRAPH AT	415	412.	12.17	55.	16.	7.	.45
+	HYDROGRAPH AT	RT385	195.	12.23	22.	6.	3.	.65
+	ROUTED TO	RR385	177.	12.40	22.	6.	3.	.65
+	3 COMBINED AT	415C	1193.	12.20	184.	53.	26.	1.71
+	ROUTED TO	R415	1179.	12.27	184.	53.	26.	1.71

+	HYDROGRAPH AT 455	1346.	12.13	142.	43.	21.	1.11
+	DIVERSION TO BS455	1346.	12.13	137.	37.	18.	1.11
+	HYDROGRAPH AT D455	55.	12.77	16.	6.	3.	1.11
+	HYDROGRAPH AT RT455	1346.	12.13	137.	37.	18.	1.11
+	ROUTED TO SR455	25.	10.47	25.	25.	18.	1.11
+	2 COMBINED AT C455	80.	12.77	41.	31.	21.	1.11
+	3 COMBINED AT 455C	6477.	12.37	1333.	506.	310.	13.69
+	ROUTED TO SR440	808.	13.80	791.	506.	309.	13.69
+	ROUTED TO RR455	808.	14.10	791.	506.	307.	13.69
+	HYDROGRAPH AT 456	468.	12.07	35.	10.	5.	.26
+	DIVERSION TO BASIN1	184.	12.07	8.	2.	1.	.26
+	HYDROGRAPH AT DIV1	284.	12.07	27.	8.	4.	.26
+	DIVERSION TO WA30	58.	12.07	10.	3.	2.	.26
+	HYDROGRAPH AT DIV2	226.	12.07	18.	4.	2.	.26
+	ROUTED TO R456	213.	12.13	18.	4.	2.	.26
+	HYDROGRAPH AT 457	264.	12.07	20.	5.	3.	.19
+	2 COMBINED AT C101	462.	12.10	38.	10.	5.	.45
+	DIVERSION TO BASIN2	165.	12.10	7.	2.	1.	.45
+	HYDROGRAPH AT DIV3	297.	12.10	30.	8.	4.	.45
+	HYDROGRAPH AT RTDIV3	165.	12.10	7.	2.	1.	.45
+	ROUTED TO RFDIV3	2.	11.90	2.	2.	1.	.45
+	2 COMBINED AT CDIV3	299.	12.10	32.	9.	5.	.45
+	ROUTED TO R101	297.	12.10	32.	9.	5.	.45
+	HYDROGRAPH AT 458	356.	12.03	25.	7.	3.	.19
+	2 COMBINED AT C103	635.	12.07	56.	16.	8.	.64
+	ROUTED TO R103	630.	12.07	56.	16.	8.	.64
+	HYDROGRAPH AT RT30	58.	12.07	10.	3.	2.	.26
+	ROUTED TO R30	57.	12.10	10.	3.	2.	.26
+	HYDROGRAPH AT RTB1	184.	12.07	8.	2.	1.	.26
+	ROUTED TO B1	37.	12.23	8.	2.	1.	.26
+	ROUTED TO RB1	37.	12.30	8.	2.	1.	.26
+	2 COMBINED AT CDIV	86.	12.20	17.	5.	3.	.12
+	HYDROGRAPH AT 459	44.	12.03	3.	1.	0.	.03
+	2 COMBINED AT C52	113.	12.10	20.	6.	3.	.15
+	ROUTED TO R52	112.	12.17	20.	6.	3.	.15
+	HYDROGRAPH AT 460	214.	12.07	19.	6.	3.	.14
+	2 COMBINED AT C102	313.	12.07	39.	12.	6.	.29
+	ROUTED TO BASIN3	71.	12.63	39.	12.	6.	.29

+	ROUTED TO	R3	71.	12.77	39.	12.	6.	.29
+	HYDROGRAPH AT	461	161.	12.10	17.	5.	2.	.12
+	2 COMBINED AT	C104	213.	12.10	55.	17.	8.	.41
+	2 COMBINED AT	C106	835.	12.07	110.	32.	16.	1.05
+	ROUTED TO	R106	797.	12.13	110.	32.	16.	1.05
+	HYDROGRAPH AT	462	538.	12.07	40.	11.	5.	.30
+	2 COMBINED AT	C56	1254.	12.10	149.	42.	21.	1.35
+	HYDROGRAPH AT	480	1050.	12.10	96.	29.	14.	.73
+	DIVERSION TO	BS480	455.	11.90	27.	8.	4.	.73
+	HYDROGRAPH AT	D480	1050.	12.10	78.	21.	10.	.73
+	HYDROGRAPH AT	RT480	455.	11.90	27.	8.	4.	.73
+	ROUTED TO	SR480	6.	3.90	6.	6.	4.	.73
+	2 COMBINED AT	C480	1056.	12.10	84.	27.	14.	.73
+	3 COMBINED AT	480C	2511.	12.10	968.	590.	352.	2.09
+	ROUTED TO	RR480	2349.	12.13	965.	590.	351.	2.09
+	HYDROGRAPH AT	500	1073.	12.27	122.	33.	16.	.93
+	2 COMBINED AT	500C	3237.	12.17	1076.	618.	365.	3.02

*** NORMAL END OF HEC-1 ***

SPOOK HILL ADMP



HEC-1 Existing Condition 100-Year, 24hr Storm Levee added to Sub-Basin 350 diverting entire flow to Pass Mountain Diversion. Pass Mountain Diversion extended North-West creating Sub-Basins 295, 300 & 305 from 300. Offline Basins added to Sub-Basins 300 & 305.

```
1****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*            JUN   1998                *
*          VERSION 4.1                 *
*                                      *
*  RUN DATE   11MAY00  TIME  15:50:37  *
*                                      *
****************************************
```

```
****************************************
*                                      *
*   U.S. ARMY CORPS OF ENGINEERS       *
*   HYDROLOGIC ENGINEERING CENTER      *
*          609 SECOND STREET           *
*       DAVIS, CALIFORNIA 95616        *
*          (916) 756-1104              *
*                                      *
****************************************
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X     X  XXXXXXX   XXXXX          X
X     X  X        X     X        XX
X     X  X        X               X
XXXXXXX  XXXX     X        XXXXX  X
X     X  X        X               X
X     X  X        X     X         X
X     X  XXXXXXX   XXXXX         XXX
```

THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

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1                                   HEC-1 INPUT                                                    PAGE  1

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  1           ID   EXISTING LAND USE CALCULATIONS WERE BASED ON 1 YR. FROM 11/5/99
  2           ID   FOR LAS SENDAS       AND LANDISCOR JAN.1999 AERIAL PHOTOGPRAPHS
  3           ID
  4           ID   ALL DAMS WERE ANALYZED WITH NO STORAGE BELOW PRINCIPLE SPILLWAY ELEVATIONS
  5           ID
  6           ID   A CONSERVATIVE ESTIMATE WAS USED FOR THE LOCATION OF THE CENTROID FOR
  7           ID   PRECIPITATION VALUES
  8           ID
  9           ID   ALL CHANNEL ROUTING INFORMATION WAS OBTAINED FROM MCFCD SPOOK HILL   SIGNAL
 10           ID   BUTTE        AND BULLDOG FLOODWAY PLANS
 11           ID
 12           ID   ANALYSIS PREPARED BY WOOD/PATEL - JCD; 11/05/99; FILE:  SPHEX1.DAT
 13           ID
 14           ID   MODEL UPDATE WITH LAS SENDAS WEST BASINS & ALL RETENTION BASINS
 15           ID   DRAINING BACK INTO THE SYSTEM WITHIN 36 HOURS
 16           ID   BY: JCD; 1/4/2000              FILE: SPHEX1RV.DAT
 17           ID
 18           ID   CURRENT MODEL UPDATED WITH ALL PREVIOUS MODEL RUNS
 19           ID   NOTED ABOVE, AND COUNTY COMMENTS DATED MARCH 20, 2000
 20           ID   BY: MW; 04/06/2000        FILE:  S24CE0.DAT
 21           ID
 22           ID   PASS MOUNTAIN DIVERSION UPDATE OF WEIR STRUCTURES MODELED USING 2' CONTOURS
 23           ID   AND AS-BUILT PLANS.  FOR SIMPLICITY NO NEW SEDIMENTATION CONSIDERED WHEN
 24           ID   MODELING STORAGE CAPACITY UPSTREAM OF WEIR STRUCTURES.
 25           ID   ANALYSIS PERFORMED BY WOOD/PATEL; MW;  ON 05/11/2000;  FILE: S24CE11.DAT
 26           ID   DDM MCUHP1 SPOOK HILL AMDP - EXISTING CONDITIONS MODEL - 100YR, 24HR STORM
              *DIAGRAM
 27           IT       2                    1500
 28           IO       3
 29           IN      15
 30           JD    3.81    0.01
 31           PC    .000    .002    .005    .008    .011    .014    .017    .020    .023    .026
 32           PC    .029    .032    .035    .038    .041    .044    .048    .052    .056    .060
 33           PC    .064    .068    .072    .076    .080    .085    .090    .095    .100    .105
 34           PC    .110    .115    .120    .126    .133    .140    .147    .155    .163    .172
 35           PC    .181    .191    .203    .218    .236    .257    .283    .387    .663    .707
 36           PC    .735    .758    .776    .791    .804    .815    .825    .834    .842    .849
 37           PC    .856    .863    .869    .875    .881    .887    .893    .898    .903    .908
 38           PC    .913    .918    .922    .926    .930    .934    .938    .942    .946    .950
 39           PC    .953    .956    .959    .962    .965    .968    .971    .974    .977    .980
 40           PC    .983    .986    .989    .992    .995    .998   1.000
 41           JD    3.58   10.00
 42           JD    3.43   30.00
 43           JD    3.28   60.00
 44           JD    3.22   90.00
 45           JD    3.18  120.00
 46           JD    3.14  150.00
 47           JD    3.05  300.00
 48           JD    2.97  500.00
              * DDM   ***** Updated *****
1                                   HEC-1 INPUT                                                    PAGE  2

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


 49           KK      10
 50           KM   SUB-BASIN 10
 51           KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 52           KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
 53           KM     L = 2.00  Kb = .044  Adj. Slope =  165.0
 54           BA    .702
 55           LG    .350    .320   7.600    .090  15.000
 56           UC    .421    .302
 57           UA       0       3       5       8      12      20      43      75      90      96
 58           UA     100
              * DDM   ***** Preserved *****

 59           KK     R10
 60           KM   ROUTING OF FLOW FROM SUB-BASIN 10 TO R12
 61           RS       4    FLOW      -1
 62           RC    .045     .03    .045    8700    .021
 63           RX       0       1       2      17      27      42      43      44
 64           RY       5       5       5       0       0       5       5       5
              * DDM   ***** Preserved *****
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 65          KK     R12
 66          KM   ROUTING OF FLOW FROM R12 TO SUB-BASIN 20
 67          RS       6    FLOW      -1
 68          RC    .045     .03    .045    4500     .01
 69          RX       0       1      30    37.5    57.5      65      94      95
 70          RY       3     2.5     2.5       0       0     2.5     2.5       3
             * DDM   ***** Updated *****

 71          KK      20
 72          KM   SUB-BASIN 20
 73          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 74          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
 75          KM     L = 2.50  Kb = .041  Adj. Slope =   88.0
 76          BA   1.120
 77          LG    .350    .390   5.800    .190   1.000
 78          UC    .658    .454
 79          UA       0       3       5       8      12      20      43      75      90      96
 80          UA     100
             * DDM   ***** Preserved *****

 81          KK     C20
 82          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 10 AND 20
 83          HC       2
             * DDM   ***** Updated *****

 84          KK      40
 85          KM   SUB-BASIN 40
 86          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 87          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
 88          KM     L = 3.08  Kb = .036  Adj. Slope =  189.0
 89          BA   2.233
 90          LG    .340    .340   4.900    .280   5.000
 91          UC    .496    .264
 92          UA       0       3       5       8      12      20      43      75      90      96
1                                        HEC-1 INPUT                                          PAGE  3

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 93          UA     100
             * DDM   ***** Updated *****

 94          KK      60
 95          KM   SUB-BASIN 60
 96          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 97          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .990
 98          KM     L = 4.19  Kb = .038  Adj. Slope =  209.6
 99          BA   1.746
100          LG    .330    .350   5.800    .190   9.000
101          UC    .596    .477
102          UA       0       3       5       8      12      20      43      75      90      96
103          UA     100
             * DDM   ***** Preserved *****

104          KK     60C
105          KM   HYDROGRAPH COMBINATION FOR APACHE JUNCTION FRS
             *      1       2
106          HC       3
             * DDM   ***** Preserved *****

107          KK    SR60
108          KM   APACHE JUNCTION FRS AS-BUILT PLANS 12/19/88
109          KM   OUTLET PIPE=30"RCP; L=136.6'; INLET INV.=1783.5; OUTLET INV.=1783
110          KM   EMERGENCY SPILLWAY ELEV.=1799.77'; PRINCIPLE SPILLWAY ELEV.=1793.5'
111          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 100 ACRE-FEET
112          RS       1    STOR       0
113          SV       0       1     100     200     300     400
114          SQ       0      71      81      87    91.5      94
115          SE    83.5    93.5      96    97.7      99   99.77
             * DDM   ***** Preserved *****

116          KK     R60
117          KM        ROUTE FLOW THROUGH BULLDOG FLOODWAY FROM APACHE JUNCTION FRS
118          RS       1    FLOW      -1
119          RC    .016    .016    .016    2850    .012
120          RX       0       1       2     2.1     5.6     5.7       6       7
121          RY     3.5     3.5     3.5       0       0     3.5     3.5     3.5
             * DDM   ***** Preserved *****

122          KK    RR60
123          KM   ROUTE FLOW FROM BULLDOG FLOODWAY TO SUB-BASIN 80
124          RS       4    FLOW      -1
125          RC    .016    .016    .016    3500    .005
126          RX       0       1       2     2.1     7.1     7.2       8       9
127          RY     3.5     3.5     3.5       0       0     3.5     3.5     3.5
             * DDM   ***** Updated *****

128          KK      80
129          KM   SUB-BASIN 80
130          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
131          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .991
132          KM     L = 2.69  Kb = .039  Adj. Slope =  229.8
133          BA   1.475
134          LG    .330    .330   5.600    .210   4.000
1                                        HEC-1 INPUT                                          PAGE  4

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

135          UC    .433    .259
136          UA       0       3       5       8      12      20      43      75      90      96
137          UA     100
             * DDM   ***** Preserved *****

138          KK     80C
139          KM   HYDROGRAPH COMBINATION FOR FLOW FROM APACHE JUNCTION FRS & SUB-BASIN 80
140          HC       2   1.475
             * DDM   ***** Preserved *****

141          KK     R80
142          KM   ROUTE FLOW FROM SUB-BASIN 80 TO SUB-BASIN 100
143          RS       1    FLOW      -1
144          RC    .025    .016    .025    1200    .003
145          RX       0       2       6     6.1    41.1    41.2    56.2    58.2
146          RY     5.5     4.5     4.5       0       0     4.5     4.5     5.5
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            * DDM   ***** Updated *****

147         KK     100
148         KM   SUB-BASIN 100
149         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
150         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
151         KM     L = 1.94  Kb = .046  Adj. Slope =  108.0
152         BA    .484
153         LG    .320    .290   5.100    .260   3.000
154         UC    .533    .473
155         UA       0       5      16      30      65      77      84      90      94      97
156         UA     100
            * DDM   ***** Preserved *****

157         KK    100C
158         KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 80 & 100
159         HC       2
            * DDM   ***** Preserved *****

160         KK    R100
161         KM   ROUTE FLOW FROM SUB-BASIN 100 TO SUB-BASIN 120
162         RS       1    FLOW      -1
163         RC    .016    .016    .016     940    .005
164         RX       0       1       2     2.1    52.1    52.2      53      54
165         RY     4.5     4.5     4.5       0       0     4.5     4.5     4.5
            * DDM   ***** Updated *****

166         KK     120
167         KM   SUB-BASIN 120
168         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
169         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
170         KM     L = 3.07  Kb = .037  Adj. Slope =  239.0
171         BA   2.202
172         LG    .330    .280   6.800    .130  11.000
173         UC    .429    .226
174         UA       0       3       5       8      12      20      43      75      90      96
175         UA     100
            * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE  5

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

176         KK    120C
177         KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 100 & 120
178         HC       2
            * DDM   ***** Preserved *****

179         KK    R120
180         KM   ROUTE FLOW FROM SUB-BASIN 120 TO SIGNAL BUTTE FRS
181         RS       1    FLOW      -1
182         RC    .025    .016    .025    2100    .005
183         RX       0       6      10    10.1    60.1    60.2    74.2    80.2
184         RY       8       5       5       0       0       5       5       8
            * DDM   ***** Updated *****

185         KK     140
186         KM   SUB-BASIN 140
187         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
188         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
189         KM     L = 1.61  Kb = .044  Adj. Slope =  149.0
190         BA    .598
191         LG    .310    .280   4.200    .440   5.000
192         UC    .421    .278
193         UA       0       5      16      30      65      77      84      90      94      97
194         UA     100
            * DDM   ***** Updated *****

195         KK     150
196         KM   SUB-BASIN 150
197         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
198         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
199         KM     L = 1.50  Kb = .047  Adj. Slope =  315.0
200         BA    .408
201         LG    .350    .360   5.100    .260   7.000
202         UC   1.579   1.417
203         UA       0       3       5       8      12      20      43      75      90      96
204         UA     100
            * DDM   ***** Preserved *****

205         KK    R150
206         KM   ROUTING OF FLOW FROM SUB-BASIN 150 TO R152
207         RS       3    FLOW      -1
208         RC    .045     .04    .045    3100    .032
209         RX       0       1       2      23      33      54      55      56
210         RY       7       7       7       0       0       7       7       7
            * DDM   ***** Preserved *****

211         KK    R152
212         KM   ROUTING OF FLOW FROM R152 TO SUB-BASIN 160
213         RS       6    FLOW      -1
214         RC    .045     .03    .045    5900    .019
215         RX       0       1       2       8      33      39      40      41
216         RY       2       2       2       0       0       2       2       2
            * DDM   ***** Updated *****
1                                    HEC-1 INPUT                                          PAGE  6

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

217         KK     160
218         KM   SUB-BASIN 160
219         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
220         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
221         KM     L = 2.10  Kb = .047  Adj. Slope =  129.0
222         BA    .369
223         LG    .340    .330   4.150    .440   1.000
224         UC    .587    .655
225         UA       0       3       5       8      12      20      43      75      90      96
226         UA     100
            * DDM   ***** Updated *****

227         KK     180
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228          KM   SUB-BASIN 180
229          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
230          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
231          KM     L = 2.42  Kb = .041  Adj. Slope =  140.0
232          BA   1.000
233          LG    .350    .350   4.150    .430    .000
234          UC    .571    .403
235          UA       0       3       5       8      12      20      43      75      90      96
236          UA     100
             * DDM   ***** Preserved *****

237          KK    180C
238          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
239          HC       5

240          KK     350
241          KM   SUB-BASIN 350
242          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
243          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
244          KM     L = 2.22  Kb = .042  Adj. Slope =  311.0
245          BA    .935
246          LG    .350    .350   4.600    .330   5.000
247          UC    .367    .239
248          UA       0       3       5       8      12      20      43      75      90      96
249          UA     100
             * DDM   ***** Preserved *****

250          KK    350R
251          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING
252          KM   ROUTING OF MAIN FLOW FROM DIVERSION OF SUB-BASIN 350 TO SUB-BASIN 310
253          RS       7    FLOW      -1
254          RC    .045    .035    .045    7650    .025
255          RX       0       1      40      46      56      62     102     103
256          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

257          KK     310
258          KM   SUB-BASIN 310
259          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
260          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
261          KM     L = 2.70  Kb = .045  Adj. Slope =  283.5
262          BA    .555
263          LG    .350    .350   3.910    .480    .000
264          UC    .483    .511
265          UA       0       3       5       8      12      20      43      75      90      96
266          UA     100
             * DDM   ***** Preserved *****

267          KK    C310
268          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 350 & 310
269          HC       2
             * DDM   ***** Preserved *****

270          KK    R310
271          KM   ROUTING OF FLOW FROM SUB-BASIN 310 TO R312
272          RS       3    FLOW      -1
273          RC    .045     .03    .045    1500    .021
274          RX       0       1       2       8      28      34      35      36
275          RY       2       2       2       0       0       2       2       2

276          KK    R312
277          KM   ROUTING OF FLOW FROM R312 TO SUB-BASIN 295
278          RS       1    FLOW      -1
279          RC    .045    .022    .045    1300   .0125
280          RX       0       1       2      10      50      58      59      60
281          RY       4       4       4       0       0       4       4       4
             * DDM   ***** Updated *****

282          KK     295
283          KM   SUB-BASIN 295
284          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
285          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
286          KM     L = 1.60  Kb = .047  Adj. Slope =  131.0
287          BA    .380
288          LG    .350    .350   4.900    .280    .000
289          UC    .450    .386
290          UA       0       3       5       8      12      20      43      75      90      96
291          UA     100
             * DDM   ***** Preserved *****

292          KK    295C
293          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 310 & 295
294          HC       2

295          KK    295R
296          KM   ROUTING OF FLOW FROM SUB-BASIN 295 TO BEGINNING OF PASS MTN. DIVERSION.
297          RS       1    FLOW      -1
298          RC    .045    .022    .045    1300   .0125
299          RX       0       1       2      10      50      58      59      60
300          RY       4       4       4       0       0       4       4       4
             * DDM   ***** Updated *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

301          KK     210
302          KM   SUB-BASIN 210
303          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
304          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .995
305          KM     L = 1.90  Kb = .043  Adj. Slope =  315.0
306          BA    .790
307          LG    .350    .360   6.800    .130   4.000
308          UC    .317    .197
309          UA       0       3       5       8      12      20      43      75      90      96
310          UA     100
             * DDM   ***** Preserved *****

311          KK    R210
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312          KM   ROUTING OF FLOW FROM SUB-BASIN 210 TO SUB-BASIN 220
313          RS       2    FLOW      -1
314          RC    .045     .03    .045    5100     .022
315          RX       0       1       2      14       34       46       47       48
316          RY       4       4       4       0        0        4        4        4
             * DDM   ***** Updated *****

317          KK     240
318          KM   SUB-BASIN 240
319          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
320          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
321          KM     L = 3.00  Kb = .046  Adj. Slope =  304.6
322          BA    .484
323          LG    .350    .350   7.000    .120   4.000
324          UC    .446    .550
325          UA       0       3       5       8       12       20       43       75       90       96
326          UA     100
             * DDM   ***** Preserved *****

327          KK    240C
328          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
329          HC       3
             * DDM   ***** Preserved *****

330          KK   SR240
331          KM   DIGITAL MAPPING SHOWS SEDIMENTATION.  FOR SIMPLICITY NO ADDITIONAL
332          KM   SEDIMENTATION WILL BE CONSIDERED FOR STORAGE ROUTING ANALYSIS. 5/11/00
333          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
334          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
335          RS       1    STOR       0
336          SA    1.38    14.2    36.5
337          SE       0       5      11
338          SS       5      42       3     1.5
             * DDM   ***** Updated *****

339          KK     220
340          KM   SUB-BASIN 220
341          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
342          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
343          KM     L = 1.92  Kb = .043  Adj. Slope =  315.0
344          BA    .725
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

345          LG    .350    .350   7.000    .120   4.000
346          UC    .317    .209
347          UA       0       3       5       8       12       20       43       75       90       96
348          UA     100
             * DDM   ***** Preserved *****

349          KK    220C
350          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
351          HC       2
             * DDM   ***** Preserved *****

352          KK   SR220
353          KM   DIGITAL MAPPING SHOWS SEDIMENTATION.  FOR SIMPLICITY NO ADDITIONAL
354          KM   SEDIMENTATION WILL BE CONSIDERED FOR STORAGE ROUTING ANALYSIS. 5/11/00
355          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
356          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
357          RS       1    STOR       0
358          SA     .78     4.1    13.7
359          SE       0       3      10
360          SS       3      65       3     1.5
             * DDM   ***** Updated *****

361          KK     190
362          KM   SUB-BASIN 190
363          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
364          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
365          KM     L = 1.91  Kb = .042  Adj. Slope =  315.0
366          BA    .918
367          LG    .350    .390   5.800    .190   8.000
368          UC    .321    .185
369          UA       0       3       5       8       12       20       43       75       90       96
370          UA     100
             * DDM   ***** Preserved *****

371          KK    R190
372          KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
373          RS       2    FLOW      -1
374          RC    .045     .03    .045    4740     .03
375          RX       0       1       2      17       37       52       53       54
376          RY       5       5       5       0        0        5        5        5
             * DDM   ***** Preserved *****

377          KK    R192
378          KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
379          RS       2    FLOW      -1
380          RC    .045    .035    .045    2200    .018
381          RX       0       1      50      59       79       88      137      138
382          RY     3.5       3       3       0        0        3        3      3.5
             * DDM   ***** Updated *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

383          KK     200
384          KM   SUB-BASIN 200
385          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
386          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
387          KM     L = 1.92  Kb = .045  Adj. Slope =  315.0
388          BA    .535
389          LG    .350    .390   5.700    .200  10.000
390          UC    .338    .267
391          UA       0       3       5       8       12       20       43       75       90       96
392          UA     100
             * DDM   ***** Preserved *****

393          KK    200C
394          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 220 & 200
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395          HC       3
             * DDM   ***** Preserved *****

396          KK   SR200
397          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
398          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
399          RS       1     STOR       0
400          SA    2.56      3.1      9.4
401          SE       0        3       10
402          SS       3      112        3      1.5

403          KK   200SR
404          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
405          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
406          RS       1     STOR       0
407          SA       8      9.2      9.2
408          SE       0        7       10
409          SS       7      251        3      1.5
             * DDM   ***** Preserved *****

410          KK    C180
411          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
             *      1        2
412          HC       2
             * DDM   ***** Updated *****

413          KK   SR180
414          KM   SIGNAL BUTTE FRS DATED 1/28/85
415          KM   OUTLET PIPE=36"RCP; L= 147';  INLET INV.=1690; OUTLET INV.=1687
416          KM   EMERGENCY SPILLWAY ELEV.=1712.4; PRINCIPLE SPILLWAY ELEV.=1701
417          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 250 ACRE-FEET
418          RS       1     STOR       0
419          SV       0        1      250      500      750     1060
420          SQ       0    106.5    125.5    137.5      146      160
421          SE      90      101    104.5      107      109    112.4
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9.......10

422          KK    R180
423          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
424          KM   ROUTE FLOW FROM SIGNAL BUTTE FRS TO SUB-BASIN 260
425          RS       1     FLOW      -1
426          RC    .035     .025     .035     1500     .003
427          RX       0        1        2     22.6     38.6     59.2       60       61
428          RY     9.3      9.3      9.3        0        0      9.3      9.3      9.3
             * DDM   ***** Updated *****

429          KK     260
430          KM   SUB-BASIN 260
431          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
432          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
433          KM     L =  .81  Kb = .049  Adj. Slope =   68.0
434          BA    .267
435          LG    .300     .170    6.800     .160   15.000
436          UC    .363     .215
437          UA       0        5       16       30       65       77       84       90       94       97
438          UA     100
             * DDM   ***** Preserved *****

439          KK    260C
440          KM   HYDROGRAPH COMBINATION FOR OUTFLOW OF SIGNAL BUTTE FRS & SUB-BASIN 260
441          HC       2     .267
             * DDM   ***** Preserved *****

442          KK    R260
443          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
444          KM   ROUTE FLOW FROM SUB-BASIN 260 TO SUB-BASIN 280
445          RS       3     FLOW      -1
446          RC    .035     .025     .035     2300     .003
447          RX       0        1        2     23.4     43.4     64.8       65       66
448          RY     9.7      9.7      9.7        0        0      9.7      9.7      9.7
             * DDM   ***** Updated *****

449          KK     280
450          KM   SUB-BASIN 280
451          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
452          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
453          KM     L =  .77  Kb = .049  Adj. Slope =   84.0
454          BA    .304
455          LG    .300     .250    5.300     .290   15.000
456          UC    .333     .175
457          UA       0        5       16       30       65       77       84       90       94       97
458          UA     100
             * DDM   ***** Preserved *****

459          KK    280C
460          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 260 & SUB-BASIN 280
461          HC       2
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9.......10

462          KK    R280
463          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
464          KM   ROUTE FLOW FROM SUB-BASIN 280 TO SUB-BASIN 300
465          RS       2     FLOW      -1
466          RC    .035     .025     .035     2500     .003
467          RX       0        1        2     23.4     43.4     64.8       65       66
468          RY     9.7      9.7      9.7        0        0      9.7      9.7      9.7
             * DDM   ***** Updated *****

469          KK     300
470          KM   SUB-BASIN 300
471          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
472          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
473          KM     L =  .80  Kb = .049  Adj. Slope =  100.0
474          BA    .297
475          LG    .320     .280    4.200     .480   11.000
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476          UC    .333    .183
477          UA       0       5      16      30      65      77      84      90      94      97
478          UA     100
             * DDM   ***** Preserved *****

479          KK    C300
480          KM   HYDROGRAPH COMBINATION OF DIVERTED FLOW
481          HC       2
             * DDM   ***** Preserved *****

482          KK    D300
483          KM   DIVERT FLOW INTO OFFLINE BASIN AT SIGNAL BUTTE FLOODWAY TO BE COMBINED
484          KM   LATER WITH BASIN 305 AT END OF SIGNAL BUTTE FLOODWAY
485          DT   DIV300
486          DI       0     300    5000
487          DQ       0       0    4700
             * DDM   ***** Preserved *****

488          KK   RTDIV300
489          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
490          DR   DIV300
             * DDM   ***** Preserved *****

491          KK   SRDIV300
492          KM   RETRIEVE FLOW INTO BASIN AND BLEED OFF WITHIN 36 HOURS
493          KM
494          RS       1    STOR       0
495          SV       0      60
496          SE       0      12
497          SQ       0     300
             * DDM   ***** Preserved *****

498          KK    300C
499          KM   HYDROGRAPH COMBINATION OF DIVERTED FLOW
500          HC       2
             * DDM   ***** Updated *****
1                                    HEC-1 INPUT                                          PAGE 13

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

501          KK     305
502          KM   SUB-BASIN 305
503          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
504          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
505          KM     L = 1.20  Kb = .047  Adj. Slope =   92.0
506          BA    .377
507          LG    .340    .330   4.450    .380   8.000
508          UC    .438    .298
509          UA       0       3       5       8      12      20      43      75      90      96
510          UA     100
             * DDM   ***** Preserved *****

511          KK    D305
512          KM   DIVERT FLOW INTO OFFLINE BASIN TO BE COMBINED LATER WITH PASS MOUNTAIN
513          KM   DIVERSION FLOW AT END OF SIGNAL BUTTE FLOODWAY
514          DT    305D
515          DI       0    1000
516          DQ       0    1000
             * DDM   ***** Preserved *****

517          KK   RT305D
518          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
519          DR    305D
             * DDM   ***** Preserved *****

520          KK   SR305D
521          KM   RETRIEVE FLOW INTO BASIN AND BLEED OFF WITHIN 36 HOURS
522          KM
523          RS       1    STOR       0
524          SV       0      25
525          SE       0       6
526          SQ       0     100
             * DDM   ***** Preserved *****

527          KK    305C
528          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 280 & 300
529          HC       3
             * DDM   ***** Preserved *****

530          KK    R305
531          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
532          KM   ROUTE FLOW FROM SUB-BASIN 300 TO START OF FLOODWAY CONCRETE CHANNEL
533          RS       2    FLOW      -1
534          RC    .035    .025    .035    2200    .003
535          RX       0       1       2    23.4    55.4    76.8      77      78
536          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Preserved *****

537          KK   RR305
538          KM   CHANNEL GEOMETRY FOR SPOOK HILL FRS OBTAINED FROM AS-BUILTS PLANS.
539          KM   CONTINUE TO ROUTE FLOW WITHIN CONCRETE CHANNEL TO SPOOK HILL FRS
540          RS       1    FLOW      -1
541          RC    .016    .016    .016    6050   .0146
542          RX       0       1       2     2.1    16.1    16.2      17      18
1                                    HEC-1 INPUT                                          PAGE 14

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

543          RY     7.5     7.5     7.5       0       0     7.5     7.5     7.5
             *        1       2
             * DDM   ***** Updated *****

544          KK     320
545          KM   SUB-BASIN 320
546          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
547          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .995
548          KM     L = 1.60  Kb = .042  Adj. Slope =  106.0
549          BA    .870
550          LG    .310    .290   4.500    .380  15.000
551          UC    .450    .240
552          UA       0       5      16      30      65      77      84      90      94      97
553          UA     100
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            * DDM   ***** Preserved *****

554         KK    D320
555         KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
556         KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
557         KM   SIERRA HEIGHTS       FALCON RIDGE    & MARBLE CREEK
558         KM       MAXIMUM VOLUME DIVERSION = 12.27acre-feet
            *      1
559         DT   BS320   12.27
560         DI       0   10000
561         DQ       0   10000
            * DDM   ***** Preserved *****

562         KK   RT320
563         KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
564         DR   BS320
            * DDM   ***** Preserved *****

565         KK   SR320
566         KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
567         KM   12.27 ACRE-FEETx43560/36x3600=4.1cfs
            *      1
568         RS       1    STOR       0
569         SV       0     .01    12.3
570         SQ       0     4.2     4.2

571         KK    C320
572         KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
573         HC       3
            * DDM   ***** Updated *****

574         KK     340
575         KM   SUB-BASIN 340
576         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
577         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .991
578         KM     L = 2.40  Kb = .042  Adj. Slope =  160.0
579         BA   1.449
580         LG    .280    .280   4.150    .520  21.000
581         UC    .512    .287
582         UA       0       5      16      30      65      77      84      90      94      97
583         UA     100
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 15

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

584         KK    D340
585         KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
586         KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
587         KM   GRANDVIEW ESTATES    BOULDER MOUNTAIN & 33% OF MESA HIGHLANDS
588         KM       MAXIMUM VOLUME DIVERSION = 56.0 acre-feet
            *      1
589         DT   BS340      56
590         DI       0   10000
591         DQ       0   10000
            * DDM   ***** Preserved *****

592         KK   RT340
593         KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
594         DR   BS340
            * DDM   ***** Preserved *****

595         KK   SR340
596         KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
597         KM    56.0 ACRE-FEETx43560/36x3600=18.8cfs
            *      1
598         RS       1    STOR       0
599         SV       0     .01      56
600         SQ       0    18.9    18.9
            * DDM   ***** Preserved *****

601         KK    C340
602         KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
603         HC       3
            * DDM   ***** Updated *****

604         KK     355
605         KM   SUB-BASIN 355
606         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
607         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
608         KM     L = 3.00  Kb = .044  Adj. Slope =  284.0
609         BA    .694
610         LG    .340    .340   4.450    .370   4.000
611         UC    .488    .494
612         UA       0       3       5       8      12      20      43      75      90      96
613         UA     100
            * DDM   ***** Preserved *****

614         KK    R355
615         KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
616         KM   ROUTING OF FLOW FROM SUB-BASIN 355 TO SUB-BASIN 360
617         RS       9    FLOW      -1
618         RC    .045    .035    .045   10100    .026
619         RX       0       1      40      46      56      62     102     103
620         RY       3       2       2       0       0       2       2       3
            * DDM   ***** Updated *****
1                                   HEC-1 INPUT                                          PAGE 16

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

621         KK     360
622         KM   SUB-BASIN 360
623         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
624         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
625         KM     L = 2.10  Kb = .048  Adj. Slope =  124.0
626         BA    .670
627         LG    .260    .270   4.100    .560  20.000
628         UC    .587    .466
629         UA       0       5      16      30      65      77      84      90      94      97
630         UA     100
            * DDM   ***** Preserved *****
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631          KK    D360
632          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
633          KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
634          KM        MAXIMUM VOLUME DIVERSION = 28.6 acre-feet
             *      1
635          DT   BS360    28.6
636          DI       0   10000
637          DQ       0   10000
             * DDM   ***** Preserved *****

638          KK   RT360
639          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
640          DR   BS360
             * DDM   ***** Preserved *****

641          KK   SR360
642          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
643          KM    28.6 ACRE-FEETx43560/36x3600=9.6cfs
644          RS       1    STOR       0
645          SV       0     .01    28.6
646          SQ       0     9.6     9.6
             * DDM   ***** Preserved *****

647          KK    360C
648          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
649          HC       4
             * DDM   ***** Updated *****

650          KK     370
651          KM   SUB-BASIN 370
652          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
653          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
654          KM     L = 2.90  Kb = .044  Adj. Slope =  294.6
655          BA    .667
656          LG    .340    .320   4.650    .330   9.000
657          UC    .454    .455
658          UA       0       3       5       8      12      20      43      75      90      96
659          UA     100
             * DDM   ***** Updated *****
1                                    HEC-1 INPUT                                          PAGE 17

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

660          KK     395
661          KM   SUB-BASIN 395
662          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
663          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
664          KM     L = 1.60  Kb = .051  Adj. Slope =  215.8
665          BA    .198
666          LG    .330    .320   4.900    .300  10.000
667          UC    .383    .468
668          UA       0       3       5       8      12      20      43      75      90      96
669          UA     100

670          KK    370C
671          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
672          HC       2
             * DDM   ***** Updated *****

673          KK    R370
674          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
675          KM   ROUTING OF FLOW FROM SUB-BASINS 370 AND 395 TO SUB-BASIN 380.
676          RS      11    FLOW      -1
677          RC    .045    .035    .045   10250    .023
678          RX       0       1      40      46      56      62     102     103
679          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

680          KK     380
681          KM   SUB-BASIN 380
682          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
683          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
684          KM     L = 2.20  Kb = .048  Adj. Slope =  114.0
685          BA    .972
686          LG    .300    .310   4.150    .500   7.000
687          UC    .658    .444
688          UA       0       5      16      30      65      77      84      90      94      97
689          UA     100
             * DDM   ***** Preserved *****

690          KK    D380
691          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
692          KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
693          KM        MAXIMUM VOLUME DIVERSION = 28.6 acre-feet
             *      1
694          DT   BS380    28.6
695          DI       0   10000
696          DQ       0   10000
             * DDM   ***** Preserved *****

697          KK   RT380
698          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
699          DR   BS380
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 18

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

700          KK   SR380
701          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
702          KM    28.6 ACRE-FEETx43560/36x3600=9.6cfs
703          RS       1    STOR       0
704          SV       0     .01    28.6
705          SQ       0     9.6     9.6
             * DDM   ***** Preserved *****

706          KK    380C
707          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
708          HC       4
             * DDM   ***** Updated *****
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709          KK     390
710          KM   SUB-BASIN 390
711          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
712          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
713          KM     L =  .70  Kb = .050  Adj. Slope =  299.4
714          BA    .244
715          LG    .300    .250   4.700    .380  18.000
716          UC    .204    .107
717          UA       0       5      16      30      65      77      84      90      94      97
718          UA     100
             * DDM   ***** Preserved *****

719          KK    D390
720          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
721          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THUNDER MOUNTAIN ESTATES
722          KM        MAXIMUM VOLUME DIVERSION  = 3.5 acre-feet
             *      1
723          DT   BS390     3.5
724          DI       0   10000
725          DQ       0   10000
             * DDM   ***** Preserved *****

726          KK   RT390
727          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
728          DR   BS390
             * DDM   ***** Preserved *****

729          KK   SR390
730          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
731          KM     3.5 ACRE-FEETx43560/36x3600=1.2cfs
732          RS       1    STOR       0
733          SV       0     .01     3.5
734          SQ       0     1.2     1.2
             * DDM   ***** Preserved *****

735          KK    390C
736          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
737          HC       2
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 19

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

738          KK   RR390
739          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
740          KM   FROM SUB-BASIN 390 TO SUB-BASIN 400
741          RS      14    FLOW      -1
742          RC    .045    .045    .045    8800    .020
743          RX       0       1      40      46      56      62     102     103
744          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

745          KK     400
746          KM   SUB-BASIN 400
747          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
748          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
749          KM     L = 1.64  Kb = .046  Adj. Slope =  110.0
750          BA    .616
751          LG    .320    .320   3.130    .930   6.000
752          UC    .592    .405
753          UA       0       5      16      30      65      77      84      90      94      97
754          UA     100
             * DDM   ***** Preserved *****

755          KK    D400
756          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
757          KM   DETENTION/RETENTION BASIN LOCATED WITHIN SAGUARO VISTA SUBDIVISION
758          KM        MAXIMUM VOLUME DIVERSION = 5.6 ACRE-FEET
             *      1
759          DT   BS400     5.6
760          DI       0   10000
761          DQ       0   10000
             * DDM   ***** Preserved *****

762          KK   RT400
763          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
764          DR   BS400
             * DDM   ***** Preserved *****

765          KK   SR400
766          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
767          KM     5.6 ACRE-FEETx43560/36x3600 = 2 cfs
768          RS       1    STOR       0
769          SV       0     .01     5.6
770          SQ       0       2       2
             * DDM   ***** Preserved *****

771          KK    C400
772          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
773          HC       2
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 20

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

774          KK    400C
775          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
776          HC       3
             * DDM   ***** Updated *****

777          KK     385
778          KM   SUB-BASIN 385
779          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
780          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
781          KM     L = 2.30  Kb = .044  Adj. Slope =  303.0
782          BA    .647
783          LG    .350    .370   5.600    .210  13.000
784          UC    .375    .311
785          UA       0       3       5       8      12      20      43      75      90      96
786          UA     100
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            * DDM   ***** Preserved *****

 787        KK    D385
 788        KM   DIVERT FLOW INTO SUB-BASINS 415 & 420
 789        DT   SF385
 790        DI       0   10000
 791        DQ       0    2500
            * DDM   ***** Preserved *****

 792        KK    385R
 793        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
 794        KM   ROUTING OF FLOW DIVERSION FROM SUB-BASIN 385 INTO SUB-BASIN 420
 795        RS      14    FLOW      -1
 796        RC    .045     .04    .045   10250    .022
 797        RX       0       1      40      46      56      62     102     103
 798        RY       3       2       2       0       0       2       2       3
            * DDM   ***** Updated *****

 799        KK     420
 800        KM   SUB-BASIN 420
 801        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 802        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .995
 803        KM     L = 1.91  Kb = .042  Adj. Slope =  120.0
 804        BA    .849
 805        LG    .310    .270   3.880    .580  12.000
 806        UC    .512    .325
 807        UA       0       5      16      30      65      77      84      90      94      97
 808        UA     100
            * DDM   ***** Preserved *****

 809        KK    D420
 810        KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
 811        KM   DETENTION/RETENTION BASINS LOCATED WITHIN GRAY FOX SUBDIVISION
 812        KM        MAXIMUM VOLUME DIVERSION = 8.65 acre-feet
            *      1
 813        DT   BS420    8.65
 814        DI       0   10000
 815        DQ       0   10000
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                    PAGE 21

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 816        KK   RT420
 817        KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
 818        DR   BS420
            * DDM   ***** Preserved *****

 819        KK   SR420
 820        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
 821        KM   38.55 ACRE-FEETx43560/36x3600=13cfs
 822        RS       1    STOR       0
 823        SV       0     .01   38.55
 824        SQ       0      13      13
            * DDM   ***** Preserved *****

 825        KK    420C
 826        KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
 827        HC       4   10.87
            * DDM   ***** Updated *****

 828        KK     440
 829        KM   SUB-BASIN 440
 830        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 831        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
 832        KM     L =  .40  Kb = .039  Adj. Slope =  315.0
 833        BA    .080
 834        LG    .190    .380   6.400    .140  13.000
 835        UC    .129    .077
 836        UA       0       3       5       8      12      20      43      75      90      96
 837        UA     100
            * DDM   ***** Preserved *****

 838        KK     R70
 839        KM   ROUTE FLOW FROM SUB-BASIN 440 TO C108
 840        RS       1    FLOW      -1
 841        RC     .05    .035     .05    2250     .08
 842        RX    1000    1025    1050    1070    1075    1095    1120    1145
 843        RY      30    22.9    15.7      10      10    15.7    22.9      30
            * DDM   ***** Updated *****

 844        KK     441
 845        KM   SUB-BASIN 441
 846        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 847        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
 848        KM     L =  .28  Kb = .069  Adj. Slope =  315.0
 849        BA    .010
 850        LG    .300    .250   5.600    .220   5.000
 851        UC    .150    .225
 852        UA       0       5      16      30      65      77      84      90      94      97
 853        UA     100
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                    PAGE 22

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 854        KK    C108
 855        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 440 & 441
 856        HC       2
            * DDM   ***** Preserved *****

 857        KK    DIV4
 858        KM        SPLIT FLOW WITH TWO 42 INCH PIPES TO WEST AND SOUTH
            *      1
 859        DT   SPLIT
 860        DI       0      14      40      82     120     154     180
 861        DQ       0       7      20      41      60      77      90
            * DDM   ***** Preserved *****

 862        KK    R108
 863        KM        ROUTE FLOW FROM SUB-BASIN C108 TO C67
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 864          RS      2    FLOW      -1
 865          RC    .05    .035     .05    3200      .1
 866          RX   1000    1025    1050    1070    1075    1095    1120    1145
 867          RY     30    22.9    15.7      10      10    15.7    22.9      30
              * DDM   ***** Updated *****

 868          KK     442
 869          KM   SUB-BASIN 442
 870          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 871          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
 872          KM     L =  .83  Kb = .055  Adj. Slope =  274.2
 873          BA    .100
 874          LG    .300    .270   3.290    .770   5.000
 875          UC    .258    .264
 876          UA       0       5      16      30      65      77      84      90      94      97
 877          UA     100
              * DDM   ***** Preserved *****

 878          KK     C67
 879          KM   COMBINE FLOW FROM SUB-BASIN 442 & DIV4
 880          HC       2
              * DDM   ***** Preserved *****

 881          KK    DIV6
 882          KM        OFFLINE BASIN WITH 25 FOOT WEIR SET AT 2.5 FEET ABOVE BOTTOM OF CHANNEL
 883          KM        FLOW CONTINUES BEYOND BASIN THROUGH 2-30" PIPES
              *      1
 884          DT  BASIN4
 885          DI       0      10      32      44    79.9   132.5     198   272.9   356.8
 886          DQ       0       0       0       0    23.9    67.5     124   190.9   266.8
              * DDM   ***** Preserved *****

 887          KK  RTDIV6
 888          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
 889          DR  BASIN4
              * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 23

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 890          KK  RFDIV6
 891          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
 892          KM     3.3 ACRE-FEETx43560/36x3600=1.1cfs
              *      1
 893          RS       1    STOR       0
 894          SV       0     .01     3.3
 895          SQ       0     1.1     1.1
              * DDM   ***** Preserved *****

 896          KK   CDIV6
 897          KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
 898          HC       2
              * DDM   ***** Updated *****

 899          KK     443
 900          KM   SUB-BASIN 443
 901          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 902          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
 903          KM     L =  .71  Kb = .050  Adj. Slope =  315.0
 904          BA    .080
 905          LG    .250    .190   8.000    .080  10.000
 906          UC    .196    .194
 907          UA       0       5      16      30      65      77      84      90      94      97
 908          UA     100
              * DDM   ***** Preserved *****

 909          KK   DIV66
 910          KM        DIVERT FLOW INTO 3 NATURAL WASHES WITH ONE 24" PIPE IN EACH WASH.
 911          KM        EACH PIPE CAPACITY BASED ON 4 FEET OF HEAD
 912          DT   WSH66
 913          DI       0      78     100     200
 914          DQ       0      78      78      78
              * DDM   ***** Preserved *****

 915          KK    R113
 916          KM        ROUTE FLOW FROM C113 TO C114
 917          RS       1    FLOW      -1
 918          RC    .019    .019    .019    1300    .029
 919          RX   1000    1004    1008    1012    1018    1022    1026    1030
 920          RY     17   15.33   12.67      10      10   12.67   15.33      17
              * DDM   ***** Preserved *****

 921          KK    C114
 922          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 67 AND C113
 923          HC       2
              * DDM   ***** Updated *****

 924          KK     444
 925          KM   SUB-BASIN 444
 926          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 927          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
 928          KM     L =  .33  Kb = .034  Adj. Slope =  315.0
 929          BA    .040
 930          LG    .130    .350   4.450    .320   1.000
1                                    HEC-1 INPUT                                          PAGE 24

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 931          UC    .112    .084
 932          UA       0       3       5       8      12      20      43      75      90      96
 933          UA     100
              * DDM   ***** Preserved *****

 934          KK     R58
 935          KM   ROUTE FLOW FROM SUB-BASIN 444 TO C107
 936          RS       1    FLOW      -1
 937          RC     .05    .035     .05    2370   .0516
 938          RX    1000    1010    1020    1050    1055    1085    1095    1105
 939          RY      19      18      17      10      10      17      18      19
              * DDM   ***** Updated *****

 940          KK     445
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941          KM   SUB-BASIN 445
942          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
943          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
944          KM     L =  .82  Kb = .036  Adj. Slope =  315.0
945          BA    .190
946          LG    .170    .320   3.470    .590   3.000
947          UC    .192    .130
948          UA       0       5      16      30      65      77      84      90      94      97
949          UA     100
             * DDM   ***** Preserved *****

950          KK    C107
951          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 444 & 445
952          HC       2
             * DDM   ***** Preserved *****

953          KK    R107
954          KM        ROUTE FLOW FROM C107 TO C109
955          RS       1    FLOW      -1
956          RC     .05    .035     .05     700    .0516
957          RX    1000    1010    1020    1050    1055    1085    1095    1105
958          RY      19      18      17      10      10      17      18      19
             * DDM   ***** Preserved *****

959          KK    RTB2
960          KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
             *      1
961          DR   SPLIT
             * DDM   ***** Preserved *****

962          KK  RSPLIT
963          KM        ROUTE FLOW FROM SPLIT TO C109
964          RS       1    FLOW      -1
965          RC     .05    .035     .05     800     .05
966          RX    1000    1025    1050    1070    1075    1095    1120    1145
967          RY      30    22.9    15.7      10      10    15.7    22.9      30
             * DDM   ***** Updated *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

968          KK     446
969          KM   SUB-BASIN 446
970          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
971          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
972          KM     L =  .46  Kb = .061  Adj. Slope =  303.9
973          BA    .040
974          LG    .270    .250   4.500    .400  19.000
975          UC    .183    .189
976          UA       0       5      16      30      65      77      84      90      94      97
977          UA     100
             * DDM   ***** Preserved *****

978          KK    C109
979          KM        COMBINE HYDROGRAPHS FROM COMBINES C107 AND C108
980          HC       3
             * DDM   ***** Preserved *****

981          KK    DIV5
982          KM        DIVERT FLOW INTO WASHES TOWARDS WEST
983          KM        DIVERSION THROUGH 36" PIPE WITH 3 FEET OF HEAD
             *      1
984          DT  WSH404
985          DI       0    40.7    71.2   121.6     190     276   379.4   500.6
986          DQ       0      35      35      35      35      35      35      35
             * DDM   ***** Preserved *****

987          KK    R109
988          KM        ROUTE FLOW FROM C109 TO C110
989          RS       1    FLOW      -1
990          RC    .019    .019    .019    3080     .05
991          RX    1000    1005    1010    1015    1025    1030    1035    1040
992          RY   13.75    12.5   11.25      10      10   11.25    12.5   13.75
             * DDM   ***** Updated *****

993          KK     447
994          KM   SUB-BASIN 447
995          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
996          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
997          KM     L =  .49  Kb = .056  Adj. Slope =  221.0
998          BA    .090
999          LG    .250    .270   3.350    .870  30.000
1000         UC    .208    .145
1001         UA       0       5      16      30      65      77      84      90      94      97
1002         UA     100
             * DDM   ***** Preserved *****

1003         KK   RT404
1004         KM        RETRIEVE DIVERTED FLOW FOR WASH 109
1005         DR  WSH404
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1006         KK    R404
1007         KM        ROUTE FLOW FROM C110 TO C110
1008         RS       5    FLOW      -1
1009         RC    .019    .019    .019    3540     .03
1010         RX    1000    1012    1016    1020    1025    1029    1033    1045
1011         RY      15      12      11      10      10      11      12      15
             * DDM   ***** Preserved *****

1012         KK    C110
1013         KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 447 AND R404
1014         HC       3
             * DDM   ***** Preserved *****

1015         KK    R110
1016         KM        ROUTE FLOW FROM C110 TO C115
1017         RS       1    FLOW      -1
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1018          RC    .019    .019    .019     580   .0291
1019          RX    1000    1012    1016    1020    1035    1039    1043    1055
1020          RY      15      12      11      10      10      11      12      15
              * DDM   ***** Preserved *****

1021          KK    C115
1022          KM        COMBINE HYDROGRAPHS FROM C114 AND C110
1023          HC       2
              * DDM   ***** Preserved *****

1024          KK    R115
1025          KM        ROUTE FLOW FROM C115 TO C119
1026          RS       1    FLOW      -1
1027          RC    .019    .019    .019    2125    .029
1028          RC    .019    .019    .019     580   .0291
1029          RX    1000    1012    1016    1020    1035    1039    1043    1055
1030          RY      15      12      11      10      10      11      12      15
              * DDM   ***** Updated *****

1031          KK     448
1032          KM   SUB-BASIN 448
1033          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1034          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1035          KM     L =  .36  Kb = .042  Adj. Slope =  315.0
1036          BA    .045
1037          LG    .170    .310   4.200    .390  11.000
1038          UC    .133    .102
1039          UA       0       5      16      30      65      77      84      90      94      97
1040          UA     100
              * DDM   ***** Updated *****

1041          KK     449
1042          KM   SUB-BASIN 449
1043          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1044          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1045          KM     L =  .40  Kb = .054  Adj. Slope =  315.0
1046          BA    .050
1047          LG    .260    .280   3.500    .640   6.000
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1048          UC    .167    .134
1049          UA       0       5      16      30      65      77      84      90      94      97
1050          UA     100
              * DDM   ***** Preserved *****

1051          KK   C6364
1052          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 448 & 449
1053          HC       2
              * DDM   ***** Preserved *****

1054          KK   R6364
1055          KM   ROUTE FLOW FROM C116 AND SUB-BASINS 448 AND 449
1056          RS       4    FLOW      -1
1057          RC     .05    .035     .05    4375   .0333
1058          RX    1000    1027    1053    1080    1090    1117    1143    1170
1059          RY      15   13.33   11.67      10      10   11.67   13.33      15
              * DDM   ***** Updated *****

1060          KK     450
1061          KM   SUB-BASIN 450
1062          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1063          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1064          KM     L =  .85  Kb = .057  Adj. Slope =  210.5
1065          BA    .070
1066          LG    .340    .350   3.630    .570   4.000
1067          UC    .296    .383
1068          UA       0       3       5       8      12      20      43      75      90      96
1069          UA     100
              * DDM   ***** Updated *****

1070          KK     451
1071          KM   SUB-BASIN 451
1072          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1073          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1074          KM     L =  .57  Kb = .063  Adj. Slope =  175.0
1075          BA    .025
1076          LG    .340    .340   3.290    .750   3.000
1077          UC    .271    .453
1078          UA       0       3       5       8      12      20      43      75      90      96
1079          UA     100
              * DDM   ***** Preserved *****

1080          KK    RT66
1081          KM        RETRIEVE DIVERTED FLOW FROM SUB-BASIN 66
1082          DR   WSH66
              * DDM   ***** Updated *****

1083          KK     452
1084          KM   SUB-BASIN 452
1085          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1086          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1087          KM     L =  .43  Kb = .055  Adj. Slope =  315.0
1088          BA    .040
1089          LG    .260    .280   3.700    .550   9.000
1090          UC    .171    .166
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1091          UA       0       5      16      30      65      77      84      90      94      97
1092          UA     100
              * DDM   ***** Preserved *****

1093          KK   C6465
1094          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 443 AND 452
1095          HC       2
              * DDM   ***** Preserved *****

1096          KK   R6566
1097          KM        ROUTE FLOW FROM DIVERSIONS 65 AND 66 TO C116
1098          RS       2    FLOW      -1
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1099        RC     .05    .035     .05    2435   .0282
1100        RX    1000    1045    1090    1150    1160    1220    1265    1310
1101        RY      25      23      20      10      10      20      23      25
            * DDM   ***** Preserved *****

1102        KK    C116
1103        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 450 & 451 AND R6364 & R6465
1104        HC       4
            * DDM   ***** Preserved *****

1105        KK  BASIN5
1106        KM        RESERVOIR WITHIN PARCEL 31      2-48 INCH PIPES AT OUTFALL
1107        KM        BASIN 5 FEET DEEP
1108        RS       1    ELEV       0
1109        SV       0     4.5     9.9
1110        SQ       0      69     190
1111        SE       0     2.5       5
            * DDM   ***** Preserved *****

1112        KK    R116
1113        KM   ROUTE FLOW FROM C116 TO C117
1114        RS       2    FLOW      -1
1115        RC     .05    .035     .05    1300   .0333
1116        RX    1000    1100    1200    1300    1320    1420    1520    1620
1117        RY      13      12      11      10      10      11      12      13
            * DDM   ***** Updated *****

1118        KK     453
1119        KM   SUB-BASIN 453
1120        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1121        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1122        KM     L =  .58  Kb = .058  Adj. Slope =  138.0
1123        BA    .060
1124        LG    .290    .300   3.290    .820  18.000
1125        UC    .275    .284
1126        UA       0       5      16      30      65      77      84      90      94      97
1127        UA     100
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1128        KK    C117
1129        KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 453 AND R116
1130        HC       2
            * DDM   ***** Preserved *****

1131        KK    C118
1132        KM   COMBINE HYDROGRAPHS FROM R115 AND C117
1133        HC       2
            * DDM   ***** Preserved *****

1134        KK    R118
1135        KM        ROUTE FLOW FROM C118 TO DIV7
1136        RS       1    FLOW      -1
1137        RC    .019    .019    .019    1500    .024
1138        RX    1000    1012    1016    1020    1035    1039    1043    1055
1139        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Preserved *****

1140        KK    DIV7
1141        KM        OFFLINE BASIN AT NORTH MOUNTAIN RIDGE   FLOWS ENTER BASIN OVER
1142        KM        30' WEIR SET AT 5.3' ABOVE THE CHANNEL BOTTOM
            *      1
1143        DT  BASIN6
1144        DI       0     363     487     563     645     844
1145        DQ       0       3      47      83     125     244
            * DDM   ***** Preserved *****

1146        KK  RTDIV7
1147        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1148        DR  BASIN6
            * DDM   ***** Preserved *****

1149        KK  RFDIV7
1150        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1151        KM     3.6 ACRE-FEETx43560/36x3600=1.2cfs
1152        RS       1    STOR       0
1153        SV       0     .01     3.6
1154        SQ       0     1.2     1.2
            * DDM   ***** Preserved *****

1155        KK   CDIV7
1156        KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1157        HC       2
            * DDM   ***** Updated *****

1158        KK     454
1159        KM   SUB-BASIN 454
1160        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1161        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1162        KM     L = 1.23  Kb = .051  Adj. Slope =  163.0
1163        BA    .180
1164        LG    .300    .310   3.780    .560  14.000
1165        UC    .379    .395
1166        UA       0       5      16      30      65      77      84      90      94      97
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1167        UA     100
            * DDM   ***** Preserved *****

1168        KK    C119
1169        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 454 AND C119
            *      1       2
1170        HC       2
            * DDM   ***** Preserved *****

1171        KK    R454
1172        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1173        KM   ROUTE FLOW FROM C119 TO 415C
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1174          RS       2    FLOW      -1
1175          RC    .045    .035    .045    2200    .009
1176          RX       0      .5       1      33      42      67    67.5      68
1177          RY       5       4       4       0       0       6       6       6
              * DDM   ***** Updated *****

1178          KK     415
1179          KM   SUB-BASIN 415
1180          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1181          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
1182          KM     L = 2.10  Kb = .046  Adj. Slope =  266.0
1183          BA    .448
1184          LG    .310    .270   4.250    .480  15.000
1185          UC    .404    .387
1186          UA       0       5      16      30      65      77      84      90      94      97
1187          UA     100
              * DDM   ***** Preserved *****

1188          KK   RT385
1189          KM   RETRIEVE FLOW FROM DIVERSION OF SUB-BASIN 385 INTO SUB-BASIN 415
1190          DR   SF385
              * DDM   ***** Preserved *****

1191          KK   RR385
1192          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1193          KM   ROUTING OF SPLIT FLOW FROM SUB-BASIN 385 TO SUB-BASIN 415
1194          RS       5    FLOW      -1
1195          RC    .045     .04    .045    5878    .024
1196          RX       0       1      40      46      56      62     102     103
1197          RY       3       2       2       0       0       2       2       3
              * DDM   ***** Preserved *****

1198          KK    415C
1199          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 415, R454 & SPLIT FLOW FROM 385
1200          HC       3    1.71
              * DDM   ***** Preserved *****

1201          KK    R415
1202          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1203          KM   ROUTING OF FLOW FROM 415C TO 455C
1204          RS       2    FLOW      -1
1205          RC    .045     .03    .045    4100    .024
1206          RX       0      .5       1       8      16      23    23.5      24
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1207          RY       8       8       8       0       0       8       8       8
              * DDM   ***** Updated *****

1208          KK     455
1209          KM   SUB-BASIN 455
1210          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1211          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
1212          KM     L = 1.70  Kb = .041  Adj. Slope =  146.0
1213          BA   1.111
1214          LG    .270    .280   3.700    .640  24.000
1215          UC    .421    .204
1216          UA       0       5      16      30      65      77      84      90      94      97
1217          UA     100
              * DDM   ***** Preserved *****

1218          KK    D455
1219          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1220          KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1221          KM   FOR BASIN #: 30      34      43      47&58
1222          KM        MAXIMUM VOLUME DIVERSION = 74.1 acre-feet
              *      1
1223          DT   BS455    74.1
1224          DI       0   10000
1225          DQ       0   10000
              * DDM   ***** Preserved *****

1226          KK   RT455
1227          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1228          DR   BS455
              * DDM   ***** Preserved *****

1229          KK   SR455
1230          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1231          KM    74.1 ACRE-FEETx43560/36x3600=25cfs
1232          RS       1    STOR       0
1233          SV       0     .01    74.1
1234          SQ       0      25      25
              * DDM   ***** Preserved *****

1235          KK    C455
1236          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 455 AND DIVERTED BASIN STORAGE OF 455
1237          HC       2
              * DDM   ***** Preserved *****

1238          KK    455C
1239          KM   HYDROGRAPH COMBINATION OF 420C, R415 AND C455
              *      1       2
1240          HC       3
              * DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1241          KK   SR440
1242          KM   SPOOK HILL FRS PLANS DATED 6/15/77
1243          KM   OUTLET PIPE=7'x7.5'RCBC; L=70 INLET INV.=1566; OUTLET INV.=1566
1244          KM   EMERGENCY SPILLWAY ELEV.=1582; PRINCIPLE SPILLWAY ELEV.=1577.5
1245          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 200 ACRE-FEET
1246          RS       1    STOR       0
1247          SV       0      10     100     300     500     680
1248          SQ       0     640     720     780     825     860
1249          SE      66    77.5      79    80.2    81.2      82
              * DDM   ***** Preserved *****

1250          KK   RR455
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1251    KM   ROUTE FLOW FROM SPOOK HILL FRS TO SUB-BASIN 462
1252    RS       9    FLOW      -1
1253    RC    .035    .025    .035    9200    .002
1254    RX       0       1       2      28      58      84      85      86
1255    RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
        * DDM   ***** Updated *****

1256    KK     456
1257    KM   SUB-BASIN 456
1258    KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1259    KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1260    KM     L =  .94  Kb = .045  Adj. Slope =  315.0
1261    BA    .260
1262    LG    .300    .380   5.600    .200  12.000
1263    UC    .217    .139
1264    UA       0       5      16      30      65      77      84      90      94      97
1265    UA     100
        * DDM   ***** Preserved *****

1266    KK    DIV1
1267    KM        DIVERT FLOW INTO OFFLINE DETENTION BASIN
1268    KM        WEIR FOR BASIN SET AT 4 FEET ABOVE CHANNEL BOTTOM
        *      1
1269    DT  BASIN1
1270    DI       0    11.1   127.9   234.4   577.7   789.9  1025.5  1280.9  1555.7
1271    DQ       0       0       0    47.7     248   381.8   533.6   701.5     884
        * DDM   ***** Preserved *****

1272    KK    DIV2
1273    KM        SPLIT OUT FLOW FOR WASHES THAT FLOW TO THE SOUTH FROM
1274    KM        WASHES THAT DRAIN TO THE WES, SOUTHERN WASHES FED BY 30" & 24" PIPE
1275    DT    WA30
1276    DI       0    11.1   127.9   189.6   329.7     408   491.9   579.4   671.7
1277    DQ       0    11.1    38.4    48.2      63    69.5      76      81      86
        * DDM   ***** Preserved *****

1278    KK    R456
1279    KM        ROUTE FLOW FROM SUB-BASIN 51 TO C101
1280    RS       2    FLOW      -1
1281    RC     .05    .035     .05    3800    .044
1282    RX    1000    1010    1020    1036    1041    1057    1067    1077
1283    RY   14.88   14.44      14      10      10      14   14.44   14.88
        * DDM   ***** Updated *****
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LINE    ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1284    KK     457
1285    KM   SUB-BASIN 457
1286    KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1287    KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1288    KM     L = 1.01  Kb = .045  Adj. Slope =  308.8
1289    BA    .190
1290    LG    .270    .330   3.950    .460   6.000
1291    UC    .237    .195
1292    UA       0       5      16      30      65      77      84      90      94      97
1293    UA     100
        * DDM   ***** Preserved *****

1294    KK    C101
1295    KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 50 AND 51
1296    HC       2
        * DDM   ***** Preserved *****

1297    KK    DIV3
1298    KM        RESERVOIR AT THE EDGE OF THE PROPERTY   FLOW FROM CHANNEL
1299    KM        DIVERTED  INTO OFFLINE BASIN A 25' WEIR SET AT ELEVATION 1808 FT
        *      1
1300    DT  BASIN2
1301    DI       0      36      70     110     180   313.5     402   500.9
1302    DQ       0       0       0       0       0    67.5     124   190.9
        * DDM   ***** Preserved *****

1303    KK  RTDIV3
1304    KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1305    DR  BASIN2
        * DDM   ***** Preserved *****

1306    KK  RFDIV3
1307    KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1308    KM     5.0 ACRE-FEETx43560/36x3600=1.7cfs
1309    RS       1    STOR       0
1310    SV       0     .01       5
1311    SQ       0     1.7     1.7
        * DDM   ***** Preserved *****

1312    KK   CDIV3
1313    KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1314    HC       2
        * DDM   ***** Preserved *****

1315    KK    R101
1316    KM        ROUTE FLOW FROM SUBBASIN C101 TO C103
1317    RS       1    FLOW      -1
1318    RC     .05    .035     .05    1450     .05
1319    RX    1000    1010    1020    1036    1041    1057    1067    1077
1320    RY      15    14.5      14      10      10      14    14.5      15
        * DDM   ***** Updated *****
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LINE    ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1321    KK     458
1322    KM   SUB-BASIN 458
1323    KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1324    KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1325    KM     L =  .76  Kb = .048  Adj. Slope =  299.0
1326    BA    .190
1327    LG    .290    .330   5.800    .190   6.000
1328    UC    .204    .131
1329    UA       0       5      16      30      65      77      84      90      94      97
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1330          UA     100
              * DDM   ***** Preserved *****

1331          KK    C103
1332          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 55 AND C101
1333          HC       2
              * DDM   ***** Preserved *****

1334          KK    R103
1335          KM        ROUTE FLOW FROM SUBBASIN C103 TO C106
1336          RS       1    FLOW      -1
1337          RC     .05    .035     .05     900     .03
1338          RX    1000    1010    1020    1030    1050    1060    1070    1080
1339          RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
              * DDM   ***** Preserved *****

1340          KK    RT30
1341          KM        RETRIEVE DIVERTED FLOW FOR WASH BELOW 30 INCH PIPE
1342          DR    WA30
              * DDM   ***** Preserved *****

1343          KK     R30
1344          KM        ROUTE FLOW FROM WASH DIVERSION TO COMBINE C52
1345          RS       1    FLOW      -1
1346          RC     .05    .035     .05    1630     .05
1347          RX    1000    1010    1020    1036    1041    1057    1067    1077
1348          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Preserved *****

1349          KK    RTB1
1350          KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
              *      1        2
1351          DR  BASIN1
              * DDM   ***** Preserved *****

1352          KK      B1
1353          KM        ROUTE FLOW THROUGH OFFLINE DETENTION BASIN
1354          KM        FLOW OUTLETS THROUGH A 30 INCH OUTLET PIPE
              *      1        2
1355          RS       1    ELEV       0
1356          SV              .7     1.4     2.3     2.7     3.2
1357          SQ       0       5      16      28    32.5      37
1358          SE       0       1       2       3     3.5       4
              * DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1359          KK     RB1
1360          KM        ROUTE FLOW FROM BASIN DIVERSION TO COMBINE C52
1361          RS       2    FLOW      -1
1362          RC     .05    .035     .05    1720     .05
1363          RX    1000    1010    1020    1036    1041    1057    1067    1077
1364          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Preserved *****

1365          KK    CDIV
1366          KM        COMBINE FLOWS FROM WA30 AND BASIN 1
1367          HC       2     .12
              * DDM   ***** Updated *****

1368          KK     459
1369          KM   SUB-BASIN 459
1370          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1371          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1372          KM     L =  .35  Kb = .052  Adj. Slope =  251.6
1373          BA    .030
1374          LG    .220    .300   3.330    .710   8.000
1375          UC    .162    .157
1376          UA       0       5      16      30      65      77      84      90      94      97
1377          UA     100
              * DDM   ***** Preserved *****

1378          KK     C52
1379          KM        COMBINE FLOWS FROM SUB-BASIN 52 WA30 AND BASIN 1
1380          HC       2
              * DDM   ***** Preserved *****

1381          KK     R52
1382          KM        ROUTE FLOW FROM SUBBASIN 52 TO C102
1383          RS       2    FLOW      -1
1384          RC     .05    .035     .05    2000     .05
1385          RX    1000    1010    1020    1036    1041    1057    1067    1077
1386          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Updated *****

1387          KK     460
1388          KM   SUB-BASIN 460
1389          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1390          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1391          KM     L =  .62  Kb = .058  Adj. Slope =  194.0
1392          BA    .140
1393          LG    .250    .260   3.740    .690  27.000
1394          UC    .242    .160
1395          UA       0       5      16      30      65      77      84      90      94      97
1396          UA     100
              * DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1397          KK    C102
1398          KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 52 AND 53
1399          HC       2
              * DDM   ***** Preserved *****

1400          KK  BASIN3
1401          KM        RESERVOIR AT CLUBHOUSE LOCATION 1-30 INCH PIPE AT OUTFALL
1402          KM        BOTTOM OF BASIN AT 6 FEET ABOVE 1795 ELEVATION
1403          RS       1    ELEV       0
1404          SA       0       0       0       0     .34    1.59    1.81    1.96    2.13     2.3
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            *      0       0       0       0    1.14    3.25    5.52    9.23
1405        SQ       0      22      45    47.4      48      51      57      62      67      73
1406        SE    1795  1797.5    1800  1800.4  1800.5    1801    1802    1803    1804  1805.5
            * DDM   ***** Preserved *****

1407        KK      R3
1408        KM        ROUTE FLOW FROM C102 to C106
1409        RS       4    FLOW      -1
1410        RC     .05     .03     .05    2750   .0375
1411        RX    1000    1010    1020    1052    1086    1118    1128    1138
1412        RY    19.2    18.4      18      10      10      18    18.4    19.2
            * DDM   ***** Updated *****

1413        KK     461
1414        KM   SUB-BASIN 461
1415        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1416        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1417        KM     L =  .83  Kb = .052  Adj. Slope =  181.0
1418        BA    .120
1419        LG    .270    .250   4.250    .450  21.000
1420        UC    .271    .250
1421        UA       0       5      16      30      65      77      84      90      94      97
1422        UA     100
            * DDM   ***** Preserved *****

1423        KK    C104
1424        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 54 AND R102
1425        HC       2
            * DDM   ***** Preserved *****

1426        KK    C106
1427        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN C103 AND C104
1428        HC       2
            * DDM   ***** Preserved *****

1429        KK    R106
1430        KM        ROUTE FLOW FROM C106 TO C49
1431        RS       2    FLOW      -1
1432        RC     .05    .035     .05    3950    .033
1433        RX    1000    1010    1020    1030    1050    1060    1070    1080
1434        RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
            * DDM   ***** Updated *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1435        KK     462
1436        KM   SUB-BASIN 462
1437        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1438        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1439        KM     L =  .97  Kb = .045  Adj. Slope =  297.7
1440        BA    .301
1441        LG    .300    .330   5.300    .240  12.000
1442        UC    .225    .137
1443        UA       0       5      16      30      65      77      84      90      94      97
1444        UA     100
            * DDM   ***** Preserved *****

1445        KK     C56
1446        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 56 AND C106
            *      1       2
1447        HC       2
            * DDM   ***** Updated *****

1448        KK     480
1449        KM   SUB-BASIN 480
1450        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1451        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
1452        KM     L = 1.21  Kb = .042  Adj. Slope =  165.0
1453        BA    .731
1454        LG    .270    .270   3.580    .730  27.000
1455        UC    .325    .148
1456        UA       0       5      16      30      65      77      84      90      94      97
1457        UA     100
            * DDM   ***** Preserved *****

1458        KK    D480
1459        KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1460        KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1461        KM   FOR BASIN #: 18 & 26
1462        KM        MAXIMUM VOLUME DIVERSION = 16.5 acre-feet
            *      1
1463        DT   BS480    16.5
1464        DI       0   10000
1465        DQ       0   10000
            * DDM   ***** Preserved *****

1466        KK   RT480
1467        KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1468        DR   BS480
            * DDM   ***** Preserved *****

1469        KK   SR480
1470        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1471        KM    16.5 ACRE-FEETx43560/36x3600=5.5cfs
1472        RS       1    STOR       0
1473        SV       0     .01    16.5
1474        SQ       0     5.6     5.6
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1475        KK    C480
1476        KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1477        HC       2
            * DDM   ***** Preserved *****

1478        KK    480C
1479        KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1480        HC       3    2.09
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* DDM   ***** Preserved *****

KK   RR480
KM   ROUTE FLOW FROM SUB-BASIN 480 TO SUB-BASIN 500
RS       1    FLOW      -1
RC    .025    .025    .025    6500     .05
RX       0       1       2      28      58      84      85      86
RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
* DDM   ***** Updated *****

KK     500
KM   SUB-BASIN 500
KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
KM     L = 2.77  Kb = .042  Adj. Slope =  286.8
BA    .930
LG    .350    .400   6.000    .170   9.000
UC    .421    .333
UA       0       3       5       8      12      20      43      75      90      96
UA     100
* DDM   ***** Preserved *****

KK    500C
KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
HC       2    3.02
ZZ
```

SCHEMATIC DIAGRAM OF STREAM NETWORK

```
INPUT
 LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW
  NO.      (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

  49          10
               V
               V
  59         R10
               V
               V
  65         R12
               .
               .
  71           .          20
               .           .
               .           .
  81         C20............
               .
               .
  84           .          40
               .           .
               .           .
  94           .           .          60
               .           .           .
               .           .           .
 104         60C........................
               V
               V
 107        SR60
               V
               V
 116         R60
               V
               V
 122        RR60
               .
               .
 128           .          80
               .           .
               .           .
 138         80C............
               V
               V
 141         R80
               .
               .
 147           .         100
               .           .
               .           .
 157        100C............
               V
               V
 160        R100
               .
               .
 166           .         120
               .           .
               .           .
 176        120C............
               V
               V
 179        R120
               .
               .
 185           .         140
               .           .
               .           .
 195           .           .         150
               .           .           V
               .           .           V
 205           .           .        R150
               .           .           V
               .           .           V
 211           .           .        R152
               .           .           .
               .           .           .
 217           .           .           .        160
               .           .           .          .
               .           .           .          .
 227           .           .           .          .        180
               .           .           .          .          .
               .           .           .          .          .
 237        180C..............................................
               .
               .
 240           .         350
               .           V
               .           V
 250           .        350R
               .           .
               .           .
 257           .           .         310
               .           .           .
               .           .           .
 267           .        C310............
               .           V
               .           V
 270           .        R310
               .           V
               .           V
 276           .        R312
               .           .
               .           .
 282           .           .         295
               .           .           .
               .           .           .
 292           .        295C............
               .           V
               .           V
 295           .        295R
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                .          .
                .          .
301             .          .        210
                .          .          V
                .          .          V
311             .          .       R210
                .          .          .
                .          .          .
317             .          .          .        240
                .          .          .          .
                .          .          .          .
327             .       240C.......................
                .          V
                .          V
330             .      SR240
                .          .
                .          .
339             .          .        220
                .          .          .
                .          .          .
349             .       220C............
                .          V
                .          V
352             .      SR220
                .          .
                .          .
361             .          .        190
                .          .          V
                .          .          V
371             .          .       R190
                .          .          V
                .          .          V
377             .          .       R192
                .          .          .
                .          .          .
383             .          .          .        200
                .          .          .          .
                .          .          .          .
393             .       200C.......................
                .          V
                .          V
396             .      SR200
                .          V
                .          V
403             .      200SR
                .          .
                .          .
410          C180............
                V
                V
413         SR180
                V
                V
422          R180
                .
                .
429             .        260
                .          .
                .          .
439          260C............
                V
                V
442          R260
                .
                .
449             .        280
                .          .
                .          .
459          280C............
                V
                V
462          R280
                .
                .
469             .        300
                .          .
                .          .
479          C300............
                .
                .
485             .-------->   DIV30
482          D300
                .
                .
490             .          .<-------   DIV30
488             .      RTDIV
                .          V
                .          V
491             .      SRDIV
                .          .
                .          .
498          300C............
                .
                .
501             .        305
                .          .
                .          .
514             .          .-------->    305D
511             .       D305
                .          .
                .          .
519             .          .          .<-------    305D
517             .          .      RT305
                .          .          V
                .          .          V
520             .          .      SR305
                .          .          .
                .          .          .
527          305C.......................
                V
                V
530          R305
                V
```

```
                V
537        RR305
                .
                .
544             .         320
                .           .
                .           .
559             .           .-------->   BS320
554             .        D320
                .           .
                .           .
564             .           .          .<-------   BS320
562             .           .       RT320
                .           .          V
                .           .          V
565             .           .       SR320
                .           .           .
                .           .           .
571        C320.......................
                .
                .
574             .         340
                .           .
                .           .
589             .           .-------->   BS340
584             .        D340
                .           .
                .           .
594             .           .          .<-------   BS340
592             .           .       RT340
                .           .          V
                .           .          V
595             .           .       SR340
                .           .           .
                .           .           .
601        C340.......................
                .
                .
604             .         355
                .           V
                .           V
614             .        R355
                .           .
                .           .
621             .           .         360
                .           .           .
                .           .           .
635             .           .           .-------->   BS360
631             .           .        D360
                .           .           .
                .           .           .
640             .           .           .          .<-------   BS360
638             .           .           .       RT360
                .           .           .          V
                .           .           .          V
641             .           .           .       SR360
                .           .           .           .
                .           .           .           .
647        360C...................................
                .
                .
650             .         370
                .           .
                .           .
660             .           .         395
                .           .           .
                .           .           .
670             .        370C............
                .           V
                .           V
673             .        R370
                .           .
                .           .
680             .           .         380
                .           .           .
                .           .           .
694             .           .           .-------->   BS380
690             .           .        D380
                .           .           .
                .           .           .
699             .           .           .          .<-------   BS380
697             .           .           .       RT380
                .           .           .          V
                .           .           .          V
700             .           .           .       SR380
                .           .           .           .
                .           .           .           .
706        380C...................................
                .
                .
709             .         390
                .           .
                .           .
723             .           .-------->   BS390
719             .        D390
                .           .
                .           .
728             .           .          .<-------   BS390
726             .           .       RT390
                .           .          V
                .           .          V
729             .           .       SR390
                .           .           .
                .           .           .
735             .        390C............
                .           V
                .           V
738             .       RR390
                .           .
                .           .
745             .           .         400
                .           .           .
                .           .           .
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759          .          .          .-------->  BS400
755          .          .       D400
             .          .          .
             .          .          .
764          .          .          .          .<-------  BS400
762          .          .          .      RT400
             .          .          .          V
             .          .          .          V
765          .          .          .      SR400
             .          .          .          .
             .          .          .          .
771          .          .       C400............
             .          .          .
             .          .          .
774       400C........................
             .
             .
777          .        385
             .          .
             .          .
789          .          .-------->  SF385
787          .       D385
             .          V
             .          V
792          .       385R
             .          .
             .          .
799          .          .        420
             .          .          .
             .          .          .
813          .          .          .-------->  BS420
809          .          .       D420
             .          .          .
             .          .          .
818          .          .          .          .<-------  BS420
816          .          .          .      RT420
             .          .          .          V
             .          .          .          V
819          .          .          .      SR420
             .          .          .          .
             .          .          .          .
825       420C....................................
             .
             .
828          .        440
             .          V
             .          V
838          .        R70
             .          .
             .          .
844          .          .        441
             .          .          .
             .          .          .
854          .       C108............
             .          .
             .          .
859          .          .-------->  SPLIT
857          .       DIV4
             .          V
             .          V
862          .       R108
             .          .
             .          .
868          .          .        442
             .          .          .
             .          .          .
878          .        C67............
             .          .
             .          .
884          .          .-------->  BASIN4
881          .       DIV6
             .          .
             .          .
889          .          .          .<-------  BASIN4
887          .          .     RTDIV6
             .          .          V
             .          .          V
890          .          .     RFDIV6
             .          .          .
             .          .          .
896          .      CDIV6............
             .          .
             .          .
899          .          .        443
             .          .          .
             .          .          .
912          .          .          .-------->  WSH66
909          .          .      DIV66
             .          .          V
             .          .          V
915          .          .       R113
             .          .          .
             .          .          .
921          .       C114............
             .          .
             .          .
924          .          .        444
             .          .          V
             .          .          V
934          .          .        R58
             .          .          .
             .          .          .
940          .          .          .        445
             .          .          .          .
             .          .          .          .
950          .          .       C107............
             .          .          V
             .          .          V
953          .          .       R107
             .          .          .
             .          .          .
961          .          .          .          .<-------  SPLIT
959          .          .          .      RTB2
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                                V
                                V
962                        RSPLIT
                                .
                                .
968                             .        446
                                .          .
                                .          .
978                     C109.......................
                                .
                                .
984                             .-------> WSH404
981                     DIV5
                                V
                                V
987                     R109
                                .
                                .
993                             .        447
                                .
                                .
1005                            .          .<-------  WSH404
1003                            .      RT404
                                .          V
                                .          V
1006                            .       R404
                                .          .
                                .          .
1012                    C110.......................
                                V
                                V
1015                    R110
                                .
                                .
1021                C115............
                        V
                        V
1024                R115
                                .
                                .
1031                     448
                                .
                                .
1041                            .        449
                                .
                                .
1051                  C6364............
                                V
                                V
1054                  R6364
                                .
                                .
1060                            .        450
                                .
                                .
1070                            .        451
                                .
                                .
1082                            .          .          .<-------   WSH66
1080                            .          .       RT66
                                .          .          .
1083                            .          .          .         452
                                .          .          .           .
                                .          .          .           .
1093                            .          .       C6465............
                                .          .          V
                                .          .          V
1096                            .          .       R6566
                                .          .          .
                                .          .          .
1102                    C116.................................
                                V
                                V
1105                  BASIN5
                                V
                                V
1112                    R116
                                .
                                .
1118                            .        453
                                .
                                .
1128                    C117............
                                .
                                .
1131                C118............
                        V
                        V
1134                R118
                                .
                                .
1143                            .-------> BASIN6
1140                DIV7
                                .
                                .
1148                            .<-------  BASIN6
1146                  RTDIV7
                                V
                                V
1149                  RFDIV7
                                .
                                .
1155               CDIV7............
                                .
                                .
1158                     454
                                .
                                .
1168                C119............
                        V
                        V
1171                R454
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                .          .
1178            .          .        415
                .          .          .
                .          .          .
1190            .          .          .          .<-------   SF385
1188            .          .          .      RT385
                .          .          .          V
                .          .          .          V
1191            .          .          .      RR385
                .          .          .          .
                .          .          .          .
1198            .       415C.......................
                .          V
                .          V
1201            .       R415
                .          .
                .          .
1208            .          .        455
                .          .          .
                .          .          .
1223            .          .          .------->   BS455
1218            .          .      D455
                .          .          .
                .          .          .
1228            .          .          .          .<-------   BS455
1226            .          .          .      RT455
                .          .          .          V
                .          .          .          V
1229            .          .          .      SR455
                .          .          .          .
                .          .          .          .
1235            .          .      C455............
                .          .          .
                .          .          .
1238         455C.......................
                V
                V
1241        SR440
                V
                V
1250        RR455
                .
                .
1256            .        456
                .          .
                .          .
1269            .          .-------->  BASIN1
1266            .       DIV1
                .          .
                .          .
1275            .          .-------->    WA30
1272            .       DIV2
                .          V
                .          V
1278            .       R456
                .          .
                .          .
1284            .          .        457
                .          .          .
                .          .          .
1294            .       C101............
                .          .
                .          .
1300            .          .-------->  BASIN2
1297            .       DIV3
                .          .
                .          .
1305            .          .          .<-------  BASIN2
1303            .          .     RTDIV3
                .          .          V
                .          .          V
1306            .          .     RFDIV3
                .          .          .
                .          .          .
1312            .      CDIV3............
                .          V
                .          V
1315            .       R101
                .          .
                .          .
1321            .          .        458
                .          .          .
                .          .          .
1331            .       C103............
                .          V
                .          V
1334            .       R103
                .          .
                .          .
1342            .          .          .<-------    WA30
1340            .          .      RT30
                .          .          V
                .          .          V
1343            .          .       R30
                .          .          .
                .          .          .
1351            .          .          .          .<-------  BASIN1
1349            .          .          .      RTB1
                .          .          .          V
                .          .          .          V
1352            .          .          .        B1
                .          .          .          V
                .          .          .          V
1359            .          .          .       RB1
                .          .          .          .
                .          .          .          .
1365            .          .      CDIV............
                .          .          .
                .          .          .
1368            .          .          .       459
                .          .          .          .
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1378                C52............
                     V
                     V
1381                R52
                     .
                     .
1387                 .          460
                     .            .
                     .            .
1397               C102...........
                     V
                     V
1400             BASIN3
                     V
                     V
1407                R3
                     .
                     .
1413                 .          461
                     .            .
                     .            .
1423               C104...........
                     .
                     .
1426          C106...........
                 V
                 V
1429          R106
                 .
                 .
1435                462
                     .
                     .
1445           C56...........
                 .
                 .
1448                480
                     .
                     .
1463                 .-------->   BS480
1458               D480
                     .
                     .
1468                 .           .<-------   BS480
1466                 .       RT480
                     .           V
                     .           V
1469                 .       SR480
                     .            .
                     .            .
1475               C480...........
                     .
                     .
1478        480C........................
               V
               V
1481        RR480
               .
               .
1487           .        500
               .          .
               .          .
1497        500C............
```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
HYDROGRAPH AT	10	951.	12.27	114.	31.	15.	.70		
ROUTED TO	R10	882.	12.40	114.	31.	15.	.70		
ROUTED TO	R12	833.	12.60	114.	31.	15.	.70		
HYDROGRAPH AT	20	959.	12.43	128.	32.	16.	1.12		
2 COMBINED AT	C20	1663.	12.53	240.	63.	30.	1.82		
HYDROGRAPH AT	40	2582.	12.30	252.	66.	32.	2.23		
HYDROGRAPH AT	60	1553.	12.40	228.	61.	29.	1.75		
3 COMBINED AT	60C	5274.	12.37	708.	188.	90.	5.80		
ROUTED TO	SR60	92.	14.40	92.	89.	70.	5.80		
ROUTED TO	R60	92.	14.40	92.	89.	70.	5.80		
ROUTED TO	RR60	92.	14.53	92.	89.	70.	5.80		
HYDROGRAPH AT	80	1868.	12.27	179.	46.	22.	1.48		
2 COMBINED AT	80C	1942.	12.27	266.	134.	92.	1.48		
ROUTED TO	R80	1919.	12.27	266.	134.	92.	1.48		
HYDROGRAPH AT	100	404.	12.20	58.	15.	7.	.48		
2 COMBINED AT	100C	2300.	12.27	321.	148.	99.	1.96		
ROUTED TO	R100	2292.	12.30	321.	148.	99.	1.96		
HYDROGRAPH AT	120	3232.	12.27	326.	88.	42.	2.20		
2 COMBINED AT	120C	5469.	12.27	636.	229.	141.	4.16		
ROUTED TO	R120	5397.	12.30	636.	229.	140.	4.16		
HYDROGRAPH AT	140	632.	12.13	64.	17.	8.	.60		
HYDROGRAPH AT	150	135.	13.20	47.	13.	6.	.41		
ROUTED TO	R150	134.	13.30	47.	13.	6.	.41		
ROUTED TO	R152	133.	13.50	47.	13.	6.	.41		
HYDROGRAPH AT	160	217.	12.40	35.	9.	4.	.37		
HYDROGRAPH AT	180	785.	12.37	90.	23.	11.	1.00		
5 COMBINED AT	180C	6707.	12.30	857.	286.	168.	6.54		
HYDROGRAPH AT	350	1151.	12.20	102.	27.	13.	.94		
ROUTED TO	350R	1018.	12.43	102.	27.	13.	.94		
HYDROGRAPH AT	310	376.	12.33	49.	12.	6.	.56		
2 COMBINED AT	C310	1339.	12.43	149.	38.	18.	1.49		
ROUTED TO	R310	1331.	12.47	149.	38.	18.	1.49		
ROUTED TO	R312	1328.	12.47	149.	38.	18.	1.49		
HYDROGRAPH AT	295	364.	12.30	40.	10.	5.	.38		
2 COMBINED AT	295C	1580.	12.47	187.	48.	23.	1.87		

+	ROUTED TO 295R	1570.	12.47	187.	48.	23.	1.87
+	HYDROGRAPH AT 210	1240.	12.17	105.	27.	13.	.79
+	ROUTED TO R210	1165.	12.23	105.	27.	13.	.79
+	HYDROGRAPH AT 240	437.	12.30	66.	17.	8.	.48
+	3 COMBINED AT 240C	2596.	12.43	353.	91.	44.	3.14
+	ROUTED TO SR240	942.	12.90	284.	74.	36.	3.14
+	HYDROGRAPH AT 220	1126.	12.17	98.	25.	12.	.73
+	2 COMBINED AT 220C	1103.	12.17	376.	98.	47.	3.87
+	ROUTED TO SR220	992.	12.93	364.	95.	46.	3.87
+	HYDROGRAPH AT 190	1403.	12.17	116.	31.	15.	.92
+	ROUTED TO R190	1348.	12.23	116.	31.	15.	.92
+	ROUTED TO R192	1267.	12.30	116.	31.	15.	.92
+	HYDROGRAPH AT 200	703.	12.20	69.	19.	9.	.54
+	3 COMBINED AT 200C	2592.	12.30	538.	142.	69.	5.32
+	ROUTED TO SR200	2446.	12.37	533.	139.	67.	5.32
+	ROUTED TO 200SR	1653.	12.63	412.	109.	52.	5.32
+	2 COMBINED AT C180	6707.	12.30	1261.	394.	220.	11.86
+	ROUTED TO SR180	139.	18.73	139.	138.	112.	11.86
+	ROUTED TO R180	139.	18.90	139.	138.	111.	11.86
+	HYDROGRAPH AT 260	418.	12.10	43.	12.	6.	.27
+	2 COMBINED AT 260C	527.	12.10	176.	149.	119.	.27
+	ROUTED TO R260	515.	12.20	176.	149.	118.	.27
+	HYDROGRAPH AT 280	478.	12.10	42.	12.	6.	.30
+	2 COMBINED AT 280C	945.	12.13	215.	159.	124.	.57
+	ROUTED TO R280	909.	12.20	215.	159.	123.	.57
+	HYDROGRAPH AT 300	407.	12.10	34.	9.	5.	.30
+	2 COMBINED AT C300	1243.	12.17	247.	167.	127.	.87
+	DIVERSION TO DIV30	943.	12.17	68.	17.	8.	.87
+	HYDROGRAPH AT D300	300.	11.87	178.	150.	119.	.87
+	HYDROGRAPH AT RTDIV	943.	12.17	68.	17.	8.	.87
+	ROUTED TO SRDIV	141.	12.60	62.	17.	8.	.87
+	2 COMBINED AT 300C	441.	12.60	239.	167.	127.	.87
+	HYDROGRAPH AT 305	409.	12.27	42.	11.	6.	.38
+	DIVERSION TO 305D	409.	12.27	42.	11.	6.	.38
	HYDROGRAPH AT D305	0.	.00	0.	0.	0.	.38
	HYDROGRAPH AT RT305	409.	12.27	42.	11.	6.	.38
+	ROUTED TO SR305	62.	12.93	36.	11.	6.	.38
+	3 COMBINED AT 305C	498.	12.67	273.	178.	133.	1.25

+	ROUTED TO R305	497.	12.73	273.	178.	132.	1.25
+	ROUTED TO RR305	494.	12.77	272.	178.	132.	1.25
+	HYDROGRAPH AT 320	1040.	12.17	111.	31.	15.	.87
+	DIVERSION TO BS320	409.	11.93	21.	6.	3.	.87
+	HYDROGRAPH AT D320	1040.	12.17	96.	25.	12.	.87
+	HYDROGRAPH AT RT320	409.	11.93	21.	6.	3.	.87
+	ROUTED TO SR320	4.	4.17	4.	4.	3.	.87
+	3 COMBINED AT C320	1351.	12.17	370.	206.	146.	2.12
+	HYDROGRAPH AT 340	1471.	12.17	186.	55.	26.	1.45
+	DIVERSION TO BS340	1471.	12.17	104.	28.	14.	1.45
+	HYDROGRAPH AT D340	1199.	12.33	97.	27.	13.	1.45
+	HYDROGRAPH AT RT340	1471.	12.17	104.	28.	14.	1.45
+	ROUTED TO SR340	19.	9.00	19.	19.	14.	1.45
+	3 COMBINED AT C340	2305.	12.33	481.	251.	172.	3.56
+	HYDROGRAPH AT 355	537.	12.33	73.	19.	9.	.69
+	ROUTED TO R355	440.	12.80	73.	19.	9.	.69
+	HYDROGRAPH AT 360	504.	12.23	84.	25.	12.	.67
+	DIVERSION TO BS360	504.	12.23	53.	14.	7.	.67
+	HYDROGRAPH AT D360	306.	12.63	38.	11.	5.	.67
+	HYDROGRAPH AT RT360	504.	12.23	53.	14.	7.	.67
+	ROUTED TO SR360	10.	9.83	10.	10.	7.	.67
+	4 COMBINED AT 360C	2486.	12.33	594.	287.	192.	4.93
+	HYDROGRAPH AT 370	588.	12.30	79.	21.	10.	.67
+	HYDROGRAPH AT 395	182.	12.23	25.	7.	3.	.20
+	2 COMBINED AT 370C	758.	12.30	103.	28.	13.	.87
+	ROUTED TO R370	654.	12.67	103.	28.	13.	.87
+	HYDROGRAPH AT 380	666.	12.27	98.	26.	13.	.97
+	DIVERSION TO BS380	666.	12.27	56.	14.	7.	.97
+	HYDROGRAPH AT D380	472.	12.57	46.	12.	6.	.97
+	HYDROGRAPH AT RT380	666.	12.27	56.	14.	7.	.97
+	ROUTED TO SR380	10.	11.33	10.	10.	7.	.97
+	4 COMBINED AT 380C	2933.	12.63	742.	333.	217.	6.77
+	HYDROGRAPH AT 390	463.	12.03	33.	10.	5.	.24
+	DIVERSION TO BS390	95.	11.73	6.	2.	1.	.24
+	HYDROGRAPH AT D390	463.	12.03	30.	8.	4.	.24
+	HYDROGRAPH AT RT390	95.	11.73	6.	2.	1.	.24
+	ROUTED TO SR390	1.	.90	1.	1.	1.	.24
+	2 COMBINED AT 390C	464.	12.03	31.	9.	5.	.24

+	ROUTED TO	RR390	324.	12.50	31.	9.	5.	.24
+	HYDROGRAPH AT	400	351.	12.23	47.	13.	6.	.62
+	DIVERSION TO	BS400	262.	12.10	10.	3.	1.	.62
+	HYDROGRAPH AT	D400	351.	12.23	39.	10.	5.	.62
+	HYDROGRAPH AT	RT400	262.	12.10	10.	3.	1.	.62
+	ROUTED TO	SR400	2.	8.70	2.	2.	1.	.62
+	2 COMBINED AT	C400	353.	12.23	41.	12.	6.	.62
+	3 COMBINED AT	400C	3376.	12.63	809.	353.	227.	7.63
+	HYDROGRAPH AT	385	782.	12.23	87.	24.	12.	.65
+	DIVERSION TO	SF385	195.	12.23	22.	6.	3.	.65
+	HYDROGRAPH AT	D385	586.	12.23	65.	18.	9.	.65
+	ROUTED TO	385R	475.	12.70	65.	18.	9.	.65
+	HYDROGRAPH AT	420	752.	12.20	92.	26.	12.	.85
+	DIVERSION TO	BS420	269.	11.97	15.	4.	2.	.85
+	HYDROGRAPH AT	D420	752.	12.20	83.	22.	10.	.85
+	HYDROGRAPH AT	RT420	269.	11.97	15.	4.	2.	.85
+	ROUTED TO	SR420	13.	11.03	12.	4.	2.	.85
+	4 COMBINED AT	420C	4043.	12.63	948.	389.	246.	10.87
+	HYDROGRAPH AT	440	180.	12.03	12.	3.	2.	.08
+	ROUTED TO	R70	176.	12.07	12.	3.	2.	.08
+	HYDROGRAPH AT	441	16.	12.03	1.	0.	0.	.01
+	2 COMBINED AT	C108	191.	12.07	14.	4.	2.	.09
+	DIVERSION TO	SPLIT	96.	12.07	7.	2.	1.	.09
+	HYDROGRAPH AT	DIV4	96.	12.07	7.	2.	1.	.09
+	ROUTED TO	R108	88.	12.13	7.	2.	1.	.09
+	HYDROGRAPH AT	442	102.	12.10	9.	2.	1.	.10
+	2 COMBINED AT	C67	187.	12.10	15.	4.	2.	.19
+	DIVERSION TO	BASIN4	115.	12.10	6.	1.	1.	.19
+	HYDROGRAPH AT	DIV6	72.	12.10	10.	3.	1.	.19
+	HYDROGRAPH AT	RTDIV6	115.	12.10	6.	1.	1.	.19
+	ROUTED TO	RFDIV6	1.	11.90	1.	1.	1.	.19
+	2 COMBINED AT	CDIV6	74.	12.10	10.	4.	2.	.19
+	HYDROGRAPH AT	443	148.	12.07	14.	4.	2.	.08
+	DIVERSION TO	WSH66	78.	11.90	12.	3.	2.	.08
+	HYDROGRAPH AT	DIV66	70.	12.07	3.	1.	0.	.08
+	ROUTED TO	R113	69.	12.07	3.	1.	0.	.08
+	2 COMBINED AT	C114	140.	12.07	13.	4.	2.	.27
+	HYDROGRAPH AT	444	82.	12.03	5.	1.	1.	.04

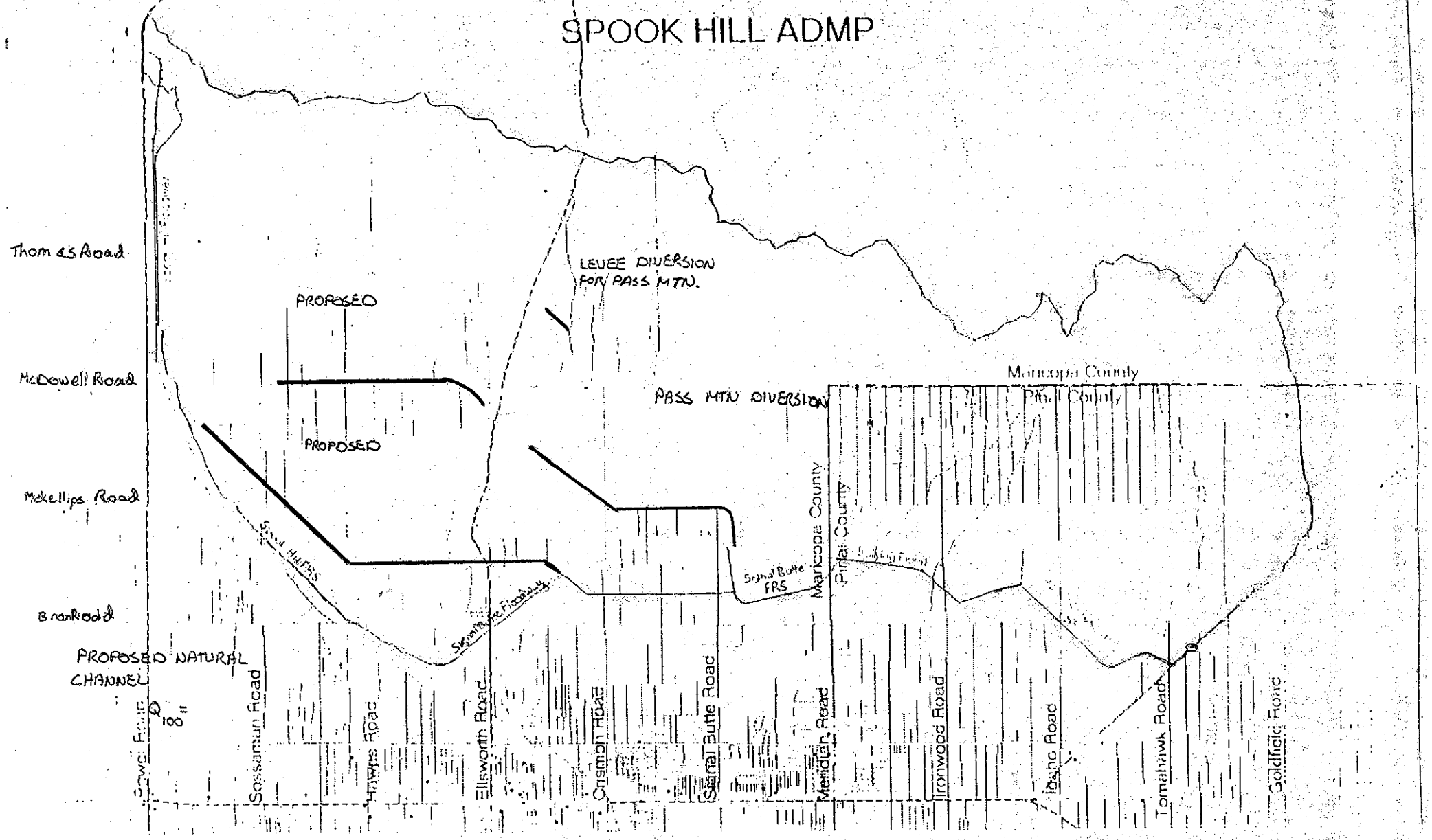
+	ROUTED TO R58	75.	12.07	5.	1.	1.	.04
+	HYDROGRAPH AT 445	296.	12.03	18.	5.	2.	.19
+	2 COMBINED AT C107	365.	12.03	22.	6.	3.	.23
+	ROUTED TO R107	365.	12.07	22.	6.	3.	.23
+	HYDROGRAPH AT RTB2	96.	12.07	7.	2.	1.	.09
+	ROUTED TO RSPLIT	95.	12.07	7.	2.	1.	.09
+	HYDROGRAPH AT 446	65.	12.03	6.	2.	1.	.04
+	3 COMBINED AT C109	520.	12.07	35.	9.	4.	.27
+	DIVERSION TO WSH404	35.	11.73	8.	2.	1.	.27
+	HYDROGRAPH AT DIV5	485.	12.07	27.	7.	3.	.27
+	ROUTED TO R109	469.	12.10	27.	7.	3.	.27
+	HYDROGRAPH AT 447	138.	12.07	12.	4.	2.	.09
+	HYDROGRAPH AT RT404	35.	11.73	8.	2.	1.	.27
+	ROUTED TO R404	35.	11.90	8.	2.	1.	.27
+	3 COMBINED AT C110	635.	12.07	46.	13.	6.	.36
+	ROUTED TO R110	632.	12.10	46.	13.	6.	.36
+	2 COMBINED AT C115	764.	12.10	59.	17.	8.	.63
+	ROUTED TO R115	767.	12.10	59.	17.	8.	.63
	HYDROGRAPH AT 448	88.	12.03	6.	2.	1.	.05
	HYDROGRAPH AT 449	80.	12.03	5.	1.	1.	.05
+	2 COMBINED AT C6364	166.	12.03	11.	3.	1.	.09
+	ROUTED TO R6364	137.	12.17	11.	3.	1.	.09
+	HYDROGRAPH AT 450	61.	12.20	6.	2.	1.	.07
+	HYDROGRAPH AT 451	18.	12.17	2.	1.	0.	.03
+	HYDROGRAPH AT RT66	78.	11.90	12.	3.	2.	.08
+	HYDROGRAPH AT 452	62.	12.03	4.	1.	1.	.04
+	2 COMBINED AT C6465	140.	12.03	16.	4.	2.	.04
+	ROUTED TO R6566	135.	12.10	16.	4.	2.	.04
+	4 COMBINED AT C116	341.	12.17	35.	9.	4.	.23
+	ROUTED TO BASIN5	152.	12.47	35.	9.	4.	.23
+	ROUTED TO R116	150.	12.53	35.	9.	4.	.23
+	HYDROGRAPH AT 453	62.	12.10	7.	2.	1.	.06
+	2 COMBINED AT C117	169.	12.50	41.	11.	5.	.29
+	2 COMBINED AT C118	852.	12.10	99.	28.	14.	.92
	ROUTED TO R118	842.	12.10	99.	28.	14.	.92
	DIVERSION TO BASIN6	243.	12.10	10.	2.	1.	.92
+	HYDROGRAPH AT DIV7	599.	12.10	89.	25.	13.	.92
+	HYDROGRAPH AT RTDIV7	243.	12.10	10.	2.	1.	.92

+	ROUTED TO	RFDIV7	1.	11.97	1.	1.	1.	.92
+	2 COMBINED AT	CDIV7	600.	12.10	90.	26.	13.	.92
	HYDROGRAPH AT	454	157.	12.17	21.	6.	3.	.18
+	2 COMBINED AT	C119	748.	12.13	110.	32.	16.	1.10
+	ROUTED TO	R454	722.	12.20	110.	32.	16.	1.10
+	HYDROGRAPH AT	415	412.	12.17	55.	16.	7.	.45
+	HYDROGRAPH AT	RT385	195.	12.23	22.	6.	3.	.65
+	ROUTED TO	RR385	177.	12.40	22.	6.	3.	.65
+	3 COMBINED AT	415C	1193.	12.20	184.	53.	26.	1.71
+	ROUTED TO	R415	1179.	12.27	184.	53.	26.	1.71
+	HYDROGRAPH AT	455	1346.	12.13	142.	43.	21.	1.11
+	DIVERSION TO	BS455	1346.	12.13	137.	37.	18.	1.11
+	HYDROGRAPH AT	D455	55.	12.77	16.	6.	3.	1.11
+	HYDROGRAPH AT	RT455	1346.	12.13	137.	37.	18.	1.11
+	ROUTED TO	SR455	25.	10.47	25.	25.	18.	1.11
+	2 COMBINED AT	C455	80.	12.77	41.	31.	21.	1.11
+	3 COMBINED AT	455C	4968.	12.37	1138.	461.	289.	13.69
+	ROUTED TO	SR440	782.	13.83	766.	461.	288.	13.69
	ROUTED TO	RR455	782.	14.17	766.	461.	286.	13.69
	HYDROGRAPH AT	456	468.	12.07	35.	10.	5.	.26
+	DIVERSION TO	BASIN1	184.	12.07	8.	2.	1.	.26
+	HYDROGRAPH AT	DIV1	284.	12.07	27.	8.	4.	.26
+	DIVERSION TO	WA30	58.	12.07	10.	3.	2.	.26
+	HYDROGRAPH AT	DIV2	226.	12.07	18.	4.	2.	.26
+	ROUTED TO	R456	213.	12.13	18.	4.	2.	.26
+	HYDROGRAPH AT	457	264.	12.07	20.	5.	3.	.19
+	2 COMBINED AT	C101	462.	12.10	38.	10.	5.	.45
+	DIVERSION TO	BASIN2	165.	12.10	7.	2.	1.	.45
+	HYDROGRAPH AT	DIV3	297.	12.10	30.	8.	4.	.45
+	HYDROGRAPH AT	RTDIV3	165.	12.10	7.	2.	1.	.45
+	ROUTED TO	RFDIV3	2.	11.90	2.	2.	1.	.45
+	2 COMBINED AT	CDIV3	299.	12.10	32.	9.	5.	.45
+	ROUTED TO	R101	297.	12.10	32.	9.	5.	.45
+	HYDROGRAPH AT	458	356.	12.03	25.	7.	3.	.19
	2 COMBINED AT	C103	635.	12.07	56.	16.	8.	.64
	ROUTED TO	R103	630.	12.07	56.	16.	8.	.64
+	HYDROGRAPH AT	RT30	58.	12.07	10.	3.	2.	.26
+	ROUTED TO	R30	57.	12.10	10.	3.	2.	.26

+ HYDROGRAPH AT	RTB1	184.	12.07	8.	2.	1.	.26
+ ROUTED TO	B1	37.	12.23	8.	2.	1.	.26
+ ROUTED TO	RB1	37.	12.30	8.	2.	1.	.26
+ 2 COMBINED AT	CDIV	86.	12.20	17.	5.	3.	.12
+ HYDROGRAPH AT	459	44.	12.03	3.	1.	0.	.03
+ 2 COMBINED AT	C52	113.	12.10	20.	6.	3.	.15
+ ROUTED TO	R52	112.	12.17	20.	6.	3.	.15
+ HYDROGRAPH AT	460	214.	12.07	19.	6.	3.	.14
+ 2 COMBINED AT	C102	313.	12.07	39.	12.	6.	.29
+ ROUTED TO	BASIN3	71.	12.63	39.	12.	6.	.29
+ ROUTED TO	R3	71.	12.77	39.	12.	6.	.29
+ HYDROGRAPH AT	461	161.	12.10	17.	5.	2.	.12
+ 2 COMBINED AT	C104	213.	12.10	55.	17.	8.	.41
+ 2 COMBINED AT	C106	835.	12.07	110.	32.	16.	1.05
+ ROUTED TO	R106	797.	12.13	110.	32.	16.	1.05
+ HYDROGRAPH AT	462	538.	12.07	40.	11.	5.	.30
+ 2 COMBINED AT	C56	1254.	12.10	149.	42.	21.	1.35
+ HYDROGRAPH AT	480	1050.	12.10	96.	29.	14.	.73
+ DIVERSION TO	BS480	455.	11.90	27.	8.	4.	.73
+ HYDROGRAPH AT	D480	1050.	12.10	78.	21.	10.	.73
+ HYDROGRAPH AT	RT480	455.	11.90	27.	8.	4.	.73
+ ROUTED TO	SR480	6.	3.90	6.	6.	4.	.73
+ 2 COMBINED AT	C480	1056.	12.10	84.	27.	14.	.73
+ 3 COMBINED AT	480C	2506.	12.10	946.	543.	329.	2.09
+ ROUTED TO	RR480	2343.	12.13	943.	543.	329.	2.09
+ HYDROGRAPH AT	500	1073.	12.27	122.	33.	16.	.93
+ 2 COMBINED AT	500C	3232.	12.17	1054.	571.	343.	3.02

*** NORMAL END OF HEC-1 ***

SPOOK HILL ADMP



HEC-1Existing Condition 100-Year, 24-Hour Storm. Maintain Apache & Signal Butte FRS while eliminating Spook Hill FRS. Use an improved channel along McDowell with offline basins added to Sub-Basins 380, and 415; Max Storage of 60 AC-FT @ 3' Depth. Improved channel used headin west along Mclellan Rd. on the North side of Road. Pass Mountain Diversi

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1*************************************
*                                   *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*            JUN  1998              *
*          VERSION 4.1              *
*                                   *
*  RUN DATE   15MAY00  TIME  12:18:00  *
*                                   *
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*                                   *
*   U.S. ARMY CORPS OF ENGINEERS    *
*   HYDROLOGIC ENGINEERING CENTER   *
*         609 SECOND STREET         *
*      DAVIS, CALIFORNIA 95616      *
*          (916) 756-1104           *
*                                   *
*************************************
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X     X  XXXXXXX   XXXXX          X
X     X  X        X     X        XX
X     X  X        X               X
XXXXXXX  XXXX     X        XXXXX  X
X     X  X        X               X
X     X  X        X     X         X
X     X  XXXXXXX   XXXXX         XXX
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THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

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1                                   HEC-1 INPUT                                          PAGE  1

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  1           ID   EXISTING LAND USE CALCULATIONS WERE BASED ON 1 YR. FROM 11/5/99
  2           ID   FOR LAS SENDAS       AND LANDISCOR JAN.1999 AERIAL PHOTOGPRAPHS
  3           ID
  4           ID   ALL DAMS WERE ANALYZED WITH NO STORAGE BELOW PRINCIPLE SPILLWAY ELEVATIONS
  5           ID
  6           ID   A CONSERVATIVE ESTIMATE WAS USED FOR THE LOCATION OF THE CENTROID FOR
  7           ID   PRECIPITATION VALUES
  8           ID
  9           ID   ALL CHANNEL ROUTING INFORMATION WAS OBTAINED FROM MCFCD SPOOK HILL   SIGNAL
 10           ID   BUTTE        AND BULLDOG FLOODWAY PLANS
 11           ID
 12           ID   MAINTAIN APACHE & SIGNAL BUTTE FRS WHILE ELIMINATING SPOOK HILL FRS.
 13           ID   USE AN IMPROVED CHANNEL ALONG MCDOWELL WITH OFFLINE BASINS ADDED TO
 14           ID   SUB-BASINS 380, AND 415; MAX STORAGE OF 60 AC-FT @ 3' DEPTH.
 15           ID   IMROVED CHANNEL ALSO USED HEADING WEST ALONG MCLELLAN RD. ON THE NORTH SIDE.
 16           ID
 17           ID   PASS MOUNTAIN DIVERSION ALTERNATIVE WITH REDIRECTION OF FLOW FROM NEW
 18           ID   BOUNDARIES FOR SUB-BASINS 350 & 355. ADDITIONAL LEVEE ADDED TO WHAT WAS
 19           ID   SUB-BASINS 300 & 320 WITH 300 NOW BEING RELABELED 295, 300, AND 305.
 20           ID   FLOW DIRECTED IN PIPE AT THE END OF SIGNAL BUTTE FLOODWAY WEST TO ELLSWORTH
 21           ID   ROAD, THEN ROUTED IN OPEN CHANNEL.
 22           ID
 23           ID   ANALYSIS PERFORMED BY WOOD/PATEL  05/15/00;   MW;   FILE:  S24CE12.DAT
 24           ID
 25           ID   DDM MCUHP1 SPOOK HILL AMDP - EXISTING CONDITIONS MODEL - 100YR, 24HR STORM
              *DIAGRAM
 26           IT       2                    1500
 27           IO       3
 28           IN      15
 29           JD    3.81    0.01
 30           PC    .000    .002    .005    .008    .011    .014    .017    .020    .023    .026
 31           PC    .029    .032    .035    .038    .041    .044    .048    .052    .056    .060
 32           PC    .064    .068    .072    .076    .080    .085    .090    .095    .100    .105
 33           PC    .110    .115    .120    .126    .133    .140    .147    .155    .163    .172
 34           PC    .181    .191    .203    .218    .236    .257    .283    .387    .663    .707
 35           PC    .735    .758    .776    .791    .804    .815    .825    .834    .842    .849
 36           PC    .856    .863    .869    .875    .881    .887    .893    .898    .903    .908
 37           PC    .913    .918    .922    .926    .930    .934    .938    .942    .946    .950
 38           PC    .953    .956    .959    .962    .965    .968    .971    .974    .977    .980
 39           PC    .983    .986    .989    .992    .995    .998   1.000
 40           JD    3.58   10.00
 41           JD    3.43   30.00
 42           JD    3.28   60.00
 43           JD    3.22   90.00
 44           JD    3.18  120.00
 45           JD    3.14  150.00
 46           JD    3.05  300.00
 47           JD    2.97  500.00
              * DDM   ***** Updated *****
1                                   HEC-1 INPUT                                          PAGE  2

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


 48           KK      10
 49           KM   SUB-BASIN 10
 50           KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 51           KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
 52           KM     L = 2.00  Kb = .044  Adj. Slope =  165.0
 53           BA    .702
 54           LG    .350    .320   7.600    .090  15.000
 55           UC    .421    .302
 56           UA       0       3       5       8      12      20      43      75      90      96
 57           UA     100

 58           KK     R10
 59           KM   ROUTING OF FLOW FROM SUB-BASIN 10 TO R12
 60           RS       4    FLOW      -1
 61           RC    .045     .03    .045    8700    .021
 62           RX       0       1       2      17      27      42      43      44
 63           RY       5       5       5       0       0       5       5       5
              * DDM   ***** Preserved *****

 64           KK     R12
 65           KM   ROUTING OF FLOW FROM R12 TO SUB-BASIN 20
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 66          RS       6    FLOW      -1
 67          RC    .045     .03    .045    4500     .01
 68          RX       0       1      30    37.5    57.5      65      94      95
 69          RY       3     2.5     2.5       0       0     2.5     2.5       3
             * DDM   ***** Updated *****

 70          KK      20
 71          KM   SUB-BASIN 20
 72          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 73          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
 74          KM     L = 2.50  Kb = .041  Adj. Slope =   88.0
 75          BA   1.120
 76          LG    .350    .390   5.800    .190   1.000
 77          UC    .658    .454
 78          UA       0       3       5       8      12      20      43      75      90      96
 79          UA     100
             * DDM   ***** Preserved *****

 80          KK     C20
 81          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 10 AND 20
 82          HC       2
             * DDM   ***** Updated *****

 83          KK      40
 84          KM   SUB-BASIN 40
 85          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 86          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
 87          KM     L = 3.08  Kb = .036  Adj. Slope =  189.0
 88          BA   2.233
 89          LG    .340    .340   4.900    .280   5.000
 90          UC    .496    .264
 91          UA       0       3       5       8      12      20      43      75      90      96
 92          UA     100
             * DDM   ***** Updated *****
1                                        HEC-1 INPUT                                          PAGE  3

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 93          KK      60
 94          KM   SUB-BASIN 60
 95          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 96          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .990
 97          KM     L = 4.19  Kb = .038  Adj. Slope =  209.6
 98          BA   1.746
 99          LG    .330    .350   5.800    .190   9.000
100          UC    .596    .477
101          UA       0       3       5       8      12      20      43      75      90      96
102          UA     100
             * DDM   ***** Preserved *****

103          KK     60C
104          KM   HYDROGRAPH COMBINATION FOR APACHE JUNCTION FRS
             *      1       2
105          HC       3
             * DDM   ***** Preserved *****

106          KK    SR60
107          KM   APACHE JUNCTION FRS AS-BUILT PLANS 12/19/88
108          KM   OUTLET PIPE=30"RCP; L=136.6'; INLET INV.=1783.5; OUTLET INV.=1783
109          KM   EMERGENCY SPILLWAY ELEV.=1799.77'; PRINCIPLE SPILLWAY ELEV.=1793.5'
110          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 100 ACRE-FEET
111          RS       1    STOR       0
112          SV       0       1     100     200     300     400
113          SQ       0      71      81      87    91.5      94
114          SE    83.5    93.5      96    97.7      99   99.77
             * DDM   ***** Preserved *****

115          KK     R60
116          KM        ROUTE FLOW THROUGH BULLDOG FLOODWAY FROM APACHE JUNCTION FRS
117          RS       2    FLOW      -1
118          RC    .016    .016    .016    2850    .012
119          RX       0       1       2     2.1     5.6     5.7       6       7
120          RY     3.5     3.5     3.5       0       0     3.5     3.5     3.5
             * DDM   ***** Preserved *****

121          KK    RR60
122          KM   ROUTE FLOW FROM BULLDOG FLOODWAY TO SUB-BASIN 80
123          RS       3    FLOW      -1
124          RC    .016    .016    .016    3500    .005
125          RX       0       1       2     2.1     7.1     7.2       8       9
126          RY     3.5     3.5     3.5       0       0     3.5     3.5     3.5
             * DDM   ***** Updated *****

127          KK      80
128          KM   SUB-BASIN 80
129          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
130          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .991
131          KM     L = 2.69  Kb = .039  Adj. Slope =  229.8
132          BA   1.475
133          LG    .330    .330   5.600    .210   4.000
134          UC    .433    .259
135          UA       0       3       5       8      12      20      43      75      90      96
1                                        HEC-1 INPUT                                          PAGE  4

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

136          UA     100
             * DDM   ***** Preserved *****

137          KK     80C
138          KM   HYDROGRAPH COMBINATION FOR FLOW FROM APACHE JUNCTION FRS & SUB-BASIN 80
139          HC       2   1.475
             * DDM   ***** Preserved *****

140          KK     R80
141          KM   ROUTE FLOW FROM SUB-BASIN 80 TO SUB-BASIN 100
142          RS       1    FLOW      -1
143          RC    .025    .016    .025    1200    .003
144          RX       0       2       6     6.1    41.1    41.2    56.2    58.2
145          RY     5.5     4.5     4.5       0       0     4.5     4.5     5.5
             * DDM   ***** Updated *****
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146          KK     100
147          KM   SUB-BASIN 100
148          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
149          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
150          KM     L = 1.94  Kb = .046  Adj. Slope =  108.0
151          BA    .484
152          LG    .320    .290   5.100    .260   3.000
153          UC    .533    .473
154          UA       0       5      16      30      65      77      84      90      94      97
155          UA     100
             * DDM   ***** Preserved *****

156          KK    100C
157          KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 80 & 100
158          HC       2
             * DDM   ***** Preserved *****

159          KK    R100
160          KM   ROUTE FLOW FROM SUB-BASIN 100 TO SUB-BASIN 120
161          RS       1    FLOW      -1
162          RC    .016    .016    .016     940    .005
163          RX       0       1       2     2.1    52.1    52.2      53      54
164          RY     4.5     4.5     4.5       0       0     4.5     4.5     4.5
             * DDM   ***** Updated *****

165          KK     120
166          KM   SUB-BASIN 120
167          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
168          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
169          KM     L = 3.07  Kb = .037  Adj. Slope =  239.0
170          BA   2.202
171          LG    .330    .280   6.800    .130  11.000
172          UC    .429    .226
173          UA       0       3       5       8      12      20      43      75      90      96
174          UA     100
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE  5

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

175          KK    120C
176          KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 100 & 120
177          HC       2
             * DDM   ***** Preserved *****

178          KK    R120
179          KM   ROUTE FLOW FROM SUB-BASIN 120 TO SIGNAL BUTTE FRS
180          RS       1    FLOW      -1
181          RC    .025    .016    .025    2100    .005
182          RX       0       6      10    10.1    60.1    60.2    74.2    80.2
183          RY       8       5       5       0       0       5       5       8
             * DDM   ***** Updated *****

184          KK     140
185          KM   SUB-BASIN 140
186          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
187          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
188          KM     L = 1.61  Kb = .044  Adj. Slope =  149.0
189          BA    .598
190          LG    .310    .280   4.200    .440   5.000
191          UC    .421    .278
192          UA       0       5      16      30      65      77      84      90      94      97
193          UA     100
             * DDM   ***** Updated *****

194          KK     150
195          KM   SUB-BASIN 150
196          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
197          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
198          KM     L = 1.50  Kb = .047  Adj. Slope =  315.0
199          BA    .408
200          LG    .350    .360   5.100    .260   7.000
201          UC   1.579   1.417
202          UA       0       3       5       8      12      20      43      75      90      96
203          UA     100

204          KK    R150
205          KM   ROUTING OF FLOW FROM SUB-BASIN 150 TO R152
206          RS       3    FLOW      -1
207          RC    .045     .04    .045    3100    .032
208          RX       0       1       2      23      33      54      55      56
209          RY       7       7       7       0       0       7       7       7
             * DDM   ***** Preserved *****

210          KK    R152
211          KM   ROUTING OF FLOW FROM R152 TO SUB-BASIN 160
212          RS       6    FLOW      -1
213          RC    .045     .03    .045    5900    .019
214          RX       0       1       2       8      33      39      40      41
215          RY       2       2       2       0       0       2       2       2
             * DDM   ***** Updated *****
1                                        HEC-1 INPUT                                          PAGE  6

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

216          KK     160
217          KM   SUB-BASIN 160
218          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
219          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
220          KM     L = 2.10  Kb = .047  Adj. Slope =  129.0
221          BA    .369
222          LG    .340    .330   4.150    .440   1.000
223          UC    .587    .655
224          UA       0       3       5       8      12      20      43      75      90      96
225          UA     100
             * DDM   ***** Updated *****

226          KK     180
227          KM   SUB-BASIN 180
228          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
229          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
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230          KM     L = 2.42  Kb = .041  Adj. Slope =  140.0
231          BA   1.000
232          LG    .350    .350   4.150    .430    .000
233          UC    .571    .403
234          UA       0       3       5       8      12      20      43      75      90      96
235          UA     100
             * DDM   ***** Preserved *****

236          KK    180C
237          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
238          HC       5
             * DDM   ***** Updated *****

239          KK     350
240          KM   SUB-BASIN 350
241          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
242          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
243          KM     L = 2.22  Kb = .042  Adj. Slope =  311.0
244          BA    .935
245          LG    .350    .350   4.600    .330   5.000
246          UC    .367    .239
247          UA       0       3       5       8      12      20      43      75      90      96
248          UA     100
             * DDM   ***** Preserved *****

249          KK    350R
250          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING
251          KM   ROUTING OF MAIN FLOW FROM DIVERSION OF SUB-BASIN 350 TO SUB-BASIN 310
252          RS       7    FLOW      -1
253          RC    .045    .035    .045    7650    .025
254          RX       0       1      40      46      56      62     102     103
255          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

256          KK     310
257          KM   SUB-BASIN 310
258          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
259          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
260          KM     L = 2.70  Kb = .045  Adj. Slope =  283.5
261          BA    .555
262          LG    .350    .350   3.910    .480    .000
263          UC    .483    .511
264          UA       0       3       5       8      12      20      43      75      90      96
265          UA     100
             * DDM   ***** Preserved *****

266          KK    C310
267          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 350 & 310
268          HC       2
             * DDM   ***** Preserved *****

269          KK    R310
270          KM   ROUTING OF FLOW FROM SUB-BASIN 310 TO R312
271          RS       1    FLOW      -1
272          RC    .045     .03    .045    1500    .021
273          RX       0       1       2    18.5    38.5    53.5      54      55
274          RY     3.5     3.5     3.5       0       0     3.5     3.5     3.5

275          KK    R312
276          KM   ROUTING OF FLOW FROM R312 TO SUB-BASIN 295
277          RS       1    FLOW      -1
278          RC    .045    .022    .045    1300   .0125
279          RX       0       1       2      10      50      58      59      60
280          RY       4       4       4       0       0       4       4       4
             * DDM   ***** Updated *****

281          KK     295
282          KM   SUB-BASIN 295
283          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
284          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
285          KM     L = 1.60  Kb = .047  Adj. Slope =  131.0
286          BA    .380
287          LG    .350    .350   4.900    .280    .000
288          UC    .450    .386
289          UA       0       3       5       8      12      20      43      75      90      96
290          UA     100
             * DDM   ***** Preserved *****

291          KK    295C
292          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 310 & 295
293          HC       2

294          KK    295R
295          KM   ROUTING OF FLOW FROM SUB-BASIN 295 TO BEGINNING OF PASS MTN. DIVERSION.
296          RS       1    FLOW      -1
297          RC    .045    .022    .045    1300   .0125
298          RX       0       1       2      10      50      58      59      60
299          RY       4       4       4       0       0       4       4       4
             * DDM   ***** Updated *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

300          KK     210
301          KM   SUB-BASIN 210
302          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
303          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .995
304          KM     L = 1.90  Kb = .043  Adj. Slope =  315.0
305          BA    .790
306          LG    .350    .360   6.800    .130   4.000
307          UC    .317    .197
308          UA       0       3       5       8      12      20      43      75      90      96
309          UA     100
             * DDM   ***** Preserved *****

310          KK    R210
311          KM   ROUTING OF FLOW FROM SUB-BASIN 210 TO SUB-BASIN 220
312          RS       2    FLOW      -1
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313          RC    .045     .03    .045    5100    .022
314          RX       0       1       2      14      34      46      47      48
315          RY       4       4       4       0       0       4       4       4
             * DDM   ***** Updated *****

316          KK     240
317          KM   SUB-BASIN 240
318          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
319          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
320          KM     L = 3.00  Kb = .046  Adj. Slope =  304.6
321          BA    .484
322          LG    .350    .350   7.000    .120   4.000
323          UC    .446    .550
324          UA       0       3       5       8      12      20      43      75      90      96
325          UA     100
             * DDM   ***** Preserved *****

326          KK    240C
327          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
328          HC       3
             * DDM   ***** Preserved *****

329          KK   SR240
330          KM   DIGITAL MAPPING SHOWS SEDIMENTATION.  FOR SIMPLICITY NO ADDITIONAL
331          KM   SEDIMENTATION WILL BE CONSIDERED FOR STORAGE ROUTING ANALYSIS. 5/11/00
332          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
333          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
334          RS       1    STOR       0
335          SA    1.38    14.2    36.5
336          SE       0       5      11
337          SS       5      42       3     1.5
             * DDM   ***** Updated *****

338          KK     220
339          KM   SUB-BASIN 220
340          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
341          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
342          KM     L = 1.92  Kb = .043  Adj. Slope =  315.0
343          BA    .725
1                                        HEC-1 INPUT                                          PAGE  9

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

344          LG    .350    .350   7.000    .120   4.000
345          UC    .317    .209
346          UA       0       3       5       8      12      20      43      75      90      96
347          UA     100
             * DDM   ***** Preserved *****

348          KK    220C
349          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
350          HC       2
             * DDM   ***** Preserved *****

351          KK   SR220
352          KM   DIGITAL MAPPING SHOWS SEDIMENTATION.  FOR SIMPLICITY NO ADDITIONAL
353          KM   SEDIMENTATION WILL BE CONSIDERED FOR STORAGE ROUTING ANALYSIS. 5/11/00
354          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
355          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
356          RS       1    STOR       0
357          SA     .78     4.1    13.7
358          SE       0       3      10
359          SS       3      65       3     1.5
             * DDM   ***** Updated *****

360          KK     190
361          KM   SUB-BASIN 190
362          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
363          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
364          KM     L = 1.91  Kb = .042  Adj. Slope =  315.0
365          BA    .918
366          LG    .350    .390   5.800    .190   8.000
367          UC    .321    .185
368          UA       0       3       5       8      12      20      43      75      90      96
369          UA     100
             * DDM   ***** Preserved *****

370          KK    R190
371          KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
372          RS       2    FLOW      -1
373          RC    .045     .03    .045    4740     .03
374          RX       0       1       2      17      37      52      53      54
375          RY       5       5       5       0       0       5       5       5
             * DDM   ***** Preserved *****

376          KK    R192
377          KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
378          RS       2    FLOW      -1
379          RC    .045    .035    .045    2200    .018
380          RX       0       1      50      59      79      88     137     138
381          RY     3.5       3       3       0       0       3       3     3.5
             * DDM   ***** Updated *****
1                                        HEC-1 INPUT                                          PAGE 10

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

382          KK     200
383          KM   SUB-BASIN 200
384          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
385          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
386          KM     L = 1.92  Kb = .045  Adj. Slope =  315.0
387          BA    .535
388          LG    .350    .390   5.700    .200  10.000
389          UC    .338    .267
390          UA       0       3       5       8      12      20      43      75      90      96
391          UA     100
             * DDM   ***** Preserved *****

392          KK    200C
393          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 220 & 200
394          HC       3
             * DDM   ***** Preserved *****
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395          KK   SR200
396          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
397          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
398          RS       1    STOR       0
399          SA    2.56     3.1     9.4
400          SE       0       3      10
401          SS       3     112       3     1.5

402          KK   200SR
403          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
404          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
405          RS       1    STOR       0
406          SA       8     9.2     9.2
407          SE       0       7      10
408          SS       7     251       3     1.5
             * DDM   ***** Preserved *****

409          KK    C180
410          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
             *      1       2
411          HC       2
             * DDM   ***** Updated *****

412          KK   SR180
413          KM   SIGNAL BUTTE FRS DATED 1/28/85
414          KM   OUTLET PIPE=36"RCP; L= 147';  INLET INV.=1690; OUTLET INV.=1687
415          KM   EMERGENCY SPILLWAY ELEV.=1712.4; PRINCIPLE SPILLWAY ELEV.=1701
416          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 250 ACRE-FEET
417          RS       1    STOR       0
418          SV       0       1     250     500     750    1060
419          SQ       0   106.5   104.5   137.5     146     160
420          SE      90     101   104.5     107     109   112.4
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

421          KK    R180
422          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
423          KM   ROUTE FLOW FROM SIGNAL BUTTE FRS TO SUB-BASIN 260
424          RS       3    FLOW      -1
425          RC    .035    .025    .035    1500    .003
426          RX       0       1       2    22.6    38.6    59.2      60      61
427          RY     9.3     9.3     9.3       0       0     9.3     9.3     9.3
             * DDM   ***** Updated *****

428          KK     260
429          KM   SUB-BASIN 260
430          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
431          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
432          KM     L =  .81  Kb = .049  Adj. Slope =   68.0
433          BA    .267
434          LG    .300    .170   6.800    .160  15.000
435          UC    .363    .215
436          UA       0       5      16      30      65      77      84      90      94      97
437          UA     100
             * DDM   ***** Preserved *****

438          KK    260C
439          KM   HYDROGRAPH COMBINATION FOR OUTFLOW OF SIGNAL BUTTE FRS & SUB-BASIN 260
440          HC       2    .267
             * DDM   ***** Preserved *****

441          KK    R260
442          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
443          KM   ROUTE FLOW FROM SUB-BASIN 260 TO SUB-BASIN 280
444          RS       3    FLOW      -1
445          RC    .035    .025    .035    2300    .003
446          RX       0       1       2    23.4    43.4    64.8      65      66
447          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Updated *****

448          KK     280
449          KM   SUB-BASIN 280
450          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
451          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
452          KM     L =  .77  Kb = .049  Adj. Slope =   84.0
453          BA    .304
454          LG    .300    .250   5.300    .290  15.000
455          UC    .333    .175
456          UA       0       5      16      30      65      77      84      90      94      97
457          UA     100
             * DDM   ***** Preserved *****

458          KK    280C
459          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 260 & SUB-BASIN 280
460          HC       2
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

461          KK    R280
462          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
463          KM   ROUTE FLOW FROM SUB-BASIN 280 TO SUB-BASIN 300
464          RS       2    FLOW      -1
465          RC    .035    .025    .035    2500    .003
466          RX       0       1       2    23.4    43.4    64.8      65      66
467          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Updated *****

468          KK     300
469          KM   SUB-BASIN 300
470          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
471          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
472          KM     L =  .80  Kb = .049  Adj. Slope =  100.0
473          BA    .297
474          LG    .320    .280   4.200    .480  11.000
475          UC    .333    .183
476          UA       0       5      16      30      65      77      84      90      94      97
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477          UA     100
             * DDM   ***** Preserved *****

478          KK    C300
479          KM   HYDROGRAPH COMBINATION OF DIVERTED FLOW
480          HC       2
             * DDM   ***** Preserved *****

481          KK    D300
482          KM   DIVERT FLOW INTO OFFLINE BASIN AT SIGNAL BUTTE FLOODWAY TO BE COMBINED
483          KM   LATER WITH BASIN 305 AT END OF SIGNAL BUTTE FLOODWAY
484          DT   DIV300
485          DI       0     300    5000
486          DQ       0       0    4700
             * DDM   ***** Preserved *****

487          KK   RTDIV300
488          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
489          DR   DIV300
             * DDM   ***** Preserved *****

490          KK   SRDIV300
491          KM   RETRIEVE FLOW INTO BASIN AND BLEED OFF WITHIN 36 HOURS
492          KM
493          RS       1    STOR       0
494          SV       0      60
495          SE       0      12
496          SQ       0     300
             * DDM   ***** Preserved *****

497          KK    300C
498          KM   HYDROGRAPH COMBINATION OF DIVERTED FLOW
499          HC       2
             * DDM   ***** Updated *****
1                                    HEC-1 INPUT                                          PAGE 13

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

500          KK     305
501          KM   SUB-BASIN 305
502          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
503          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
504          KM     L = 1.20  Kb = .047  Adj. Slope =   92.0
505          BA    .377
506          LG    .340    .330   4.450    .380   8.000
507          UC    .438    .298
508          UA       0       3       5       8      12      20      43      75      90      96
509          UA     100
             * DDM   ***** Preserved *****

510          KK    D305
511          KM   DIVERT FLOW INTO OFFLINE BASIN TO BE COMBINED LATER WITH PASS MOUNTAIN
512          KM   DIVERSION FLOW AT END OF SIGNAL BUTTE FLOODWAY
513          DT    305D
514          DI       0    1000
515          DQ       0    1000
             * DDM   ***** Preserved *****

516          KK   RT305D
517          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
518          DR    305D
             * DDM   ***** Preserved *****

519          KK   SR305D
520          KM   RETRIEVE FLOW INTO BASIN AND BLEED OFF WITHIN 36 HOURS
521          KM
522          RS       1    STOR       0
523          SV       0      25
524          SE       0       6
525          SQ       0     100
             * DDM   ***** Preserved *****

526          KK    305C
527          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 280 & 300
528          HC       3
             * DDM   ***** Preserved *****

529          KK    R305
530          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
531          KM   ROUTE FLOW FROM SUB-BASIN 300 TO START OF FLOODWAY CONCRETE CHANNEL
532          RS       2    FLOW      -1
533          RC    .035    .025    .035    2200    .003
534          RX       0       1       2    23.4    55.4    76.8      77      78
535          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Preserved *****

536          KK   RR305
537          KM   CHANNEL GEOMETRY FOR SPOOK HILL FRS OBTAINED FROM AS-BUILTS PLANS.
538          KM   CONTINUE TO ROUTE FLOW WITHIN CONCRETE CHANNEL TO SPOOK HILL FRS
539          RS       1    FLOW      -1
540          RC    .016    .016    .016    6050   .0146
541          RX       0       1       2     2.1    16.1    16.2      17      18
1                                    HEC-1 INPUT                                          PAGE 14

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

542          RY     7.5     7.5     7.5       0       0     7.5     7.5     7.5
             *      1       2
             * DDM   ***** Updated *****

543          KK     320
544          KM   SUB-BASIN 320
545          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
546          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .995
547          KM     L = 1.60  Kb = .042  Adj. Slope =  106.0
548          BA    .870
549          LG    .310    .290   4.500    .380  15.000
550          UC    .450    .240
551          UA       0       5      16      30      65      77      84      90      94      97
552          UA     100
             * DDM   ***** Preserved *****
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553          KK    D320
554          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
555          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
556          KM   SIERRA HEIGHTS        FALCON RIDGE    & MARBLE CREEK
557          KM        MAXIMUM VOLUME DIVERSION = 12.27acre-feet
             *      1
558          DT   BS320   12.27
559          DI       0   10000
560          DQ       0   10000
             * DDM   ***** Preserved *****

561          KK   RT320
562          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
563          DR   BS320
             * DDM   ***** Preserved *****

564          KK   SR320
565          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
566          KM   12.27 ACRE-FEETx43560/36x3600=4.1cfs
             *      1
567          RS       1    STOR       0
568          SV       0     .01    12.3
569          SQ       0     4.2     4.2

570          KK    C320
571          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
572          HC       3

573          KK    R320
574          KM   ROUTE FLOW THROUGH SPOOK HILL FRS FROM JUNCTION OF BROWN & ELLSWORTH ROAD
575          KM   TO JUST NORTH OF JUNCTION OF MCDOWELL & POWER RD.
576          RS       3    FLOW      -1
577          RC    .025    .025    .025    4500     .01
578          RX       0       1       2      14      34      46      47      48
579          RY       4       4       4       0       0       4       4       4
             * DDM   ***** Updated *****
1                                    HEC-1 INPUT                                          PAGE 15

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


580          KK     340
581          KM   SUB-BASIN 340
582          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
583          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .995
584          KM     L = 1.81  Kb = .047  Adj. Slope =  110.0
585          BA    .892
586          LG    .280    .290   4.000    .540  16.000
587          UC    .550    .327
588          UA       0       5      16      30      65      77      84      90      94      97
589          UA     100
             * DDM   ***** Preserved *****

590          KK    D340
591          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
592          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
593          KM   GRANDVIEW ESTATES    BOULDER MOUNTAIN & 33% OF MESA HIGHLANDS
594          KM        MAXIMUM VOLUME DIVERSION = 56.0 acre-feet
             *      1
595          DT   BS340      56
596          DI       0   10000
597          DQ       0   10000
             * DDM   ***** Preserved *****

598          KK   RT340
599          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
600          DR   BS340
             * DDM   ***** Preserved *****

601          KK   SR340
602          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
603          KM    56.0 ACRE-FEETx43560/36x3600=18.8cfs
             *      1
604          RS       1    STOR       0
605          SV       0     .01      56
606          SQ       0    18.9    18.9
             * DDM   ***** Preserved *****

607          KK    C340
608          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
609          HC       3
             * DDM   ***** Preserved *****

610          KK    R340
611          KM   ROUTE FLOW THROUGH SPOOK HILL FRS FROM JUNCTION OF BROWN & ELLSWORTH ROAD
612          KM   TO JUST NORTH OF JUNCTION OF MCDOWELL & POWER RD.
613          RS       2    FLOW      -1
614          RC    .025    .025    .025    2300     .01
615          RX       0       1       2      14      34      46      47      48
616          RY       4       4       4       0       0       4       4       4
             * DDM   ***** Updated *****
1                                    HEC-1 INPUT                                          PAGE 16

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


617          KK     355
618          KM   SUB-BASIN 355
619          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
620          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
621          KM     L = 3.00  Kb = .044  Adj. Slope =  284.0
622          BA    .694
623          LG    .340    .340   4.450    .370   4.000
624          UC    .488    .494
625          UA       0       3       5       8      12      20      43      75      90      96
626          UA     100
             * DDM   ***** Preserved *****

627          KK    R355
628          KM   ROUTING OF FLOW FROM SUB-BASIN 355 TO SUB-BASIN 360
629          RS      10    FLOW      -1
630          RC    .045    .045    .045   11535    .023
631          RX       0       1       2      14      34      46      47      48
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632          RY       4       4       4       0       0       4       4       4
             * DDM   ***** Updated *****

633          KK     360
634          KM   SUB-BASIN 360
635          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
636          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
637          KM     L = 2.10  Kb = .048  Adj. Slope =  124.0
638          BA    .670
639          LG    .260    .270   4.100    .560  20.000
640          UC    .587    .466
641          UA       0       5      16      30      65      77      84      90      94      97
642          UA     100
             * DDM   ***** Preserved *****

643          KK    D360
644          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
645          KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
646          KM        MAXIMUM VOLUME DIVERSION = 28.6 acre-feet
             *      1
647          DT   BS360    28.6
648          DI       0   10000
649          DQ       0   10000
             * DDM   ***** Preserved *****

650          KK   RT360
651          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
652          DR   BS360
             * DDM   ***** Preserved *****

653          KK   SR360
654          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
655          KM    28.6 ACRE-FEETx43560/36x3600=9.6cfs
656          RS       1    STOR       0
657          SV       0     .01    28.6
658          SQ       0     9.6     9.6
             * DDM   ***** Updated *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

659          KK     321
660          KM   SUB-BASIN 321
661          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
662          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
663          KM     L =  .64  Kb = .047  Adj. Slope =  125.0
664          BA    .397
665          LG    .290    .290   4.300    .450  18.000
666          UC    .250    .094
667          UA       0       5      16      30      65      77      84      90      94      97
668          UA     100
             * DDM   ***** Preserved *****

669          KK    R321
670          KM   ROUTE FLOW THROUGH SPOOK HILL FRS FROM JUNCTION OF BROWN & ELLSWORTH ROAD
671          KM   TO JUST NORTH OF JUNCTION OF MCDOWELL & POWER RD.
672          RS      15    FLOW      -1
673          RC    .025    .025    .025    6800   .0016
674          RX       0       1       2      15     165     180     181     182
675          RY       5       5       5       0       0       7       7       7
             * DDM   ***** Updated *****

676          KK     341
677          KM   SUB-BASIN 341
678          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
679          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
680          KM     L =  .80  Kb = .044  Adj. Slope =  100.0
681          BA    .652
682          LG    .270    .260   4.350    .450  24.000
683          UC    .300    .104
684          UA       0       5      16      30      65      77      84      90      94      97
685          UA     100
             * DDM   ***** Preserved *****

686          KK    R341
687          KM   ROUTE FLOW THROUGH SPOOK HILL FRS FROM JUNCTION OF BROWN & ELLSWORTH ROAD
688          KM   TO JUST NORTH OF JUNCTION OF MCDOWELL & POWER RD.
689          RS       2    FLOW      -1
690          RC    .025    .025    .025    2000   .0016
691          RX       0       1       2      20      70      88      89      90
692          RY       6       6       6       0       0       6       6       6
             * DDM   ***** Preserved *****

693          KK    C360
694          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
695          HC       2
             * DDM   ***** Preserved *****

696          KK    360C
697          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
698          HC       5
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

699          KK    R360
700          KM   ROUTE FLOW THROUGH SPOOK HILL FRS FROM JUNCTION OF BROWN & ELLSWORTH ROAD
701          KM   TO JUST NORTH OF JUNCTION OF MCDOWELL & POWER RD.
702          RS       3    FLOW      -1
703          RC    .025    .025    .025    2600   .0016
704          RX       0       1       2      20      70      88      89      90
705          RY       6       6       6       0       0       6       6       6
             * DDM   ***** Updated *****

706          KK     380
707          KM   SUB-BASIN 380
708          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
709          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
710          KM     L = 2.20  Kb = .048  Adj. Slope =  114.0
711          BA    .972
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712          LG    .300    .310   4.150    .500   7.000
713          UC    .658    .444
714          UA       0       5      16      30      65      77      84      90      94      97
715          UA     100
             * DDM   ***** Preserved *****

716          KK    D380
717          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
718          KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
719          KM        MAXIMUM VOLUME DIVERSION = 28.6 acre-feet
             *      1
720          DT   BS380    28.6
721          DI       0   10000
722          DQ       0   10000
             * DDM   ***** Preserved *****

723          KK   RT380
724          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
725          DR   BS380
             * DDM   ***** Preserved *****

726          KK   SR380
727          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
728          KM    28.6 ACRE-FEETx43560/36x3600=9.6cfs
729          RS       1    STOR       0
730          SV       0     .01    28.6
731          SQ       0     9.6     9.6
             * DDM   ***** Preserved *****

732          KK    380C
733          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
734          HC       3
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 19

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

735          KK    380D
736          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
737          KM
738          KM
             *      1
739          DT    380S
740          DI       0    1100    3000
741          DQ       0       0    1900
             * DDM   ***** Preserved *****

742          KK   TR380
743          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
744          DR    380S
             * DDM   ***** Preserved *****

745          KK   380SR
746          KM   OFFLINE BASIN IN PARK AREA
             *      1       2
747          RS       1    STOR       0
748          SA      19      20
749          SE       0       3
750          SQ      50     210
             * DDM   ***** Preserved *****

751          KK    C380
752          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
753          HC       2
             * DDM   ***** Preserved *****

754          KK    R380
755          KM   ROUTE FLOW THROUGH SPOOK HILL FRS FROM JUNCTION OF BROWN & ELLSWORTH ROAD
756          KM   TO JUST NORTH OF JUNCTION OF MCDOWELL & POWER RD.
757          RS       3    FLOW      -1
758          RC    .025    .025    .025    4000   .0016
759          RX       0       1       2      20      50      68      69      70
760          RY       6       6       6       0       0       6       6       6
             * DDM   ***** Updated *****

761          KK     400
762          KM   SUB-BASIN 400
763          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
764          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
765          KM     L = 1.64  Kb = .046  Adj. Slope =  110.0
766          BA    .616
767          LG    .320    .320   3.130    .930   6.000
768          UC    .592    .405
769          UA       0       5      16      30      65      77      84      90      94      97
770          UA     100
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 20

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

771          KK    D400
772          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
773          KM   DETENTION/RETENTION BASIN LOCATED WITHIN SAGUARO VISTA SUBDIVISION
774          KM        MAXIMUM VOLUME DIVERSION = 5.6 ACRE-FEET
             *      1
775          DT   BS400     5.6
776          DI       0   10000
777          DQ       0   10000
             * DDM   ***** Preserved *****

778          KK   RT400
779          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
780          DR   BS400
             * DDM   ***** Preserved *****

781          KK   SR400
782          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
783          KM     5.6 ACRE-FEETx43560/36x3600 = 2 cfs
784          RS       1    STOR       0
785          SV       0     .01     5.6
786          SQ       0       2       2
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            * DDM   ***** Preserved *****

787         KK    C400
788         KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
            *      1       2
789         HC      2
            * DDM   ***** Preserved *****

790         KK    400C
791         KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
792         HC      2
            * DDM   ***** Preserved *****

793         KK    R400
794         KM   ROUTE FLOW THROUGH SPOOK HILL FRS FROM JUNCTION OF BROWN & ELLSWORTH ROAD
795         KM   TO JUST NORTH OF JUNCTION OF MCDOWELL & POWER RD.
796         RS       5    FLOW      -1
797         RC    .025    .025    .025    3800   .0016
798         RX       0       1       2      20      50      68      69      70
799         RY       6       6       6       0       0       6       6       6
            * DDM   ***** Updated *****

800         KK     420
801         KM   SUB-BASIN 420
802         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
803         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .995
804         KM     L = 1.91  Kb = .042  Adj. Slope =  120.0
805         BA    .849
806         LG    .310    .270   3.880    .580  12.000
807         UC    .512    .325
808         UA       0       5      16      30      65      77      84      90      94      97
809         UA     100
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 21

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

810         KK    D420
811         KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
812         KM   DETENTION/RETENTION BASINS LOCATED WITHIN GRAY FOX SUBDIVISION
813         KM        MAXIMUM VOLUME DIVERSION = 8.65 acre-feet
            *      1
814         DT   BS420    8.65
815         DI       0   10000
816         DQ       0   10000
            * DDM   ***** Preserved *****

817         KK   RT420
818         KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
819         DR   BS420
            * DDM   ***** Preserved *****

820         KK   SR420
821         KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
822         KM   38.55 ACRE-FEETx43560/36x3600=13cfs
823         RS       1    STOR       0
824         SV       0     .01   38.55
825         SQ       0      13      13
            * DDM   ***** Preserved *****

826         KK    420C
827         KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
            *      1       2
828         HC      2
            * DDM   ***** Preserved *****

829         KK    C420
830         KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
831         HC      2
            * DDM   ***** Preserved *****

832         KK    R420
833         KM   ROUTE FLOW THROUGH SPOOK HILL FRS FROM JUNCTION OF BROWN & ELLSWORTH ROAD
834         KM   TO JUST NORTH OF JUNCTION OF MCDOWELL & POWER RD.
835         RS       3    FLOW      -1
836         RC    .025    .025    .025    2900   .0016
837         RX       0       1       2      20      50      68      69      70
838         RY       6       6       6       0       0       6       6       6
            * DDM   ***** Updated *****

839         KK     370
840         KM   SUB-BASIN 370
841         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
842         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
843         KM     L = 2.90  Kb = .044  Adj. Slope =  294.6
844         BA    .667
845         LG    .340    .320   4.650    .330   9.000
846         UC    .454    .455
847         UA       0       3       5       8      12      20      43      75      90      96
848         UA     100
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 22

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

849         KK    R370
850         KM   ROUTING OF FLOW FROM SUB-BASIN 370 TO 360
851         RS       1    FLOW      -1
852         RC    .025    .025    .025    1000    .005
853         RX       0       1       2      14      34      46      47      48
854         RY       3       3       3       0       0       3       3       3
            * DDM   ***** Updated *****

855         KK     395
856         KM   SUB-BASIN 395
857         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
858         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
859         KM     L = 1.60  Kb = .051  Adj. Slope =  215.8
860         BA    .198
861         LG    .330    .320   4.900    .300  10.000
862         UC    .383    .468
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863          UA       0       3       5       8      12      20      43      75      90      96
864          UA     100
             * DDM   ***** Preserved *****

865          KK    395C
866          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
867          HC       2
             * DDM   ***** Preserved *****

868          KK    R395
869          KM   ROUTING OF FLOW FROM SUB-BASIN 395 TO SUB-BASIN 380
870          KM   CHECK THUNDER MTN FOR CHANNEL GEOMETRY
871          RS       2    FLOW      -1
872          RC     .03     .03     .03    1900     .01
873          RX       0       1       2      14      34      46      47      48
874          RY       3       3       3       0       0       3       3       3
             * DDM   ***** Updated *****

875          KK     390
876          KM   SUB-BASIN 390
877          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
878          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
879          KM     L =  .70  Kb = .050  Adj. Slope =  299.4
880          BA    .244
881          LG    .300    .250   4.700    .380  18.000
882          UC    .204    .107
883          UA       0       5      16      30      65      77      84      90      94      97
884          UA     100
             * DDM   ***** Preserved *****

885          KK    D390
886          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
887          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THUNDER MOUNTAIN ESTATES
888          KM        MAXIMUM VOLUME DIVERSION  = 3.5 acre-feet
             *      1
889          DT   BS390     3.5
890          DI       0   10000
891          DQ       0   10000
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

892          KK   RT390
893          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
894          DR   BS390
             * DDM   ***** Preserved *****

895          KK   SR390
896          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
897          KM     3.5 ACRE-FEETx43560/36x3600=1.2cfs
898          RS       1    STOR       0
899          SV       0     .01     3.5
900          SQ       0     1.2     1.2
             * DDM   ***** Preserved *****

901          KK    390C
902          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
903          HC       3
             * DDM   ***** Preserved *****

904          KK   RR390
905          KM   FROM SUB-BASIN 390 TO SUB-BASIN 400
906          RS       4    FLOW      -1
907          RC     .03     .03     .03    5280     .01
908          RX       0       1       2      14      34      50      51      52
909          RY       4       4       4       0       0       4       4       4
             * DDM   ***** Updated *****

910          KK     385
911          KM   SUB-BASIN 385
912          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
913          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
914          KM     L = 2.30  Kb = .044  Adj. Slope =  303.0
915          BA    .647
916          LG    .350    .370   5.600    .210  13.000
917          UC    .375    .311
918          UA       0       3       5       8      12      20      43      75      90      96
919          UA     100
             * DDM   ***** Preserved *****

920          KK    D385
921          KM   DIVERT FLOW INTO SUB-BASINS 415 & 420
922          DT   SF385
923          DI       0   10000
924          DQ       0    4000
             * DDM   ***** Preserved *****

925          KK    385R
926          KM   ROUTING OF FLOW DIVERSION FROM SUB-BASIN 385 INTO SUB-BASIN 420
927          RS       5    FLOW      -1
928          RC    .045    .045    .045    5800    .026
929          RX       0       1       2      14      24      36      37      38
930          RY       3       3       3       0       0       3       3       3
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

931          KK     410
932          KM   SUB-BASIN 410
933          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
934          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
935          KM     L =  .52  Kb = .049  Adj. Slope =  173.0
936          BA    .270
937          LG    .300    .250   3.950    .580  15.000
938          UC    .213    .083
             * DDM   ***** Preserved *****

939          KK    410C
940          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
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 941          HC       3
              * DDM   ***** Updated *****

 942          KK     440
 943          KM   SUB-BASIN 440
 944          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 945          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
 946          KM     L =  .40  Kb = .039  Adj. Slope =  315.0
 947          BA    .080
 948          LG    .190    .380   6.400    .140  13.000
 949          UC    .129    .077
 950          UA       0       3       5       8      12      20      43      75      90      96
 951          UA     100
              * DDM   ***** Preserved *****

 952          KK     R70
 953          KM   ROUTE FLOW FROM SUB-BASIN 440 TO C108
 954          RS       1    FLOW      -1
 955          RC     .05    .035     .05    2250     .08
 956          RX    1000    1025    1050    1070    1075    1095    1120    1145
 957          RY      30    22.9    15.7      10      10    15.7    22.9      30
              * DDM   ***** Updated *****

 958          KK     441
 959          KM   SUB-BASIN 441
 960          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 961          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
 962          KM     L =  .28  Kb = .069  Adj. Slope =  315.0
 963          BA    .010
 964          LG    .300    .250   5.600    .220   5.000
 965          UC    .150    .225
 966          UA       0       5      16      30      65      77      84      90      94      97
 967          UA     100
              * DDM   ***** Preserved *****

 968          KK    C108
 969          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 440 & 441
 970          HC       2
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 25

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


 971          KK    DIV4
 972          KM        SPLIT FLOW WITH TWO 42 INCH PIPES TO WEST AND SOUTH
              *      1
 973          DT   SPLIT
 974          DI       0      14      40      82     120     154     180
 975          DQ       0       7      20      41      60      77      90
              * DDM   ***** Preserved *****

 976          KK    R108
 977          KM        ROUTE FLOW FROM SUB-BASIN C108 TO C67
 978          RS       2    FLOW      -1
 979          RC     .05    .035     .05    3200      .1
 980          RX    1000    1025    1050    1070    1075    1095    1120    1145
 981          RY      30    22.9    15.7      10      10    15.7    22.9      30
              * DDM   ***** Updated *****

 982          KK     442
 983          KM   SUB-BASIN 442
 984          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 985          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
 986          KM     L =  .83  Kb = .055  Adj. Slope =  274.2
 987          BA    .100
 988          LG    .300    .270   3.290    .770   5.000
 989          UC    .258    .264
 990          UA       0       5      16      30      65      77      84      90      94      97
 991          UA     100
              * DDM   ***** Preserved *****

 992          KK     C67
 993          KM   COMBINE FLOW FROM SUB-BASIN 442 & DIV4
 994          HC       2
              * DDM   ***** Preserved *****

 995          KK    DIV6
 996          KM        OFFLINE BASIN WITH 25 FOOT WEIR SET AT 2.5 FEET ABOVE BOTTOM OF CHANNEL
 997          KM        FLOW CONTINUES BEYOND BASIN THROUGH 2-30" PIPES
              *      1
 998          DT  BASIN4
 999          DI       0      10      32      44    79.9   132.5     198   272.9   356.8
1000          DQ       0       0       0       0    23.9    67.5     124   190.9   266.8
              * DDM   ***** Preserved *****

1001          KK  RTDIV6
1002          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1003          DR  BASIN4
              * DDM   ***** Preserved *****

1004          KK  RFDIV6
1005          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1006          KM     3.3 ACRE-FEETx43560/36x3600=1.1cfs
              *      1
1007          RS       1    STOR       0
1008          SV       0     .01     3.3
1009          SQ       0     1.1     1.1
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 26

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1010          KK   CDIV6
1011          KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1012          HC       2
              * DDM   ***** Updated *****

1013          KK     443
1014          KM   SUB-BASIN 443
1015          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1016          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
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1017    KM     L =  .71  Kb = .050  Adj. Slope =  315.0
1018    BA    .080
1019    LG    .250    .190   8.000    .080  10.000
1020    UC    .196    .194
1021    UA       0       5      16      30      65      77      84      90      94      97
1022    UA     100
        * DDM   ***** Preserved *****

1023    KK   DIV66
1024    KM        DIVERT FLOW INTO 3 NATURAL WASHES WITH ONE 24" PIPE IN EACH WASH.
1025    KM        EACH PIPE CAPACITY BASED ON 4 FEET OF HEAD
1026    DT   WSH66
1027    DI       0      78     100     200
1028    DQ       0      78      78      78
        * DDM   ***** Preserved *****

1029    KK    R113
1030    KM        ROUTE FLOW FROM C113 TO C114
1031    RS       1    FLOW      -1
1032    RC    .019    .019    .019    1300    .029
1033    RX    1000    1004    1008    1012    1018    1022    1026    1030
1034    RY      17   15.33   12.67      10      10   12.67   15.33      17
        * DDM   ***** Preserved *****

1035    KK    C114
1036    KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 67 AND C113
1037    HC       2
        * DDM   ***** Updated *****

1038    KK     444
1039    KM   SUB-BASIN 444
1040    KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1041    KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1042    KM     L =  .33  Kb = .034  Adj. Slope =  315.0
1043    BA    .040
1044    LG    .130    .350   4.450    .320   1.000
1045    UC    .112    .084
1046    UA       0       3       5       8      12      20      43      75      90      96
1047    UA     100
        * DDM   ***** Preserved *****
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LINE    ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1048    KK     R58
1049    KM   ROUTE FLOW FROM SUB-BASIN 444 TO C107
1050    RS       1    FLOW      -1
1051    RC     .05    .035     .05    2370   .0516
1052    RX    1000    1010    1020    1050    1055    1085    1095    1105
1053    RY      19      18      17      10      10      17      18      19
        * DDM   ***** Updated *****

1054    KK     445
1055    KM   SUB-BASIN 445
1056    KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1057    KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1058    KM     L =  .82  Kb = .036  Adj. Slope =  315.0
1059    BA    .190
1060    LG    .170    .320   3.470    .590   3.000
1061    UC    .192    .130
1062    UA       0       5      16      30      65      77      84      90      94      97
1063    UA     100
        * DDM   ***** Preserved *****

1064    KK    C107
1065    KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 444 & 445
1066    HC       2
        * DDM   ***** Preserved *****

1067    KK    R107
1068    KM        ROUTE FLOW FROM C107 TO C109
1069    RS       1    FLOW      -1
1070    RC     .05    .035     .05     700   .0516
1071    RX    1000    1010    1020    1050    1055    1085    1095    1105
1072    RY      19      18      17      10      10      17      18      19
        * DDM   ***** Preserved *****

1073    KK    RTB2
1074    KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
        *      1
1075    DR   SPLIT
        * DDM   ***** Preserved *****

1076    KK  RSPLIT
1077    KM        ROUTE FLOW FROM SPLIT TO C109
1078    RS       1    FLOW      -1
1079    RC     .05    .035     .05     800     .05
1080    RX    1000    1025    1050    1070    1075    1095    1120    1145
1081    RY      30    22.9    15.7      10      10    15.7    22.9      30
        * DDM   ***** Updated *****

1082    KK     446
1083    KM   SUB-BASIN 446
1084    KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1085    KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1086    KM     L =  .46  Kb = .061  Adj. Slope =  303.9
1087    BA    .040
1088    LG    .270    .250   4.500    .400  19.000
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LINE    ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1089    UC    .183    .189
1090    UA       0       5      16      30      65      77      84      90      94      97
1091    UA     100
        * DDM   ***** Preserved *****

1092    KK    C109
1093    KM        COMBINE HYDROGRAPHS FROM COMBINES C107 AND C108
1094    HC       3
        * DDM   ***** Preserved *****
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1095        KK    DIV5
1096        KM        DIVERT FLOW INTO WASHES TOWARDS WEST
1097        KM        DIVERSION THROUGH 36" PIPE WITH 3 FEET OF HEAD
            *      1
1098        DT  WSH404
1099        DI       0    40.7    71.2   121.6     190     276   379.4   500.6
1100        DQ       0      35      35      35      35      35      35      35
            * DDM   ***** Preserved *****

1101        KK    R109
1102        KM        ROUTE FLOW FROM C109 TO C110
1103        RS       1    FLOW      -1
1104        RC    .019    .019    .019    3080     .05
1105        RX    1000    1005    1010    1015    1025    1030    1035    1040
1106        RY   13.75    12.5   11.25      10      10   11.25    12.5   13.75
            * DDM   ***** Updated *****

1107        KK     447
1108        KM   SUB-BASIN 447
1109        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1110        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1111        KM     L =  .49  Kb = .056  Adj. Slope =  221.0
1112        BA    .090
1113        LG    .250    .270   3.350    .870  30.000
1114        UC    .208    .145
1115        UA       0       5      16      30      65      77      84      90      94      97
1116        UA     100
            * DDM   ***** Preserved *****

1117        KK   RT404
1118        KM        RETRIEVE DIVERTED FLOW FOR WASH 109
1119        DR  WSH404
            * DDM   ***** Preserved *****

1120        KK    R404
1121        KM        ROUTE FLOW FROM C110 TO C110
1122        RS       5    FLOW      -1
1123        RC    .019    .019    .019    3540     .03
1124        RX    1000    1012    1016    1020    1025    1029    1033    1045
1125        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1126        KK    C110
1127        KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 447 AND R404
1128        HC       3
            * DDM   ***** Preserved *****

1129        KK    R110
1130        KM        ROUTE FLOW FROM C110 TO C115
1131        RS       1    FLOW      -1
1132        RC    .019    .019    .019     580   .0291
1133        RX    1000    1012    1016    1020    1035    1039    1043    1055
1134        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Preserved *****

1135        KK    C115
1136        KM        COMBINE HYDROGRAPHS FROM C114 AND C110
1137        HC       2
            * DDM   ***** Preserved *****

1138        KK    R115
1139        KM        ROUTE FLOW FROM C115 TO C119
1140        RS       1    FLOW      -1
1141        RC    .019    .019    .019    2125    .029
1142        RC    .019    .019    .019     580   .0291
1143        RX    1000    1012    1016    1020    1035    1039    1043    1055
1144        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Updated *****

1145        KK     448
1146        KM   SUB-BASIN 448
1147        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1148        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1149        KM     L =  .36  Kb = .042  Adj. Slope =  315.0
1150        BA    .045
1151        LG    .170    .310   4.200    .390  11.000
1152        UC    .133    .102
1153        UA       0       5      16      30      65      77      84      90      94      97
1154        UA     100
            * DDM   ***** Updated *****

1155        KK     449
1156        KM   SUB-BASIN 449
1157        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1158        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1159        KM     L =  .40  Kb = .054  Adj. Slope =  315.0
1160        BA    .050
1161        LG    .260    .280   3.500    .640   6.000
1162        UC    .167    .134
1163        UA       0       5      16      30      65      77      84      90      94      97
1164        UA     100
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1165        KK   C6364
1166        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 448 & 449
1167        HC       2
            * DDM   ***** Preserved *****

1168        KK   R6364
1169        KM   ROUTE FLOW FROM C116 AND SUB-BASINS 448 AND 449
1170        RS       4    FLOW      -1
1171        RC     .05    .035     .05    4375   .0333
1172        RX    1000    1027    1053    1080    1090    1117    1143    1170
1173        RY      15   13.33   11.67      10      10   11.67   13.33      15
            * DDM   ***** Updated *****
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1174        KK     450
1175        KM   SUB-BASIN 450
1176        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1177        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1178        KM     L =  .85  Kb = .057  Adj. Slope =  210.5
1179        BA    .070
1180        LG    .340    .350   3.630    .570   4.000
1181        UC    .296    .383
1182        UA       0       3       5       8      12      20      43      75      90      96
1183        UA     100
            * DDM   ***** Updated *****

1184        KK     451
1185        KM   SUB-BASIN 451
1186        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1187        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1188        KM     L =  .57  Kb = .063  Adj. Slope =  175.0
1189        BA    .025
1190        LG    .340    .340   3.290    .750   3.000
1191        UC    .271    .453
1192        UA       0       3       5       8      12      20      43      75      90      96
1193        UA     100
            * DDM   ***** Preserved *****

1194        KK    RT66
1195        KM        RETRIEVE DIVERTED FLOW FROM SUB-BASIN 66
1196        DR   WSH66
            * DDM   ***** Updated *****

1197        KK     452
1198        KM   SUB-BASIN 452
1199        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1200        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1201        KM     L =  .43  Kb = .055  Adj. Slope =  315.0
1202        BA    .040
1203        LG    .260    .280   3.700    .550   9.000
1204        UC    .171    .166
1205        UA       0       5      16      30      65      77      84      90      94      97
1206        UA     100
            * DDM   ***** Preserved *****
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            LINE  ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1207        KK   C6465
1208        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 443 AND 452
1209        HC       2
            * DDM   ***** Preserved *****

1210        KK   R6566
1211        KM        ROUTE FLOW FROM DIVERSIONS 65 AND 66 TO C116
1212        RS       2    FLOW      -1
1213        RC     .05    .035     .05    2435   .0282
1214        RX    1000    1045    1090    1150    1160    1220    1265    1310
1215        RY      25      23      20      10      10      20      23      25
            * DDM   ***** Preserved *****

1216        KK    C116
1217        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 450 & 451 AND R6364 & R6465
1218        HC       4
            * DDM   ***** Preserved *****

1219        KK  BASIN5
1220        KM        RESERVOIR WITHIN PARCEL 31      2-48 INCH PIPES AT OUTFALL
1221        KM        BASIN 5 FEET DEEP
1222        RS       1    ELEV       0
1223        SV       0     4.5     9.9
1224        SQ       0      69     190
1225        SE       0     2.5       5
            * DDM   ***** Preserved *****

1226        KK    R116
1227        KM   ROUTE FLOW FROM C116 TO C117
1228        RS       2    FLOW      -1
1229        RC     .05    .035     .05    1300   .0333
1230        RX    1000    1100    1200    1300    1320    1420    1520    1620
1231        RY      13      12      11      10      10      11      12      13
            * DDM   ***** Updated *****

1232        KK     453
1233        KM   SUB-BASIN 453
1234        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1235        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1236        KM     L =  .58  Kb = .058  Adj. Slope =  138.0
1237        BA    .060
1238        LG    .290    .300   3.290    .820  18.000
1239        UC    .275    .284
1240        UA       0       5      16      30      65      77      84      90      94      97
1241        UA     100
            * DDM   ***** Preserved *****

1242        KK    C117
1243        KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 453 AND R116
1244        HC       2
            * DDM   ***** Preserved *****
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            LINE  ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1245        KK    C118
1246        KM   COMBINE HYDROGRAPHS FROM R115 AND C117
1247        HC       2
            * DDM   ***** Preserved *****

1248        KK    R118
1249        KM        ROUTE FLOW FROM C118 TO  DIV7
1250        RS       1    FLOW      -1
1251        RC    .019    .019    .019    1500    .024
1252        RX    1000    1012    1016    1020    1035    1039    1043    1055
1253        RY      15      12      11      10      10      11      12      15
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                * DDM   ***** Preserved *****

1254            KK    DIV7
1255            KM        OFFLINE BASIN AT NORTH MOUNTAIN RIDGE   FLOWS ENTER BASIN OVER
1256            KM        30' WEIR SET AT 5.3' ABOVE THE CHANNEL BOTTOM
                *      1
1257            DT  BASIN6
1258            DI       0     363     487     563     645     844
1259            DQ       0       3      47      83     125     244
                * DDM   ***** Preserved *****

1260            KK  RTDIV7
1261            KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1262            DR  BASIN6
                * DDM   ***** Preserved *****

1263            KK  RFDIV7
1264            KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1265            KM     3.6 ACRE-FEETx43560/36x3600=1.2cfs
1266            RS       1    STOR       0
1267            SV       0     .01     3.6
1268            SQ       0     1.2     1.2
                * DDM   ***** Preserved *****

1269            KK   CDIV7
1270            KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1271            HC       2
                * DDM   ***** Updated *****

1272            KK     454
1273            KM   SUB-BASIN 454
1274            KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1275            KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1276            KM     L = 1.23  Kb = .051  Adj. Slope =  163.0
1277            BA    .180
1278            LG    .300    .310   3.780    .560  14.000
1279            UC    .379    .395
1280            UA       0       5      16      30      65      77      84      90      94      97
1281            UA     100
                * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                          PAGE 33

LINE            ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1282            KK    C119
1283            KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 454 AND C119
                *      1       2
1284            HC       2
                * DDM   ***** Preserved *****

1285            KK    R454
1286            KM   ROUTE FLOW FROM C119 TO 415C
1287            RS       8    FLOW      -1
1288            RC    .045    .035    .045    6000    .005
1289            RX    1000    1010    1020    1036    1041    1057    1067    1077
1290            RY      15    14.5      14      10      10      14    14.5      15
                * DDM   ***** Updated *****

1291            KK     415
1292            KM   SUB-BASIN 415
1293            KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1294            KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
1295            KM     L = 2.10  Kb = .046  Adj. Slope =  266.0
1296            BA    .448
1297            LG    .310    .270   4.250    .480  15.000
1298            UC    .404    .387
1299            UA       0       5      16      30      65      77      84      90      94      97
1300            UA     100
                * DDM   ***** Preserved *****

1301            KK   RT385
1302            KM   RETRIEVE FLOW FROM DIVERSION OF SUB-BASIN 385 INTO SUB-BASIN 415
1303            DR   SF385
                * DDM   ***** Preserved *****

1304            KK   RR385
1305            KM   ROUTING OF SPLIT FLOW FROM SUB-BASIN 385 TO SUB-BASIN 415
1306            RS       5    FLOW      -1
1307            RC    .045    .045    .045    5878    .024
1308            RX       0       1       2      14      24      36      37      38
1309            RY       3       3       3       0       0       3       3       3
                * DDM   ***** Preserved *****

1310            KK    415C
1311            KM   HYDROGRAPH COMBINATION OF SUB-BASINS 415, R454 & SPLIT FLOW FROM 385
1312            HC       4
                * DDM   ***** Preserved *****

1313            KK    415D
1314            KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1315            KM
1316            KM
                *      1
1317            DT    415S
1318            DI       0     900    3000
1319            DQ       0       0    2100
                * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                          PAGE 34

LINE            ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1320            KK   TR415
1321            KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1322            DR    415S
                * DDM   ***** Preserved *****

1323            KK   415SR
1324            KM   OFFLINE BASIN IN PARK AREA
1325            RS       1    STOR       0
1326            SA      19      20
1327            SE       0       3
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1328        SQ      25     200
            * DDM   ***** Preserved *****

1329        KK    C415
1330        KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
            *      1       2
1331        HC       2
            * DDM   ***** Preserved *****

1332        KK    R415
1333        KM   ROUTING OF FLOW FROM 415C TO 455C
1334        RS       2    FLOW      -1
1335        RC    .045    .045    .045    3900    .021
1336        RX       0       1       2      14      44      56      57      58
1337        RY       4       4       4       0       0       4       4       4
            * DDM   ***** Updated *****

1338        KK     455
1339        KM   SUB-BASIN 455
1340        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1341        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
1342        KM     L = 1.70  Kb = .041  Adj. Slope =  146.0
1343        BA   1.111
1344        LG    .270    .280   3.700    .640  24.000
1345        UC    .421    .204
1346        UA       0       5      16      30      65      77      84      90      94      97
1347        UA     100
            * DDM   ***** Preserved *****

1348        KK    D455
1349        KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1350        KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1351        KM   FOR BASIN #: 30      34      43      47&58
1352        KM        MAXIMUM VOLUME DIVERSION = 74.1 acre-feet
            *      1
1353        DT   BS455    74.1
1354        DI       0   10000
1355        DQ       0   10000
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1356        KK   RT455
1357        KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1358        DR   BS455
            * DDM   ***** Preserved *****

1359        KK   SR455
1360        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1361        KM    74.1 ACRE-FEETx43560/36x3600=25cfs
1362        RS       1    STOR       0
1363        SV       0     .01    74.1
1364        SQ       0      25      25
            * DDM   ***** Preserved *****

1365        KK    C455
1366        KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 455 AND DIVERTED BASIN STORAGE OF 455
1367        HC       2
            * DDM   ***** Preserved *****

1368        KK   455C
1369        KM  HYDROGRAPH COMBINATION OF 420C, R415 AND C455
            *      1       2
1370        HC       3
            * DDM   ***** Preserved *****

1371        KK   RR455
1372        KM   ROUTE FLOW FROM SPOOK HILL FRS TO SUB-BASIN 462
1373        RS       8    FLOW      -1
1374        RC    .035    .025    .035    9200    .002
1375        RX       0       1       2      28      58      84      85      86
1376        RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
            * DDM   ***** Updated *****

1377        KK     456
1378        KM   SUB-BASIN 456
1379        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1380        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1381        KM     L =  .94  Kb = .045  Adj. Slope =  315.0
1382        BA    .260
1383        LG    .300    .380   5.600    .200  12.000
1384        UC    .217    .139
1385        UA       0       5      16      30      65      77      84      90      94      97
1386        UA     100
            * DDM   ***** Preserved *****

1387        KK    DIV1
1388        KM        DIVERT FLOW INTO OFFLINE DETENTION BASIN
1389        KM        WEIR FOR BASIN SET AT 4 FEET ABOVE CHANNEL BOTTOM
            *      1
1390        DT  BASIN1
1391        DI       0    11.1   127.9   234.4   577.7   789.9  1025.5  1280.9  1555.7
1392        DQ       0       0       0    47.7     248   381.8   533.6   701.5     884
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1393        KK    DIV2
1394        KM        SPLIT OUT FLOW FOR WASHES THAT FLOW TO THE SOUTH FROM
1395        KM        WASHES THAT DRAIN TO THE WES, SOUTHERN WASHES FED BY 30" & 24" PIPE
1396        DT    WA30
1397        DI       0    11.1   127.9   189.6   329.7     408   491.9   579.4   671.7
1398        DQ       0    11.1    38.4    48.2      63    69.5      76      81      86
            * DDM   ***** Preserved *****

1399        KK    R456
1400        KM        ROUTE FLOW FROM SUB-BASIN 51 TO C101
1401        RS       1    FLOW      -1
1402        RC     .05    .035     .05    3800    .044
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1403        RX    1000    1010    1020    1036    1041    1057    1067    1077
1404        RY   14.88   14.44      14      10      10      14   14.44   14.88
            * DDM   ***** Updated *****

1405        KK     457
1406        KM   SUB-BASIN 457
1407        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1408        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1409        KM     L = 1.01  Kb = .045  Adj. Slope =  308.8
1410        BA    .190
1411        LG    .270    .330   3.950    .460   6.000
1412        UC    .237    .195
1413        UA       0       5      16      30      65      77      84      90      94      97
1414        UA     100
            * DDM   ***** Preserved *****

1415        KK    C101
1416        KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 50 AND 51
1417        HC       2
            * DDM   ***** Preserved *****

1418        KK    DIV3
1419        KM        RESERVOIR AT THE EDGE OF THE PROPERTY   FLOW FROM CHANNEL
1420        KM        DIVERTED  INTO OFFLINE BASIN A 25' WEIR SET AT ELEVATION 1808 FT
            *      1
1421        DT  BASIN2
1422        DI       0      36      70     110     180   313.5     402   500.9
1423        DQ       0       0       0       0       0    67.5     124   190.9
            * DDM   ***** Preserved *****

1424        KK  RTDIV3
1425        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1426        DR  BASIN2
            * DDM   ***** Preserved *****

1427        KK  RFDIV3
1428        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1429        KM     5.0 ACRE-FEETx43560/36x3600=1.7cfs
1430        RS       1    STOR       0
1431        SV       0     .01       5
1432        SQ       0     1.7     1.7
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1433        KK   CDIV3
1434        KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1435        HC       2
            * DDM   ***** Preserved *****

1436        KK    R101
1437        KM        ROUTE FLOW FROM SUBBASIN C101 TO C103
1438        RS       1    FLOW      -1
1439        RC     .05    .035     .05    1450     .05
1440        RX    1000    1010    1020    1036    1041    1057    1067    1077
1441        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Updated *****

1442        KK     458
1443        KM   SUB-BASIN 458
1444        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1445        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1446        KM     L =  .76  Kb = .048  Adj. Slope =  299.0
1447        BA    .190
1448        LG    .290    .330   5.800    .190   6.000
1449        UC    .204    .131
1450        UA       0       5      16      30      65      77      84      90      94      97
1451        UA     100
            * DDM   ***** Preserved *****

1452        KK    C103
1453        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 55 AND C101
1454        HC       2
            * DDM   ***** Preserved *****

1455        KK    R103
1456        KM        ROUTE FLOW FROM SUBBASIN C103 TO C106
1457        RS       1    FLOW      -1
1458        RC     .05    .035     .05     900     .03
1459        RX    1000    1010    1020    1030    1050    1060    1070    1080
1460        RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
            * DDM   ***** Preserved *****

1461        KK    RT30
1462        KM        RETRIEVE DIVERTED FLOW FOR WASH BELOW 30 INCH PIPE
1463        DR    WA30
            * DDM   ***** Preserved *****

1464        KK     R30
1465        KM        ROUTE FLOW FROM WASH DIVERSION TO COMBINE C52
1466        RS       1    FLOW      -1
1467        RC     .05    .035     .05    1630     .05
1468        RX    1000    1010    1020    1036    1041    1057    1067    1077
1469        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1470        KK    RTB1
1471        KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
            *      1       2
1472        DR  BASIN1
            * DDM   ***** Preserved *****

1473        KK      B1
1474        KM        ROUTE FLOW THROUGH OFFLINE DETENTION BASIN
1475        KM        FLOW OUTLETS THROUGH A 30 INCH OUTLET PIPE
            *      1       2
1476        RS       1    ELEV       0
```

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1477        SV              .7     1.4     2.3     2.7     3.2
1478        SQ       0       5      16      28    32.5      37
1479        SE       0       1       2       3     3.5       4
            * DDM   ***** Preserved *****

1480        KK     RB1
1481        KM        ROUTE FLOW FROM BASIN DIVERSION TO COMBINE C52
1482        RS       2    FLOW      -1
1483        RC     .05    .035     .05    1720     .05
1484        RX    1000    1010    1020    1036    1041    1057    1067    1077
1485        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Preserved *****

1486        KK    CDIV
1487        KM        COMBINE FLOWS FROM WA30 AND BASIN 1
1488        HC       2     .12
            * DDM   ***** Updated *****

1489        KK     459
1490        KM   SUB-BASIN 459
1491        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1492        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1493        KM     L =  .35  Kb = .052  Adj. Slope =  251.6
1494        BA    .030
1495        LG    .220    .300   3.330    .710   8.000
1496        UC    .162    .157
1497        UA       0       5      16      30      65      77      84      90      94      97
1498        UA     100
            * DDM   ***** Preserved *****

1499        KK     C52
1500        KM        COMBINE FLOWS FROM SUB-BASIN 52 WA30 AND BASIN 1
1501        HC       2
            * DDM   ***** Preserved *****

1502        KK     R52
1503        KM        ROUTE FLOW FROM SUBBASIN 52 TO C102
1504        RS       2    FLOW      -1
1505        RC     .05    .035     .05    2000     .05
1506        RX    1000    1010    1020    1036    1041    1057    1067    1077
1507        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Updated *****
1                                   HEC-1 INPUT                                          PAGE 39

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1508        KK     460
1509        KM   SUB-BASIN 460
1510        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1511        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1512        KM     L =  .62  Kb = .058  Adj. Slope =  194.0
1513        BA    .140
1514        LG    .250    .260   3.740    .690  27.000
1515        UC    .242    .160
1516        UA       0       5      16      30      65      77      84      90      94      97
1517        UA     100
            * DDM   ***** Preserved *****

1518        KK    C102
1519        KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 52 AND 53
1520        HC       2
            * DDM   ***** Preserved *****

1521        KK  BASIN3
1522        KM        RESERVOIR AT CLUBHOUSE LOCATION 1-30 INCH PIPE AT OUTFALL
1523        KM        BOTTOM OF BASIN AT 6 FEET ABOVE 1795 ELEVATION
1524        RS       1    ELEV       0
1525        SA       0       0       0       0     .34    1.59    1.81    1.96    2.13     2.3
            *      0       0       0       0    1.14    3.25    5.52    9.23
1526        SQ       0      22      45    47.4      48      51      57      62      67      73
1527        SE    1795  1797.5    1800  1800.4  1800.5    1801    1802    1803    1804  1805.5
            * DDM   ***** Preserved *****

1528        KK      R3
1529        KM        ROUTE FLOW FROM C102 to C106
1530        RS       4    FLOW      -1
1531        RC     .05     .03     .05    2750   .0375
1532        RX    1000    1010    1020    1052    1086    1118    1128    1138
1533        RY    19.2    18.4      18      10      10      18    18.4    19.2
            * DDM   ***** Updated *****

1534        KK     461
1535        KM   SUB-BASIN 461
1536        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1537        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1538        KM     L =  .83  Kb = .052  Adj. Slope =  181.0
1539        BA    .120
1540        LG    .270    .250   4.250    .450  21.000
1541        UC    .271    .250
1542        UA       0       5      16      30      65      77      84      90      94      97
1543        UA     100
            * DDM   ***** Preserved *****

1544        KK    C104
1545        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 54 AND R102
1546        HC       2
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 40

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1547        KK    C106
1548        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN C103 AND C104
1549        HC       2
            * DDM   ***** Preserved *****

1550        KK    R106
1551        KM        ROUTE FLOW FROM C106 TO C49
1552        RS       2    FLOW      -1
1553        RC     .05    .035     .05    3950    .033
1554        RX    1000    1010    1020    1030    1050    1060    1070    1080
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1555        RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
            * DDM   ***** Updated *****

1556        KK     462
1557        KM   SUB-BASIN 462
1558        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1559        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1560        KM     L =  .97  Kb = .045  Adj. Slope =  297.7
1561        BA    .301
1562        LG    .300    .330   5.300    .240  12.000
1563        UC    .225    .137
1564        UA       0       5      16      30      65      77      84      90      94      97
1565        UA     100
            * DDM   ***** Preserved *****

1566        KK     C56
1567        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 56 AND C106
            *      1       2
1568        HC       2
            * DDM   ***** Updated *****

1569        KK     480
1570        KM   SUB-BASIN 480
1571        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1572        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
1573        KM     L = 1.21  Kb = .042  Adj. Slope =  165.0
1574        BA    .731
1575        LG    .270    .270   3.580    .730  27.000
1576        UC    .325    .148
1577        UA       0       5      16      30      65      77      84      90      94      97
1578        UA     100
            * DDM   ***** Preserved *****

1579        KK    D480
1580        KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1581        KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1582        KM   FOR BASIN #: 18 & 26
1583        KM        MAXIMUM VOLUME DIVERSION = 16.5 acre-feet
            *      1
1584        DT   BS480    16.5
1585        DI       0   10000
1586        DQ       0   10000
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1587        KK   RT480
1588        KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1589        DR   BS480
            * DDM   ***** Preserved *****

1590        KK   SR480
1591        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1592        KM    16.5 ACRE-FEETx43560/36x3600=5.5cfs
1593        RS       1    STOR       0
1594        SV       0     .01    16.5
1595        SQ       0     5.6     5.6
            * DDM   ***** Preserved *****

1596        KK    C480
1597        KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1598        HC       2
            * DDM   ***** Preserved *****

1599        KK    480C
1600        KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1601        HC       3    2.09
            * DDM   ***** Preserved *****

1602        KK   RR480
1603        KM   ROUTE FLOW FROM SUB-BASIN 480 TO SUB-BASIN 500
1604        RS       2    FLOW      -1
1605        RC    .025    .025    .025    6500     .05
1606        RX       0       1       2      28      58      84      85      86
1607        RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
            * DDM   ***** Updated *****

1608        KK     500
1609        KM   SUB-BASIN 500
1610        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1611        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
1612        KM     L = 2.77  Kb = .042  Adj. Slope =  286.8
1613        BA    .930
1614        LG    .350    .400   6.000    .170   9.000
1615        UC    .421    .333
1616        UA       0       3       5       8      12      20      43      75      90      96
1617        UA     100
            * DDM   ***** Preserved *****

1618        KK    500C
1619        KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1620        HC       2    2.84
1621        ZZ
```

SCHEMATIC DIAGRAM OF STREAM NETWORK

```
INPUT
 LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

  NO.      (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

  48          10
               V
               V
  58         R10
               V
               V
  64         R12
               .
               .
  70           .          20
               .           .
               .           .
  80         C20............
               .
               .
  83           .          40
               .           .
               .           .
  93           .           .          60
               .           .           .
               .           .           .
 103         60C........................
               V
               V
 106        SR60
               V
               V
 115         R60
               V
               V
 121        RR60
               .
               .
 127           .          80
               .           .
               .           .
 137         80C............
               V
               V
 140         R80
               .
               .
 146           .         100
               .           .
               .           .
 156        100C............
               V
               V
 159        R100
               .
               .
 165           .         120
               .           .
               .           .
 175        120C............
               V
               V
 178        R120
               .
               .
 184           .         140
               .           .
               .           .
 194           .           .         150
               .           .           V
               .           .           V
 204           .           .        R150
               .           .           V
               .           .           V
 210           .           .        R152
               .           .           .
               .           .           .
 216           .           .           .        160
               .           .           .          .
               .           .           .          .
 226           .           .           .          .         180
               .           .           .          .           .
               .           .           .          .           .
 236        180C..............................................
               .
               .
 239           .         350
               .           V
               .           V
 249           .        350R
               .           .
               .           .
 256           .           .         310
               .           .           .
               .           .           .
 266           .        C310............
               .           V
               .           V
 269           .        R310
               .           V
               .           V
 275           .        R312
               .           .
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 281           .           .         295
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 291           .        295C............
               .           V
               .           V
 294           .        295R
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                .          .
300             .          .        210
                .          .          V
                .          .          V
310             .          .       R210
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316             .          .          .        240
                .          .          .          .
                .          .          .          .
326             .      240C.......................
                .          V
                .          V
329             .      SR240
                .          .
                .          .
338             .          .        220
                .          .          .
                .          .          .
348             .      220C............
                .          V
                .          V
351             .      SR220
                .          .
                .          .
360             .          .        190
                .          .          V
                .          .          V
370             .          .       R190
                .          .          V
                .          .          V
376             .          .       R192
                .          .          .
                .          .          .
382             .          .          .        200
                .          .          .          .
                .          .          .          .
392             .      200C.......................
                .          V
                .          V
395             .      SR200
                .          V
                .          V
402             .      200SR
                .          .
                .          .
409          C180............
                V
                V
412         SR180
                V
                V
421         R180
                .
                .
428             .        260
                .          .
                .          .
438          260C............
                V
                V
441          R260
                .
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448             .        280
                .          .
                .          .
458          280C............
                V
                V
461          R280
                .
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468             .        300
                .          .
                .          .
478          C300............
                .
                .
484             .-------->   DIV30
481          D300
                .
                .
489             .          .<-------   DIV30
487             .      RTDIV
                .          V
                .          V
490             .      SRDIV
                .          .
                .          .
497          300C............
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500             .        305
                .          .
                .          .
513             .          .-------->    305D
510             .      D305
                .          .
                .          .
518             .          .          .<-------    305D
516             .          .       RT305
                .          .          V
                .          .          V
519             .          .       SR305
                .          .          .
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526          305C.......................
                V
                V
529          R305
                V
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                V
536        RR305
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543             .         320
                .           .
                .           .
558             .           .-------->   BS320
553             .        D320
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                .           .
563             .           .          .<-------   BS320
561             .           .       RT320
                .           .           V
                .           .           V
564             .           .       SR320
                .           .           .
                .           .           .
570        C320.......................
                V
                V
573        R320
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580             .         340
                .           .
                .           .
595             .           .-------->   BS340
590             .        D340
                .           .
                .           .
600             .           .          .<-------   BS340
598             .           .       RT340
                .           .           V
                .           .           V
601             .           .       SR340
                .           .           .
                .           .           .
607        C340.......................
                V
                V
610        R340
                .
                .
617             .         355
                .           V
                .           V
627             .        R355
                .           .
                .           .
633             .           .         360
                .           .           .
                .           .           .
647             .           .           .-------->   BS360
643             .           .       D360
                .           .           .
                .           .           .
652             .           .           .          .<-------   BS360
650             .           .           .       RT360
                .           .           .           V
                .           .           .           V
653             .           .           .       SR360
                .           .           .           .
                .           .           .           .
659             .           .           .           .         321
                .           .           .           .           V
                .           .           .           .           V
669             .           .           .           .       R321
                .           .           .           .           .
                .           .           .           .           .
676             .           .           .           .           .         341
                .           .           .           .           .           V
                .           .           .           .           .           V
686             .           .           .           .           .       R341
                .           .           .           .           .           .
                .           .           .           .           .           .
693             .           .           .           .       C360............
                .           .           .           .           .
                .           .           .           .           .
696        360C.............................................
                V
                V
699        R360
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                .
706             .         380
                .           .
                .           .
720             .           .-------->   BS380
716             .        D380
                .           .
                .           .
725             .           .          .<-------   BS380
723             .           .       RT380
                .           .           V
                .           .           V
726             .           .       SR380
                .           .           .
                .           .           .
732        380C.......................
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739             .-------->    380S
735        380D
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744             .           .<-------    380S
742             .        TR380
                .           V
                .           V
745             .        380SR
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751        C380............
              V
              V
754        R380
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              .
761           .         400
              .           .
              .           .
775           .           .-------->   BS400
771           .       D400
              .           .
              .           .
780           .           .          .<-------   BS400
778           .           .      RT400
              .           .          V
              .           .          V
781           .           .      SR400
              .           .          .
              .           .          .
787           .       C400............
              .           .
              .           .
790        400C............
              V
              V
793        R400
              .
              .
800           .         420
              .           .
              .           .
814           .           .-------->   BS420
810           .       D420
              .           .
              .           .
819           .           .          .<-------   BS420
817           .           .      RT420
              .           .          V
              .           .          V
820           .           .      SR420
              .           .          .
              .           .          .
826           .       420C............
              .           .
              .           .
829        C420............
              V
              V
832        R420
              .
              .
839           .         370
              .           V
              .           V
849           .       R370
              .           .
              .           .
855           .           .         395
              .           .           .
              .           .           .
865           .       395C............
              .           V
              .           V
868           .       R395
              .           .
              .           .
875           .           .         390
              .           .           .
              .           .           .
889           .           .           .-------->   BS390
885           .           .       D390
              .           .           .
              .           .           .
894           .           .           .          .<-------   BS390
892           .           .           .      RT390
              .           .           .          V
              .           .           .          V
895           .           .           .      SR390
              .           .           .          .
              .           .           .          .
901           .       390C.......................
              .           V
              .           V
904           .      RR390
              .           .
              .           .
910           .           .         385
              .           .           .
              .           .           .
922           .           .           .-------->   SF385
920           .           .       D385
              .           .           V
              .           .           V
925           .           .       385R
              .           .           .
              .           .           .
931           .           .           .         410
              .           .           .           .
              .           .           .           .
939           .       410C.......................
              .           .
              .           .
942           .           .         440
              .           .           V
              .           .           V
952           .           .         R70
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958           .           .           .         441
              .           .           .           .
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968           .           .       C108............
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 973                  .------->  SPLIT
 971              DIV4
                     V
                     V
 976              R108
                      .
 982                  .        442
                      .          .
                      .          .
 992               C67............
                      .
                      .
 998                  .------->  BASIN4
 995              DIV6
                      .
                      .
1003                  .          .<-------  BASIN4
1001                  .     RTDIV6
                      .          V
                      .          V
1004                  .     RFDIV6
                      .          .
                      .          .
1010             CDIV6............
                      .
                      .
1013                  .        443
                      .          .
                      .          .
1026                  .          .------->  WSH66
1023                  .      DIV66
                      .          V
                      .          V
1029                  .      R113
                      .          .
                      .          .
1035             C114............
                      .
                      .
1038                  .        444
                      .          V
                      .          V
1048                  .       R58
                      .          .
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1054                  .          .        445
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1064                  .      C107............
                      .          V
                      .          V
1067                  .      R107
                      .          .
                      .          .
1075                  .          .          .<-------  SPLIT
1073                  .          .      RTB2
                      .          .         V
                      .          .         V
1076                  .          .     RSPLIT
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                      .          .          .
1082                  .          .          .        446
                      .          .          .          .
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1092                  .      C109........................
                      .          .
                      .          .
1098                  .          .------->  WSH404
1095                  .      DIV5
                      .          V
                      .          V
1101                  .      R109
                      .          .
                      .          .
1107                  .          .        447
                      .          .          .
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1119                  .          .          .          .<-------  WSH404
1117                  .          .          .      RT404
                      .          .          .          V
                      .          .          .          V
1120                  .          .          .      R404
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1126                  .      C110........................
                      .          V
                      .          V
1129                  .      R110
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                      .          .
1135             C115............
                     V
                     V
1138             R115
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1145                  .        448
                      .          .
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1155                  .          .        449
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1165                  .     C6364............
                      .          V
                      .          V
1168                  .     R6364
                      .          .
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1174                  .          .        450
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1184                                                  451
                                                       .
1196                                                   .<-------   WSH66
1194                                                 RT66
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197                                                    .        452
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1207                                                 C6465............
                                                       V
                                                       V
1210                                                 R6566
                                                       .
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1216                                   C116.................................
                                          V
                                          V
1219                                 BASIN5
                                          V
                                          V
1226                                   R116
                                          .
                                          .
1232                                      .        453
                                          .          .
                                          .          .
1242                                   C117............
                                          .
                                          .
1245                             C118............
                                    V
                                    V
1248                             R118
                                    .
                                    .-------> BASIN6
1257
1254                             DIV7
                                    .
                                    .
1262                                .<-------  BASIN6
1260                                 RTDIV7
                                          V
                                          V
1263                                 RFDIV7
                                          .
                                          .
1269                            CDIV7............
                                    .
                                    .
1272                                .        454
                                    .          .
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1282                             C119............
                                    V
                                    V
1285                             R454
                                    .
                                    .
1291                                .        415
                                    .          .
                                    .          .
1303                                .          .<-------   SF385
1301                                .       RT385
                                    .          V
                                    .          V
1304                                .       RR385
                                    .          .
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1310                        415C.................................
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1317                                .------->    415S
1313                        415D
                                    .
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1322                                .<-------    415S
1320                             TR415
                                    V
                                    V
1323                             415SR
                                    .
                                    .
1329                        C415............
                                 V
                                 V
1332                        R415
                                    .
                                    .
1338                                .        455
                                    .
                                    .
1353                                .------->   BS455
1348                             D455
                                    .
                                    .
1358                                .          .<-------   BS455
1356                                .       RT455
                                    .          V
                                    .          V
1359                                .       SR455
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365                              C455............
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1368                    455C........................
                           V
                           V
1371                    RR455
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1377          456
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1390            .-------> BASIN1
1387        DIV1
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1396            .------->   WA30
1393        DIV2
              V
              V
1399        R456
                .
                .
1405            .        457
                .          .
                .          .
1415        C101............
                .
                .
1421            .-------> BASIN2
1418        DIV3
                .
                .
1426            .          .<-------  BASIN2
1424            .     RTDIV3
                .          V
                .          V
1427            .     RFDIV3
                .          .
                .          .
1433       CDIV3............
              V
              V
1436        R101
                .
                .
1442            .        458
                .          .
                .          .
1452        C103............
              V
              V
1455        R103
                .
                .
1463            .          .<-------   WA30
1461            .       RT30
                .          V
                .          V
1464            .       R30
                .          .
                .          .
1472            .          .          .<-------  BASIN1
1470            .          .       RTB1
                .          .          V
                .          .          V
1473            .          .         B1
                .          .          V
                .          .          V
1480            .          .        RB1
                .          .          .
                .          .          .
1486            .       CDIV............
                .          .
                .          .
1489            .          .        459
                .          .          .
                .          .          .
1499            .       C52............
                .          V
                .          V
1502            .       R52
                .          .
                .          .
1508            .          .        460
                .          .          .
                .          .          .
1518            .       C102............
                .          V
                .          V
1521            .     BASIN3
                .          V
                .          V
1528            .        R3
                .          .
                .          .
1534            .          .        461
                .          .          .
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1544            .       C104............
                .          .
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1547        C106............
              V
              V
1550        R106
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1556            .        462
                .          .
                .          .
1566        C56............
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1569            .        480
                .          .
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1584            .          .------->  BS480
1579            .       D480
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1589                                      .<-------   BS480
1587                                 RT480
                                         V
                                         V
1590                                 SR480
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1596                            C480............
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1599                 480C......................
                        V
                        V
1602                RR480
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                        .
1608                    .        500
                        .          .
                        .          .
1618                 500C............
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(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
	HYDROGRAPH AT	10	951.	12.27	114.	31.	15.	.70		
+	ROUTED TO	R10	882.	12.40	114.	31.	15.	.70		
+	ROUTED TO	R12	833.	12.60	114.	31.	15.	.70		
+	HYDROGRAPH AT	20	959.	12.43	128.	32.	16.	1.12		
+	2 COMBINED AT	C20	1663.	12.53	240.	63.	30.	1.82		
+	HYDROGRAPH AT	40	2582.	12.30	252.	66.	32.	2.23		
+	HYDROGRAPH AT	60	1553.	12.40	228.	61.	29.	1.75		
+	3 COMBINED AT	60C	5274.	12.37	708.	188.	90.	5.80		
+	ROUTED TO	SR60	92.	14.40	92.	89.	70.	5.80		
+	ROUTED TO	R60	92.	14.43	92.	89.	70.	5.80		
+	ROUTED TO	RR60	92.	14.53	92.	89.	70.	5.80		
+	HYDROGRAPH AT	80	1868.	12.27	179.	46.	22.	1.48		
+	2 COMBINED AT	80C	1942.	12.27	266.	134.	92.	1.48		
+	ROUTED TO	R80	1919.	12.27	266.	134.	92.	1.48		
+	HYDROGRAPH AT	100	404.	12.20	58.	15.	7.	.48		
	2 COMBINED AT	100C	2300.	12.27	321.	148.	99.	1.96		
	ROUTED TO	R100	2292.	12.30	321.	148.	99.	1.96		
+	HYDROGRAPH AT	120	3232.	12.27	326.	88.	42.	2.20		
+	2 COMBINED AT	120C	5469.	12.27	636.	229.	141.	4.16		
+	ROUTED TO	R120	5397.	12.30	636.	229.	140.	4.16		
+	HYDROGRAPH AT	140	632.	12.13	64.	17.	8.	.60		
+	HYDROGRAPH AT	150	135.	13.20	47.	13.	6.	.41		
+	ROUTED TO	R150	134.	13.30	47.	13.	6.	.41		
+	ROUTED TO	R152	133.	13.50	47.	13.	6.	.41		
+	HYDROGRAPH AT	160	217.	12.40	35.	9.	4.	.37		
+	HYDROGRAPH AT	180	785.	12.37	90.	23.	11.	1.00		
+	5 COMBINED AT	180C	6707.	12.30	857.	286.	168.	6.54		
+	HYDROGRAPH AT	350	1151.	12.20	102.	27.	13.	.94		
+	ROUTED TO	350R	1018.	12.43	102.	27.	13.	.94		
+	HYDROGRAPH AT	310	376.	12.33	49.	12.	6.	.56		
+	2 COMBINED AT	C310	1339.	12.43	149.	38.	18.	1.49		
	ROUTED TO	R310	1323.	12.43	149.	38.	18.	1.49		
	ROUTED TO	R312	1319.	12.47	149.	38.	18.	1.49		
+	HYDROGRAPH AT	295	364.	12.30	40.	10.	5.	.38		
+	2 COMBINED AT	295C	1571.	12.47	187.	48.	23.	1.87		

+	ROUTED TO	295R	1566.	12.47	187.	48.	23.	1.87
+	HYDROGRAPH AT	210	1240.	12.17	105.	27.	13.	.79
	ROUTED TO	R210	1165.	12.23	105.	27.	13.	.79
	HYDROGRAPH AT	240	437.	12.30	66.	17.	8.	.48
+	3 COMBINED AT	240C	2608.	12.40	353.	91.	44.	3.14
+	ROUTED TO	SR240	941.	12.90	284.	74.	36.	3.14
+	HYDROGRAPH AT	220	1126.	12.17	98.	25.	12.	.73
+	2 COMBINED AT	220C	1103.	12.17	376.	98.	47.	3.87
+	ROUTED TO	SR220	991.	12.93	364.	95.	46.	3.87
+	HYDROGRAPH AT	190	1403.	12.17	116.	31.	15.	.92
+	ROUTED TO	R190	1348.	12.23	116.	31.	15.	.92
+	ROUTED TO	R192	1267.	12.30	116.	31.	15.	.92
+	HYDROGRAPH AT	200	703.	12.20	69.	19.	9.	.54
+	3 COMBINED AT	200C	2592.	12.30	538.	142.	69.	5.32
+	ROUTED TO	SR200	2445.	12.37	533.	139.	67.	5.32
+	ROUTED TO	200SR	1653.	12.63	412.	109.	52.	5.32
+	2 COMBINED AT	C180	6707.	12.30	1261.	394.	220.	11.86
+	ROUTED TO	SR180	139.	18.93	139.	138.	112.	11.86
	ROUTED TO	R180	139.	19.00	139.	138.	111.	11.86
	HYDROGRAPH AT	260	418.	12.10	43.	12.	6.	.27
+	2 COMBINED AT	260C	527.	12.10	176.	149.	119.	.27
+	ROUTED TO	R260	514.	12.20	176.	149.	118.	.27
+	HYDROGRAPH AT	280	478.	12.10	42.	12.	6.	.30
+	2 COMBINED AT	280C	945.	12.13	215.	159.	124.	.57
+	ROUTED TO	R280	909.	12.20	215.	159.	123.	.57
+	HYDROGRAPH AT	300	407.	12.10	34.	9.	5.	.30
+	2 COMBINED AT	C300	1243.	12.17	247.	167.	127.	.87
+	DIVERSION TO	DIV30	943.	12.17	68.	17.	8.	.87
+	HYDROGRAPH AT	D300	300.	11.87	178.	150.	119.	.87
+	HYDROGRAPH AT	RTDIV	943.	12.17	68.	17.	8.	.87
+	ROUTED TO	SRDIV	141.	12.60	62.	17.	8.	.87
+	2 COMBINED AT	300C	441.	12.60	239.	167.	127.	.87
+	HYDROGRAPH AT	305	409.	12.27	42.	11.	6.	.38
+	DIVERSION TO	305D	409.	12.27	42.	11.	6.	.38
	HYDROGRAPH AT	D305	0.	.00	0.	0.	0.	.38
	HYDROGRAPH AT	RT305	409.	12.27	42.	11.	6.	.38
+	ROUTED TO	SR305	62.	12.93	36.	11.	6.	.38
+	3 COMBINED AT	305C	498.	12.67	273.	178.	133.	1.25

+	ROUTED TO	R305	497.	12.73	273.	178.	132.	1.25
+	ROUTED TO	RR305	494.	12.77	272.	178.	132.	1.25
	HYDROGRAPH AT	320	1040.	12.17	111.	31.	15.	.87
	DIVERSION TO	BS320	409.	11.93	21.	6.	3.	.87
+	HYDROGRAPH AT	D320	1040.	12.17	96.	25.	12.	.87
+	HYDROGRAPH AT	RT320	409.	11.93	21.	6.	3.	.87
+	ROUTED TO	SR320	4.	4.17	4.	4.	3.	.87
+	3 COMBINED AT	C320	1351.	12.17	370.	206.	146.	2.12
+	ROUTED TO	R320	1311.	12.23	370.	206.	146.	2.12
+	HYDROGRAPH AT	340	808.	12.20	105.	30.	15.	.89
+	DIVERSION TO	BS340	808.	12.20	103.	28.	14.	.89
+	HYDROGRAPH AT	D340	23.	13.33	5.	2.	1.	.89
+	HYDROGRAPH AT	RT340	808.	12.20	103.	28.	14.	.89
+	ROUTED TO	SR340	19.	11.10	19.	19.	14.	.89
+	3 COMBINED AT	C340	1325.	12.23	389.	226.	160.	3.01
+	ROUTED TO	R340	1313.	12.30	389.	226.	159.	3.01
+	HYDROGRAPH AT	355	537.	12.33	73.	19.	9.	.69
+	ROUTED TO	R355	481.	12.67	72.	19.	9.	.69
	HYDROGRAPH AT	360	504.	12.23	84.	25.	12.	.67
	DIVERSION TO	BS360	504.	12.23	53.	14.	7.	.67
+	HYDROGRAPH AT	D360	306.	12.63	38.	11.	5.	.67
+	HYDROGRAPH AT	RT360	504.	12.23	53.	14.	7.	.67
+	ROUTED TO	SR360	10.	9.83	10.	10.	7.	.67
+	HYDROGRAPH AT	321	720.	12.03	51.	15.	7.	.40
+	ROUTED TO	R321	466.	12.53	51.	15.	7.	.40
+	HYDROGRAPH AT	341	1156.	12.07	92.	28.	13.	.65
+	ROUTED TO	R341	1075.	12.13	92.	27.	13.	.65
+	2 COMBINED AT	C360	1078.	12.13	142.	42.	20.	1.05
+	5 COMBINED AT	360C	2143.	12.63	631.	298.	199.	5.42
+	ROUTED TO	R360	2068.	12.70	630.	298.	198.	5.42
+	HYDROGRAPH AT	380	666.	12.27	98.	26.	13.	.97
+	DIVERSION TO	BS380	666.	12.27	56.	14.	7.	.97
+	HYDROGRAPH AT	D380	472.	12.57	46.	12.	6.	.97
+	HYDROGRAPH AT	RT380	666.	12.27	56.	14.	7.	.97
	ROUTED TO	SR380	10.	11.33	10.	10.	7.	.97
	3 COMBINED AT	380C	2426.	12.67	681.	319.	210.	6.39
+	DIVERSION TO	380S	1326.	12.67	141.	35.	17.	6.39
+	HYDROGRAPH AT	380D	1100.	12.17	540.	283.	193.	6.39

HYDROGRAPH AT	TR380	1326.	12.67	141.	35.	17.	6.39
ROUTED TO	380SR	207.	13.17	128.	70.	60.	6.39
2 COMBINED AT	C380	1307.	13.17	667.	353.	253.	6.39
ROUTED TO	R380	1305.	13.27	666.	353.	252.	6.39
HYDROGRAPH AT	400	351.	12.23	47.	13.	6.	.62
DIVERSION TO	BS400	262.	12.10	10.	3.	1.	.62
HYDROGRAPH AT	D400	351.	12.23	39.	10.	5.	.62
HYDROGRAPH AT	RT400	262.	12.10	10.	3.	1.	.62
ROUTED TO	SR400	2.	8.70	2.	2.	1.	.62
2 COMBINED AT	C400	353.	12.23	41.	12.	6.	.62
2 COMBINED AT	400C	1422.	12.47	704.	364.	258.	7.01
ROUTED TO	R400	1412.	12.60	703.	364.	257.	7.01
HYDROGRAPH AT	420	752.	12.20	92.	26.	12.	.85
DIVERSION TO	BS420	269.	11.97	15.	4.	2.	.85
HYDROGRAPH AT	D420	752.	12.20	83.	22.	10.	.85
HYDROGRAPH AT	RT420	269.	11.97	15.	4.	2.	.85
ROUTED TO	SR420	13.	11.03	12.	4.	2.	.85
2 COMBINED AT	420C	765.	12.20	92.	26.	12.	.85
2 COMBINED AT	C420	1789.	12.50	784.	386.	269.	7.86
ROUTED TO	R420	1760.	12.60	782.	386.	268.	7.86
HYDROGRAPH AT	370	588.	12.30	79.	21.	10.	.67
ROUTED TO	R370	580.	12.33	79.	21.	10.	.67
HYDROGRAPH AT	395	182.	12.23	25.	7.	3.	.20
2 COMBINED AT	395C	743.	12.30	103.	28.	13.	.87
ROUTED TO	R395	734.	12.37	103.	28.	13.	.87
HYDROGRAPH AT	390	463.	12.03	33.	10.	5.	.24
DIVERSION TO	BS390	95.	11.73	6.	2.	1.	.24
HYDROGRAPH AT	D390	463.	12.03	30.	8.	4.	.24
HYDROGRAPH AT	RT390	95.	11.73	6.	2.	1.	.24
ROUTED TO	SR390	1.	.90	1.	1.	1.	.24
3 COMBINED AT	390C	789.	12.33	132.	37.	18.	1.11
ROUTED TO	RR390	764.	12.47	132.	37.	18.	1.11
HYDROGRAPH AT	385	782.	12.23	87.	24.	12.	.65
DIVERSION TO	SF385	313.	12.23	35.	10.	5.	.65
HYDROGRAPH AT	D385	469.	12.23	52.	14.	7.	.65
ROUTED TO	385R	431.	12.40	52.	14.	7.	.65
HYDROGRAPH AT	410	478.	12.03	32.	9.	4.	.27
3 COMBINED AT	410C	1193.	12.40	213.	59.	29.	2.03

+ HYDROGRAPH AT	440	180.	12.03	12.	3.	2.	.08
+ ROUTED TO	R70	176.	12.07	12.	3.	2.	.08
HYDROGRAPH AT	441	16.	12.03	1.	0.	0.	.01
2 COMBINED AT	C108	191.	12.07	14.	4.	2.	.09
+ DIVERSION TO	SPLIT	96.	12.07	7.	2.	1.	.09
+ HYDROGRAPH AT	DIV4	96.	12.07	7.	2.	1.	.09
+ ROUTED TO	R108	88.	12.13	7.	2.	1.	.09
+ HYDROGRAPH AT	442	102.	12.10	9.	2.	1.	.10
+ 2 COMBINED AT	C67	187.	12.10	15.	4.	2.	.19
+ DIVERSION TO	BASIN4	115.	12.10	6.	1.	1.	.19
+ HYDROGRAPH AT	DIV6	72.	12.10	10.	3.	1.	.19
+ HYDROGRAPH AT	RTDIV6	115.	12.10	6.	1.	1.	.19
+ ROUTED TO	RFDIV6	1.	11.90	1.	1.	1.	.19
+ 2 COMBINED AT	CDIV6	74.	12.10	10.	4.	2.	.19
+ HYDROGRAPH AT	443	148.	12.07	14.	4.	2.	.08
+ DIVERSION TO	WSH66	78.	11.90	12.	3.	2.	.08
+ HYDROGRAPH AT	DIV66	70.	12.07	3.	1.	0.	.08
+ ROUTED TO	R113	69.	12.07	3.	1.	0.	.08
2 COMBINED AT	C114	140.	12.07	13.	4.	2.	.27
HYDROGRAPH AT	444	82.	12.03	5.	1.	1.	.04
+ ROUTED TO	R58	75.	12.07	5.	1.	1.	.04
+ HYDROGRAPH AT	445	296.	12.03	18.	5.	2.	.19
+ 2 COMBINED AT	C107	365.	12.03	22.	6.	3.	.23
+ ROUTED TO	R107	365.	12.07	22.	6.	3.	.23
+ HYDROGRAPH AT	RTB2	96.	12.07	7.	2.	1.	.09
+ ROUTED TO	RSPLIT	95.	12.07	7.	2.	1.	.09
+ HYDROGRAPH AT	446	65.	12.03	6.	2.	1.	.04
+ 3 COMBINED AT	C109	520.	12.07	35.	9.	4.	.27
+ DIVERSION TO	WSH404	35.	11.73	8.	2.	1.	.27
+ HYDROGRAPH AT	DIV5	485.	12.07	27.	7.	3.	.27
+ ROUTED TO	R109	469.	12.10	27.	7.	3.	.27
+ HYDROGRAPH AT	447	138.	12.07	12.	4.	2.	.09
+ HYDROGRAPH AT	RT404	35.	11.73	8.	2.	1.	.27
+ ROUTED TO	R404	35.	11.90	8.	2.	1.	.27
3 COMBINED AT	C110	635.	12.07	46.	13.	6.	.36
ROUTED TO	R110	632.	12.10	46.	13.	6.	.36
+ 2 COMBINED AT	C115	764.	12.10	59.	17.	8.	.63
+ ROUTED TO	R115	767.	12.10	59.	17.	8.	.63

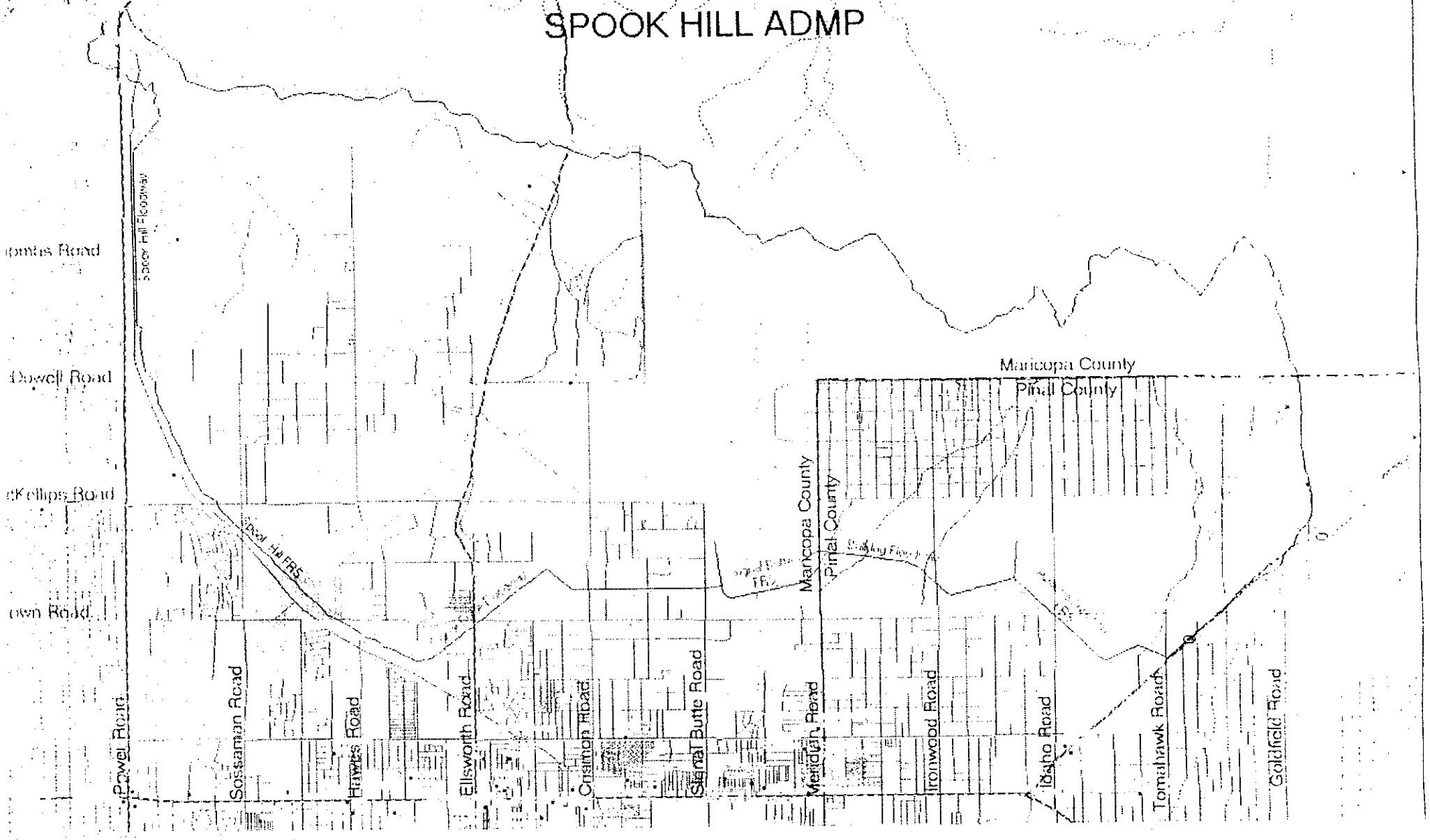
+	HYDROGRAPH AT	448	88.	12.03	6.	2.	1.	.05
+	HYDROGRAPH AT	449	80.	12.03	5.	1.	1.	.05
	2 COMBINED AT	C6364	166.	12.03	11.	3.	1.	.09
	ROUTED TO	R6364	137.	12.17	11.	3.	1.	.09
+	HYDROGRAPH AT	450	61.	12.20	6.	2.	1.	.07
+	HYDROGRAPH AT	451	18.	12.17	2.	1.	0.	.03
+	HYDROGRAPH AT	RT66	78.	11.90	12.	3.	2.	.08
+	HYDROGRAPH AT	452	62.	12.03	4.	1.	1.	.04
+	2 COMBINED AT	C6465	140.	12.03	16.	4.	2.	.04
+	ROUTED TO	R6566	135.	12.10	16.	4.	2.	.04
+	4 COMBINED AT	C116	341.	12.17	35.	9.	4.	.23
+	ROUTED TO	BASIN5	152.	12.47	35.	9.	4.	.23
+	ROUTED TO	R116	150.	12.53	35.	9.	4.	.23
+	HYDROGRAPH AT	453	62.	12.10	7.	2.	1.	.06
+	2 COMBINED AT	C117	169.	12.50	41.	11.	5.	.29
+	2 COMBINED AT	C118	852.	12.10	99.	28.	14.	.92
+	ROUTED TO	R118	842.	12.10	99.	28.	14.	.92
+	DIVERSION TO	BASIN6	243.	12.10	10.	2.	1.	.92
	HYDROGRAPH AT	DIV7	599.	12.10	89.	25.	13.	.92
	HYDROGRAPH AT	RTDIV7	243.	12.10	10.	2.	1.	.92
+	ROUTED TO	RFDIV7	1.	11.97	1.	1.	1.	.92
+	2 COMBINED AT	CDIV7	600.	12.10	90.	26.	13.	.92
+	HYDROGRAPH AT	454	157.	12.17	21.	6.	3.	.18
+	2 COMBINED AT	C119	748.	12.13	110.	32.	16.	1.10
+	ROUTED TO	R454	681.	12.40	110.	32.	16.	1.10
+	HYDROGRAPH AT	415	412.	12.17	55.	16.	7.	.45
+	HYDROGRAPH AT	RT385	313.	12.23	35.	10.	5.	.65
+	ROUTED TO	RR385	281.	12.40	35.	10.	5.	.65
+	4 COMBINED AT	415C	2405.	12.40	405.	115.	56.	3.57
+	DIVERSION TO	415S	1505.	12.40	131.	33.	16.	3.57
+	HYDROGRAPH AT	415D	900.	12.03	275.	82.	41.	3.57
+	HYDROGRAPH AT	TR415	1505.	12.40	131.	33.	16.	3.57
+	ROUTED TO	415SR	192.	12.87	112.	48.	36.	3.57
+	2 COMBINED AT	C415	1092.	12.87	381.	130.	77.	3.57
	ROUTED TO	R415	1091.	12.93	381.	130.	77.	3.57
	HYDROGRAPH AT	455	1346.	12.13	142.	43.	21.	1.11
+	DIVERSION TO	BS455	1346.	12.13	137.	37.	18.	1.11
+	HYDROGRAPH AT	D455	55.	12.77	16.	6.	3.	1.11

+	HYDROGRAPH AT	RT455	1346.	12.13	137.	37.	18.	1.11
+	ROUTED TO	SR455	25.	10.47	25.	25.	18.	1.11
+	2 COMBINED AT	C455	80.	12.77	41.	31.	21.	1.11
+	3 COMBINED AT	455C	2814.	12.63	1169.	532.	361.	12.54
+	ROUTED TO	RR455	2777.	12.90	1166.	532.	360.	12.54
+	HYDROGRAPH AT	456	468.	12.07	35.	10.	5.	.26
+	DIVERSION TO	BASIN1	184.	12.07	8.	2.	1.	.26
+	HYDROGRAPH AT	DIV1	284.	12.07	27.	8.	4.	.26
+	DIVERSION TO	WA30	58.	12.07	10.	3.	2.	.26
+	HYDROGRAPH AT	DIV2	226.	12.07	18.	4.	2.	.26
+	ROUTED TO	R456	203.	12.10	18.	4.	2.	.26
+	HYDROGRAPH AT	457	264.	12.07	20.	5.	3.	.19
+	2 COMBINED AT	C101	455.	12.07	38.	10.	5.	.45
+	DIVERSION TO	BASIN2	160.	12.07	7.	2.	1.	.45
+	HYDROGRAPH AT	DIV3	295.	12.07	31.	8.	4.	.45
+	HYDROGRAPH AT	RTDIV3	160.	12.07	7.	2.	1.	.45
+	ROUTED TO	RFDIV3	2.	11.90	2.	2.	1.	.45
+	2 COMBINED AT	CDIV3	297.	12.07	32.	9.	5.	.45
+	ROUTED TO	R101	295.	12.10	32.	9.	5.	.45
+	HYDROGRAPH AT	458	356.	12.03	25.	7.	3.	.19
+	2 COMBINED AT	C103	633.	12.07	56.	16.	8.	.64
+	ROUTED TO	R103	629.	12.07	56.	16.	8.	.64
+	HYDROGRAPH AT	RT30	58.	12.07	10.	3.	2.	.26
+	ROUTED TO	R30	57.	12.10	10.	3.	2.	.26
+	HYDROGRAPH AT	RTB1	184.	12.07	8.	2.	1.	.26
+	ROUTED TO	B1	37.	12.23	8.	2.	1.	.26
+	ROUTED TO	RB1	37.	12.30	8.	2.	1.	.26
+	2 COMBINED AT	CDIV	86.	12.20	17.	5.	3.	.12
+	HYDROGRAPH AT	459	44.	12.03	3.	1.	0.	.03
+	2 COMBINED AT	C52	113.	12.10	20.	6.	3.	.15
+	ROUTED TO	R52	112.	12.17	20.	6.	3.	.15
+	HYDROGRAPH AT	460	214.	12.07	19.	6.	3.	.14
+	2 COMBINED AT	C102	313.	12.07	39.	12.	6.	.29
+	ROUTED TO	BASIN3	71.	12.63	39.	12.	6.	.29
+	ROUTED TO	R3	71.	12.77	39.	12.	6.	.29
+	HYDROGRAPH AT	461	161.	12.10	17.	5.	2.	.12
+	2 COMBINED AT	C104	213.	12.10	55.	17.	8.	.41
+	2 COMBINED AT	C106	834.	12.07	110.	32.	16.	1.05

+	ROUTED TO	R106	796.	12.13	110.	32.	16.	1.05
+	HYDROGRAPH AT	462	538.	12.07	40.	11.	5.	.30
	2 COMBINED AT	C56	1254.	12.10	149.	43.	21.	1.35
	HYDROGRAPH AT	480	1050.	12.10	96.	29.	14.	.73
+	DIVERSION TO	BS480	455.	11.90	27.	8.	4.	.73
+	HYDROGRAPH AT	D480	1050.	12.10	78.	21.	10.	.73
+	HYDROGRAPH AT	RT480	455.	11.90	27.	8.	4.	.73
+	ROUTED TO	SR480	6.	3.90	6.	6.	4.	.73
+	2 COMBINED AT	C480	1056.	12.10	84.	27.	14.	.73
+	3 COMBINED AT	480C	3027.	12.87	1422.	611.	402.	2.09
+	ROUTED TO	RR480	3021.	12.90	1421.	611.	401.	2.09
+	HYDROGRAPH AT	500	1073.	12.27	122.	33.	16.	.93
+	2 COMBINED AT	500C	3427.	12.17	1531.	639.	416.	2.84

*** NORMAL END OF HEC-1 ***

SPOOK HILL ADMP



HEC-1 Existing Conditions 100-Year, 6hr Storm

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1****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*             JUN  1998                *
*           VERSION 4.1                *
*                                      *
*  RUN DATE   18MAY00  TIME  11:57:07  *
*                                      *
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*                                      *
*    U.S. ARMY CORPS OF ENGINEERS      *
*    HYDROLOGIC ENGINEERING CENTER     *
*          609 SECOND STREET           *
*       DAVIS, CALIFORNIA 95616        *
*           (916) 756-1104             *
*                                      *
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X     X  XXXXXXX   XXXXX          X
X     X  X        X     X        XX
X     X  X        X               X
XXXXXXX  XXXX     X        XXXXX  X
X     X  X        X               X
X     X  X        X     X         X
X     X  XXXXXXX   XXXXX         XXX
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THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

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1                                   HEC-1 INPUT                                          PAGE  1

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  1           ID   EXISTING LAND USE CALCULATIONS WERE BASED ON 1 YR. FROM 11/5/99
  2           ID   FOR LAS SENDAS       AND LANDISCOR JAN.1999 AERIAL PHOTOGPRAPHS
  3           ID
  4           ID   ALL DAMS WERE ANALYZED WITH NO STORAGE BELOW PRINCIPLE SPILLWAY ELEVATIONS
  5           ID
  6           ID   A CONSERVATIVE ESTIMATE WAS USED FOR THE LOCATION OF THE CENTROID FOR
  7           ID   PRECIPITATION VALUES
  8           ID
  9           ID   ALL CHANNEL ROUTING INFORMATION WAS OBTAINED FROM MCFCD SPOOK HILL   SIGNAL
 10           ID   BUTTE        AND BULLDOG FLOODWAY PLANS
 11           ID
 12           ID   ANALYSIS PREPARED BY WOOD/PATEL - JCD; 11/05/99; FILE:  SPHEX1.DAT
 13           ID
 14           ID   MODEL UPDATE WITH LAS SENDAS WEST BASINS & ALL RETENTION BASINS
 15           ID   DRAINING BACK INTO THE SYSTEM WITHIN 36 HOURS
 16           ID   BY: JCD; 1/4/2000            FILE: SPHEX1RV.DAT
 17           ID
 18           ID   CURRENT MODEL UPDATED WITH ALL PREVIOUS MODEL RUNS
 19           ID   NOTED ABOVE, AND COUNTY COMMENTS DATED MARCH 20, 2000
 20           ID   BY: MW; 04/06/2000       FILE:  S24CE0.DAT
 21           ID
 22           ID   MODEL UPDATED TO ALIGN SUB-BASIN CONCENTRATION POINTS WITH PASS MOUNTAIN
 23           ID   DIVERSION.  NEW BOUNDARIES CREATED FOR SUB-BASINS 240, 220, & 200
 24           ID   ANALYSIS PERFORMED BY WOOD/PATEL; MW;  ON 05/15/2000   FILE:  S6CE13.DAT
 25           ID
 26           ID   DDM MCUHP1 SPOOK HILL AMDP - EXISTING CONDITIONS MODEL - 100YR, 6HR STORM
              *DIAGRAM
 27           IT       2                    1500
 28           IO       3
 29           IN      15
 30           JD    3.15    0.01
 31           PC    .000    .002    .005    .008    .011    .014    .017    .020    .023    .026
 32           PC    .029    .032    .035    .038    .041    .044    .048    .052    .056    .060
 33           PC    .064    .068    .072    .076    .080    .085    .090    .095    .100    .105
 34           PC    .110    .115    .120    .126    .133    .140    .147    .155    .163    .172
 35           PC    .181    .191    .203    .218    .236    .257    .283    .387    .663    .707
 36           PC    .735    .758    .776    .791    .804    .815    .825    .834    .842    .849
 37           PC    .856    .863    .869    .875    .881    .887    .893    .898    .903    .908
 38           PC    .913    .918    .922    .926    .930    .934    .938    .942    .946    .950
 39           PC    .953    .956    .959    .962    .965    .968    .971    .974    .977    .980
 40           PC    .983    .986    .989    .992    .995    .998   1.000
 41           JD    2.96   10.00
 42           JD    2.84   30.00
 43           JD    2.71   60.00
 44           JD    2.66   90.00
 45           JD    2.63  120.00
 46           JD    2.60  150.00
 47           JD    2.52  300.00
 48           JD    2.46  500.00
              * DDM   ***** Updated *****
1                                   HEC-1 INPUT                                          PAGE  2

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 49           KK      10
 50           KM   SUB-BASIN 10
 51           KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 52           KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
 53           KM     L = 2.00  Kb = .044  Adj. Slope =  165.0
 54           BA    .702
 55           LG    .350    .320   7.600    .090  15.000
 56           UC    .463    .335
 57           UA       0       3       5       8      12      20      43      75      90      96
 58           UA     100
              * DDM   ***** Preserved *****

 59           KK     R10
 60           KM   ROUTING OF FLOW FROM SUB-BASIN 10 TO R12
 61           RS       5    FLOW      -1
 62           RC    .045     .03    .045    8700    .021
 63           RX       0       1       2      17      27      42      43      44
 64           RY       5       5       5       0       0       5       5       5
              * DDM   ***** Preserved *****
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 65          KK     R12
 66          KM   ROUTING OF FLOW FROM R12 TO SUB-BASIN 20
 67          RS       6    FLOW      -1
 68          RC    .045     .03    .045    4500     .01
 69          RX       0       1      30    37.5    57.5      65      94      95
 70          RY       3     2.5     2.5       0       0     2.5     2.5       3
             * DDM   ***** Updated *****

 71          KK      20
 72          KM   SUB-BASIN 20
 73          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 74          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
 75          KM     L = 2.50  Kb = .041  Adj. Slope =   88.0
 76          BA   1.120
 77          LG    .350    .390   5.800    .190   1.000
 78          UC    .783    .551
 79          UA       0       3       5       8      12      20      43      75      90      96
 80          UA     100
             * DDM   ***** Preserved *****

 81          KK     C20
 82          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 10 AND 20
 83          HC       2
             * DDM   ***** Updated *****

 84          KK      40
 85          KM   SUB-BASIN 40
 86          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 87          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
 88          KM     L = 3.08  Kb = .036  Adj. Slope =  189.0
 89          BA   2.233
 90          LG    .340    .340   4.900    .280   5.000
 91          UC    .583    .316
 92          UA       0       3       5       8      12      20      43      75      90      96
1                                        HEC-1 INPUT                                          PAGE  3

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 93          UA     100
             * DDM   ***** Updated *****

 94          KK      60
 95          KM   SUB-BASIN 60
 96          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 97          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .990
 98          KM     L = 4.19  Kb = .038  Adj. Slope =  209.6
 99          BA   1.746
100          LG    .330    .350   5.800    .190   9.000
101          UC    .696    .566
102          UA       0       3       5       8      12      20      43      75      90      96
103          UA     100
             * DDM   ***** Preserved *****

104          KK     60C
105          KM   HYDROGRAPH COMBINATION FOR APACHE JUNCTION FRS
             *      1       2
106          HC       3
             * DDM   ***** Preserved *****

107          KK    SR60
108          KM   APACHE JUNCTION FRS AS-BUILT PLANS 12/19/88
109          KM   OUTLET PIPE=30"RCP; L=136.6'; INLET INV.=1783.5; OUTLET INV.=1783
110          KM   EMERGENCY SPILLWAY ELEV.=1799.77'; PRINCIPLE SPILLWAY ELEV.=1793.5'
111          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 100 ACRE-FEET
112          RS       1    STOR       0
113          SV       0       1     100     200     300     400
114          SQ       0      71      81      87    91.5      94
115          SE    83.5    93.5      96    97.7      99   99.77
             * DDM   ***** Preserved *****

116          KK     R60
117          KM        ROUTE FLOW THROUGH BULLDOG FLOODWAY FROM APACHE JUNCTION FRS
118          RS       1    FLOW      -1
119          RC    .016    .016    .016    2850    .012
120          RX       0       1       2     2.1     5.6     5.7       6       7
121          RY     3.5     3.5     3.5       0       0     3.5     3.5     3.5
             * DDM   ***** Preserved *****

122          KK    RR60
123          KM   ROUTE FLOW FROM BULLDOG FLOODWAY TO SUB-BASIN 80
124          RS       3    FLOW      -1
125          RC    .016    .016    .016    3500    .005
126          RX       0       1       2     2.1     7.1     7.2       8       9
127          RY     3.5     3.5     3.5       0       0     3.5     3.5     3.5
             * DDM   ***** Updated *****

128          KK      80
129          KM   SUB-BASIN 80
130          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
131          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .991
132          KM     L = 2.69  Kb = .039  Adj. Slope =  229.8
133          BA   1.475
134          LG    .330    .330   5.600    .210   4.000
1                                        HEC-1 INPUT                                          PAGE  4

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

135          UC    .488    .295
136          UA       0       3       5       8      12      20      43      75      90      96
137          UA     100
             * DDM   ***** Preserved *****

138          KK     80C
139          KM   HYDROGRAPH COMBINATION FOR FLOW FROM APACHE JUNCTION FRS & SUB-BASIN 80
140          HC       2   1.475
             * DDM   ***** Preserved *****

141          KK     R80
142          KM   ROUTE FLOW FROM SUB-BASIN 80 TO SUB-BASIN 100
143          RS       1    FLOW      -1
144          RC    .025    .016    .025    1200    .003
145          RX       0       2       6     6.1    41.1    41.2    56.2    58.2
146          RY     5.5     4.5     4.5       0       0     4.5     4.5     5.5
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          * DDM   ***** Updated *****

147       KK     100
148       KM   SUB-BASIN 100
149       KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
150       KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
151       KM     L = 1.94  Kb = .046  Adj. Slope =  108.0
152       BA    .484
153       LG    .320    .290   5.100    .260   3.000
154       UC    .625    .564
155       UA       0       5      16      30      65      77      84      90      94      97
156       UA     100
          * DDM   ***** Preserved *****

157       KK    100C
158       KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 80 & 100
159       HC       2
          * DDM   ***** Preserved *****

160       KK    R100
161       KM   ROUTE FLOW FROM SUB-BASIN 100 TO SUB-BASIN 120
162       RS       1    FLOW      -1
163       RC    .016    .016    .016     940    .005
164       RX       0       1       2     2.1    52.1    52.2      53      54
165       RY     4.5     4.5     4.5       0       0     4.5     4.5     4.5
          * DDM   ***** Updated *****

166       KK     120
167       KM   SUB-BASIN 120
168       KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
169       KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
170       KM     L = 3.07  Kb = .037  Adj. Slope =  239.0
171       BA   2.202
172       LG    .330    .280   6.800    .130  11.000
173       UC    .475    .253
174       UA       0       3       5       8      12      20      43      75      90      96
175       UA     100
          * DDM   ***** Preserved *****
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

176       KK    120C
177       KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 100 & 120
178       HC       2
          * DDM   ***** Preserved *****

179       KK    R120
180       KM   ROUTE FLOW FROM SUB-BASIN 120 TO SIGNAL BUTTE FRS
181       RS       1    FLOW      -1
182       RC    .025    .016    .025    2100    .005
183       RX       0       6      10    10.1    60.1    60.2    74.2    80.2
184       RY       8       5       5       0       0       5       5       8
          * DDM   ***** Updated *****

185       KK     140
186       KM   SUB-BASIN 140
187       KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
188       KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
189       KM     L = 1.61  Kb = .044  Adj. Slope =  149.0
190       BA    .598
191       LG    .310    .280   4.200    .440   5.000
192       UC    .488    .327
193       UA       0       5      16      30      65      77      84      90      94      97
194       UA     100
          * DDM   ***** Updated *****

195       KK     150
196       KM   SUB-BASIN 150
197       KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
198       KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
199       KM     L = 1.50  Kb = .047  Adj. Slope =  315.0
200       BA    .408
201       LG    .350    .360   5.100    .260   7.000
202       UC    .338    .255
203       UA       0       3       5       8      12      20      43      75      90      96
204       UA     100
          * DDM   ***** Preserved *****

205       KK    R150
206       KM   ROUTING OF FLOW FROM SUB-BASIN 150 TO R152
207       RS       2    FLOW      -1
208       RC    .045     .04    .045    3100    .032
209       RX       0       1       2      23      33      54      55      56
210       RY       7       7       7       0       0       7       7       7
          * DDM   ***** Preserved *****

211       KK    R152
212       KM   ROUTING OF FLOW FROM R152 TO SUB-BASIN 160
213       RS       5    FLOW      -1
214       RC    .045     .03    .045    5900    .019
215       RX       0       1       2       8      33      39      40      41
216       RY       2       2       2       0       0       2       2       2
          * DDM   ***** Updated *****
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

217       KK     160
218       KM   SUB-BASIN 160
219       KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
220       KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
221       KM     L = 2.10  Kb = .047  Adj. Slope =  129.0
222       BA    .369
223       LG    .340    .330   4.150    .440   1.000
224       UC    .712    .812
225       UA       0       3       5       8      12      20      43      75      90      96
226       UA     100
          * DDM   ***** Updated *****

227       KK     180
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228          KM   SUB-BASIN 180
229          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
230          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
231          KM     L = 2.42  Kb = .041  Adj. Slope =  140.0
232          BA   1.000
233          LG    .350    .350   4.150    .430    .000
234          UC    .692    .498
235          UA       0       3       5       8      12      20      43      75      90      96
236          UA     100
             * DDM   ***** Preserved *****

237          KK    180C
238          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
239          HC       5
             * DDM   ***** Updated *****

240          KK     210
241          KM   SUB-BASIN 210
242          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
243          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
244          KM     L = 1.84  Kb = .045  Adj. Slope =  315.0
245          BA    .583
246          LG    .350    .350   7.000    .120   5.000
247          UC    .354    .259
248          UA       0       3       5       8      12      20      43      75      90      96
249          UA     100
             * DDM   ***** Preserved *****

250          KK    R210
251          KM   ROUTING OF FLOW FROM SUB-BASIN 210 TO SUB-BASIN 220
252          RS       3    FLOW      -1
253          RC    .045     .03    .045    5100    .022
254          RX       0       1       2      14      34      46      47      48
255          RY       4       4       4       0       0       4       4       4
             * DDM   ***** Updated *****
1                                        HEC-1 INPUT                                          PAGE  7

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

256          KK     240
257          KM   SUB-BASIN 240
258          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
259          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .992
260          KM     L = 3.50  Kb = .039  Adj. Slope =  298.6
261          BA   1.398
262          LG    .350    .370   5.200    .240   2.000
263          UC    .546    .425
264          UA       0       3       5       8      12      20      43      75      90      96
265          UA     100
             * DDM   ***** Preserved *****

266          KK    240C
267          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
268          HC       2
             * DDM   ***** Preserved *****

269          KK   SR240
270          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
271          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
272          RS       1    STOR       0
273          SA    1.38    14.2    36.5
274          SE     1.7       5      11
275          SS       5      42       3     1.5
             * DDM   ***** Updated *****

276          KK     220
277          KM   SUB-BASIN 220
278          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
279          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
280          KM     L = 1.92  Kb = .043  Adj. Slope =  315.0
281          BA    .725
282          LG    .350    .350   7.000    .120   4.000
283          UC    .354    .237
284          UA       0       3       5       8      12      20      43      75      90      96
285          UA     100
             * DDM   ***** Preserved *****

286          KK    220C
287          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
288          HC       2
             * DDM   ***** Preserved *****

289          KK   SR220
290          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
291          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
292          RS       1    STOR       0
293          SA     .78     4.1    13.7
294          SE       1       3      10
295          SS       3      65       3     1.5
             * DDM   ***** Updated *****
1                                        HEC-1 INPUT                                          PAGE  8

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

296          KK     190
297          KM   SUB-BASIN 190
298          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
299          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
300          KM     L = 1.91  Kb = .042  Adj. Slope =  315.0
301          BA    .918
302          LG    .350    .390   5.800    .190   8.000
303          UC    .358    .209
304          UA       0       3       5       8      12      20      43      75      90      96
305          UA     100
             * DDM   ***** Preserved *****

306          KK    R190
307          KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
308          RS       2    FLOW      -1
309          RC    .045     .03    .045    4740     .03
310          RX       0       1       2      17      37      52      53      54
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311          RY       5       5       5       0       0       5       5       5
             * DDM   ***** Preserved *****

312          KK    R192
313          KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
314          RS       2    FLOW      -1
315          RC    .045    .035    .045    2200    .018
316          RX       0       1      50      59      79      88     137     138
317          RY     3.5       3       3       0       0       3       3     3.5
             * DDM   ***** Updated *****

318          KK     200
319          KM   SUB-BASIN 200
320          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
321          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
322          KM     L = 1.58  Kb = .045  Adj. Slope =  305.6
323          BA    .535
324          LG    .350    .390   5.700    .200  10.000
325          UC    .338    .228
326          UA       0       3       5       8      12      20      43      75      90      96
327          UA     100
             * DDM   ***** Preserved *****

328          KK    200C
329          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 220 & 200
330          HC       3
             * DDM   ***** Preserved *****

331          KK   SR200
332          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
333          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
334          RS       1    STOR       0
335          SA    2.56     3.1     9.4
336          SE       0       3      10
337          SS       3     112       3     1.5
1                                   HEC-1 INPUT                                          PAGE  9

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

338          KK   200SR
339          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
340          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
341          RS       1    STOR       0
342          SA       8     9.2     9.2
343          SE       0       7      10
344          SS       7     251       3     1.5
             * DDM   ***** Preserved *****

345          KK    C180
346          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
             *      1       2
347          HC       2
             * DDM   ***** Preserved *****

348          KK   SR180
349          KM   SIGNAL BUTTE FRS DATED 1/28/85
350          KM   OUTLET PIPE=36"RCP; L= 147';  INLET INV.=1690; OUTLET INV.=1687
351          KM   EMERGENCY SPILLWAY ELEV.=1712.4; PRINCIPLE SPILLWAY ELEV.=1701
352          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 250 ACRE-FEET
353          RS       1    STOR       0
354          SV       0       1     250     500     750    1060
355          SQ       0   106.5   125.5   137.5     146     160
356          SE      90     101   104.5     107     109   112.4
             * DDM   ***** Preserved *****

357          KK    R180
358          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
359          KM   ROUTE FLOW FROM SIGNAL BUTTE FRS TO SUB-BASIN 260
360          RS       2    FLOW      -1
361          RC    .035    .025    .035    1500    .003
362          RX       0       1       2    22.6    38.6    59.2      60      61
363          RY     9.3     9.3     9.3       0       0     9.3     9.3     9.3
             * DDM   ***** Updated *****

364          KK     260
365          KM   SUB-BASIN 260
366          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
367          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
368          KM     L =  .81  Kb = .049  Adj. Slope =   68.0
369          BA    .267
370          LG    .300    .170   6.800    .160  15.000
371          UC    .396    .237
372          UA       0       5      16      30      65      77      84      90      94      97
373          UA     100
             * DDM   ***** Preserved *****

374          KK    260C
375          KM   HYDROGRAPH COMBINATION FOR OUTFLOW OF SIGNAL BUTTE FRS & SUB-BASIN 260
376          HC       2    .267
             * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 10

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

377          KK    R260
378          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
379          KM   ROUTE FLOW FROM SUB-BASIN 260 TO SUB-BASIN 280
380          RS       2    FLOW      -1
381          RC    .035    .025    .035    2300    .003
382          RX       0       1       2    23.4    43.4    64.8      65      66
383          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Updated *****

384          KK     280
385          KM   SUB-BASIN 280
386          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
387          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
388          KM     L =  .77  Kb = .049  Adj. Slope =   84.0
389          BA    .304
390          LG    .300    .250   5.300    .290  15.000
391          UC    .371    .197
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392          UA       0       5      16      30      65      77      84      90      94      97
393          UA     100
             * DDM   ***** Preserved *****

394          KK    280C
395          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 260 & SUB-BASIN 280
396          HC       2
             * DDM   ***** Preserved *****

397          KK    R280
398          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
399          KM   ROUTE FLOW FROM SUB-BASIN 280 TO SUB-BASIN 300
400          RS       2    FLOW      -1
401          RC    .035    .025    .035    2500    .003
402          RX       0       1       2    23.4    43.4    64.8      65      66
403          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Updated *****

404          KK     300
405          KM   SUB-BASIN 300
406          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
407          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
408          KM     L = 2.28  Kb = .041  Adj. Slope =  127.0
409          BA    .988
410          LG    .340    .320   4.500    .370   7.000
411          UC    .642    .440
412          UA       0       5      16      30      65      77      84      90      94      97
413          UA     100
             * DDM   ***** Preserved *****

414          KK    300C
415          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 280 & 300
416          HC       2
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 11

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

417          KK    R300
418          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
419          KM   ROUTE FLOW FROM SUB-BASIN 300 TO START OF FLOODWAY CONCRETE CHANNEL
420          RS       2    FLOW      -1
421          RC    .035    .025    .035    2200    .003
422          RX       0       1       2    23.4    55.4    76.8      77      78
423          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Preserved *****

424          KK   RR300
425          KM   CHANNEL GEOMETRY FOR SPOOK HILL FRS OBTAINED FROM AS-BUILTS PLANS.
426          KM   CONTINUE TO ROUTE FLOW WITHIN CONCRETE CHANNEL TO SPOOK HILL FRS
427          RS       2    FLOW      -1
428          RC    .016    .016    .016    6050   .0146
429          RX       0       1       2     2.1    16.1    16.2      17      18
430          RY     7.5     7.5     7.5       0       0     7.5     7.5     7.5
             *        1       2
             * DDM   ***** Updated *****

431          KK     350
432          KM   SUB-BASIN 350
433          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
434          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
435          KM     L = 2.22  Kb = .042  Adj. Slope =  315.0
436          BA    .970
437          LG    .350    .350   4.550    .340   4.000
438          UC    .425    .276
439          UA       0       3       5       8      12      20      43      75      90      96
440          UA     100
             * DDM   ***** Preserved *****

441          KK    D350
442          KM   DIVERT FLOW FROM SUB-BASIN 350. FOR MODELING PURPOSES THE SPLIT FLOW WILL
443          KM   BE ROUTED BETWEEN SUB-BASINS 355 & 310. THE MAIN FLOW WILL ROUTED TO 310
444          DT   SF350
445          DI       0   10000
446          DQ       0    6000
             * DDM   ***** Preserved *****

447          KK    350R
448          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING
449          KM   ROUTING OF MAIN FLOW FROM DIVERSION OF SUB-BASIN 350 TO SUB-BASIN 310
450          RS       6    FLOW      -1
451          RC    .045    .035    .045    5150    .025
452          RX       0       1      40      46      56      62     102     103
453          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

454          KK     310
455          KM   SUB-BASIN 310
456          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
457          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
458          KM     L = 2.70  Kb = .045  Adj. Slope =  283.5
459          BA    .555
1                                    HEC-1 INPUT                                          PAGE 12

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

460          LG    .350    .350   3.910    .480    .000
461          UC    .587    .635
462          UA       0       3       5       8      12      20      43      75      90      96
463          UA     100
             * DDM   ***** Preserved *****

464          KK    C310
465          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 350 & 310
466          HC       2    .943
             * DDM   ***** Preserved *****

467          KK    R310
468          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
469          KM   ROUTING OF FLOW FROM SUB-BASIN 310 TO 320
470          RS      14    FLOW      -1
471          RC    .045    .035    .045   10050    .022
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472          RX       0       1      40      46      56      62     102     103
473          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

474          KK     320
475          KM   SUB-BASIN 320
476          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
477          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
478          KM     L = 2.20  Kb = .042  Adj. Slope =  132.0
479          BA    .972
480          LG    .310    .300   4.550    .360  14.000
481          UC    .596    .398
482          UA       0       5      16      30      65      77      84      90      94      97
483          UA     100
             * DDM   ***** Preserved *****

484          KK    D320
485          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
486          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
487          KM   SIERRA HEIGHTS       FALCON RIDGE    & MARBLE CREEK
488          KM        MAXIMUM VOLUME DIVERSION = 12.27acre-feet
             *      1
489          DT   BS320   12.27
490          DI       0   10000
491          DQ       0   10000
             * DDM   ***** Preserved *****

492          KK   RT320
493          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
494          DR   BS320
             * DDM   ***** Preserved *****

495          KK   SR320
496          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
497          KM   12.27 ACRE-FEETx43560/36x3600=4.1cfs
             *      1
498          RS       1    STOR       0
499          SV       0     .01    12.3
500          SQ       0     4.2     4.2
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

501          KK    C320
502          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
503          HC       4
             * DDM   ***** Updated *****

504          KK     340
505          KM   SUB-BASIN 340
506          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
507          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .991
508          KM     L = 2.40  Kb = .042  Adj. Slope =  160.0
509          BA   1.449
510          LG    .280    .280   4.150    .520  21.000
511          UC    .600    .342
512          UA       0       5      16      30      65      77      84      90      94      97
513          UA     100
             * DDM   ***** Preserved *****

514          KK    D340
515          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
516          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
517          KM   GRANDVIEW ESTATES    BOULDER MOUNTAIN & 33% OF MESA HIGHLANDS
518          KM        MAXIMUM VOLUME DIVERSION = 56.0 acre-feet
             *      1
519          DT   BS340      56
520          DI       0   10000
521          DQ       0   10000
             * DDM   ***** Preserved *****

522          KK   RT340
523          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
524          DR   BS340
             * DDM   ***** Preserved *****

525          KK   SR340
526          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
527          KM    56.0 ACRE-FEETx43560/36x3600=18.8cfs
             *      1
528          RS       1    STOR       0
529          SV       0     .01      56
530          SQ       0    18.9    18.9
             * DDM   ***** Preserved *****

531          KK    C340
532          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
533          HC       3
             * DDM   ***** Preserved *****

534          KK   RT350
535          KM   RETRIEVE SPLIT FLOW FROM DIVERSION OF SUB-BASIN 350
536          DR   SF350
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

537          KK   RR350
538          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
539          KM   ROUTING OF FLOW FROM SPLIT OF SUB-BASIN 350 TO 355
540          RS       9    FLOW      -1
541          RC    .045    .035    .045    6050    .025
542          RX       0       1      40      46      56      62     102     103
543          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

544          KK     355
545          KM   SUB-BASIN 355
546          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
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547          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
548          KM     L = 3.00  Kb = .044  Adj. Slope =  284.0
549          BA    .659
550          LG    .340    .340   4.450    .370   4.000
551          UC    .583    .621
552          UA       0       3       5       8      12      20      43      75      90      96
553          UA     100
             * DDM   ***** Preserved *****

554          KK    C355
555          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 355 AND THE SPLIT FLOW FROM SUB-BASIN 350
556          HC       2    1.24
             * DDM   ***** Preserved *****

557          KK    R355
558          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
559          KM   ROUTING OF FLOW FROM SUB-BASIN 355 TO SUB-BASIN 360
560          RS      10    FLOW      -1
561          RC    .045    .035    .045   10100    .026
562          RX       0       1      40      46      56      62     102     103
563          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

564          KK     360
565          KM   SUB-BASIN 360
566          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
567          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
568          KM     L = 2.10  Kb = .048  Adj. Slope =  124.0
569          BA    .670
570          LG    .260    .270   4.100    .560  20.000
571          UC    .688    .555
572          UA       0       5      16      30      65      77      84      90      94      97
573          UA     100
             * DDM   ***** Preserved *****

574          KK    D360
575          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
576          KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
577          KM       MAXIMUM VOLUME DIVERSION = 28.6 acre-feet
             *      1
578          DT   BS360    28.6
579          DI       0   10000
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

580          DQ       0   10000
             * DDM   ***** Preserved *****

581          KK   RT360
582          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
583          DR   BS360
             * DDM   ***** Preserved *****

584          KK   SR360
585          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
586          KM    28.6 ACRE-FEETx43560/36x3600=9.6cfs
587          RS       1   STOR       0
588          SV       0     .01    28.6
589          SQ       0     9.6     9.6
             * DDM   ***** Preserved *****

590          KK    360C
591          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
592          HC       4
             * DDM   ***** Updated *****

593          KK     370
594          KM   SUB-BASIN 370
595          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
596          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
597          KM     L = 2.90  Kb = .044  Adj. Slope =  294.6
598          BA    .667
599          LG    .340    .320   4.650    .330   9.000
600          UC    .525    .534
601          UA       0       3       5       8      12      20      43      75      90      96
602          UA     100
             * DDM   ***** Updated *****

603          KK     395
604          KM   SUB-BASIN 395
605          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
606          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
607          KM     L = 1.60  Kb = .051  Adj. Slope =  215.8
608          BA    .198
609          LG    .330    .320   4.900    .300  10.000
610          UC    .433    .536
611          UA       0       3       5       8      12      20      43      75      90      96
612          UA     100
             * DDM   ***** Preserved *****

613          KK    370C
614          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
615          HC       2
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

616          KK    R370
617          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
618          KM   ROUTING OF FLOW FROM SUB-BASINS 370 AND 395 TO SUB-BASIN 380.
619          RS      16    FLOW      -1
620          RC    .045    .035    .045   10250    .023
621          RX       0       1      40      46      56      62     102     103
622          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

623          KK     380
624          KM   SUB-BASIN 380
625          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
626          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
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627          KM     L = 2.20  Kb = .048  Adj. Slope =  114.0
628          BA    .972
629          LG    .300    .310   4.150    .500   7.000
630          UC    .792    .545
631          UA       0       5      16      30      65      77      84      90      94      97
632          UA     100
             * DDM   ***** Preserved *****

633          KK    D380
634          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
635          KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
636          KM        MAXIMUM VOLUME DIVERSION = 28.6 acre-feet
             *      1
637          DT   BS380    28.6
638          DI       0   10000
639          DQ       0   10000
             * DDM   ***** Preserved *****

640          KK   RT380
641          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
642          DR   BS380
             * DDM   ***** Preserved *****

643          KK   SR380
644          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
645          KM    28.6 ACRE-FEETx43560/36x3600=9.6cfs
646          RS       1    STOR       0
647          SV       0     .01    28.6
648          SQ       0     9.6     9.6
             * DDM   ***** Preserved *****

649          KK    380C
650          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
651          HC       4
             * DDM   ***** Updated *****
1                                        HEC-1 INPUT                                          PAGE 17

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


652          KK     390
653          KM   SUB-BASIN 390
654          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
655          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
656          KM     L =  .70  Kb = .050  Adj. Slope =  299.4
657          BA    .244
658          LG    .300    .250   4.700    .380  18.000
659          UC    .221    .116
660          UA       0       5      16      30      65      77      84      90      94      97
661          UA     100
             * DDM   ***** Preserved *****

662          KK    D390
663          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
664          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THUNDER MOUNTAIN ESTATES
665          KM        MAXIMUM VOLUME DIVERSION  = 3.5 acre-feet
             *      1
666          DT   BS390     3.5
667          DI       0   10000
668          DQ       0   10000
             * DDM   ***** Preserved *****

669          KK   RT390
670          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
671          DR   BS390
             * DDM   ***** Preserved *****

672          KK   SR390
673          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
674          KM     3.5 ACRE-FEETx43560/36x3600=1.2cfs
675          RS       1    STOR       0
676          SV       0     .01     3.5
677          SQ       0     1.2     1.2
             * DDM   ***** Preserved *****

678          KK    390C
679          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
680          HC       2
             * DDM   ***** Preserved *****

681          KK   RR390
682          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
683          KM   FROM SUB-BASIN 390 TO SUB-BASIN 400
684          RS      16    FLOW      -1
685          RC    .045    .045    .045    8800    .020
686          RX       0       1      40      46      56      62     102     103
687          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****
1                                        HEC-1 INPUT                                          PAGE 18

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


688          KK     400
689          KM   SUB-BASIN 400
690          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
691          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
692          KM     L = 1.64  Kb = .046  Adj. Slope =  110.0
693          BA    .616
694          LG    .320    .320   3.130    .930   6.000
695          UC    .704    .491
696          UA       0       5      16      30      65      77      84      90      94      97
697          UA     100
             * DDM   ***** Preserved *****

698          KK    D400
699          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
700          KM   DETENTION/RETENTION BASIN LOCATED WITHIN SAGUARO VISTA SUBDIVISION
701          KM        MAXIMUM VOLUME DIVERSION = 5.6 ACRE-FEET
             *      1
702          DT   BS400     5.6
703          DI       0   10000
704          DQ       0   10000
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            * DDM   ***** Preserved *****

705         KK   RT400
706         KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
707         DR   BS400
            * DDM   ***** Preserved *****

708         KK   SR400
709         KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
710         KM     5.6 ACRE-FEETx43560/36x3600 = 2 cfs
711         RS       1    STOR       0
712         SV       0     .01     5.6
713         SQ       0       2       2
            * DDM   ***** Preserved *****

714         KK    C400
715         KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
716         HC       2
            * DDM   ***** Preserved *****

717         KK    400C
718         KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
719         HC       3
            * DDM   ***** Updated *****

720         KK     385
721         KM   SUB-BASIN 385
722         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
723         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
724         KM     L = 2.30  Kb = .044  Adj. Slope =  303.0
725         BA    .647
726         LG    .350    .370   5.600    .210  13.000
727         UC    .425    .357
728         UA       0       3       5       8      12      20      43      75      90      96
1                                        HEC-1 INPUT                                          PAGE 19

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

729         UA     100
            * DDM   ***** Preserved *****

730         KK    D385
731         KM   DIVERT FLOW INTO SUB-BASINS 415 & 420
732         DT   SF385
733         DI       0   10000
734         DQ       0    2500
            * DDM   ***** Preserved *****

735         KK    385R
736         KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
737         KM   ROUTING OF FLOW DIVERSION FROM SUB-BASIN 385 INTO SUB-BASIN 420
738         RS      18    FLOW      -1
739         RC    .045     .04    .045   10250    .022
740         RX       0       1      40      46      56      62     102     103
741         RY       3       2       2       0       0       2       2       3
            * DDM   ***** Updated *****

742         KK     420
743         KM   SUB-BASIN 420
744         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
745         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .995
746         KM     L = 1.91  Kb = .042  Adj. Slope =  120.0
747         BA    .849
748         LG    .310    .270   3.880    .580  12.000
749         UC    .608    .393
750         UA       0       5      16      30      65      77      84      90      94      97
751         UA     100
            * DDM   ***** Preserved *****

752         KK    D420
753         KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
754         KM   DETENTION/RETENTION BASINS LOCATED WITHIN GRAY FOX SUBDIVISION
755         KM        MAXIMUM VOLUME DIVERSION = 8.65 acre-feet
            *      1
756         DT   BS420    8.65
757         DI       0   10000
758         DQ       0   10000
            * DDM   ***** Preserved *****

759         KK   RT420
760         KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
761         DR   BS420
            * DDM   ***** Preserved *****

762         KK   SR420
763         KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
764         KM   38.55 ACRE-FEETx43560/36x3600=13cfs
765         RS       1    STOR       0
766         SV       0     .01   38.55
767         SQ       0      13      13
            * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 20

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

768         KK    420C
769         KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
770         HC       4   10.87
            * DDM   ***** Updated *****

771         KK     440
772         KM   SUB-BASIN 440
773         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
774         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
775         KM     L =  .40  Kb = .039  Adj. Slope =  315.0
776         BA    .080
777         LG    .190    .380   6.400    .140  13.000
778         UC    .142    .086
779         UA       0       3       5       8      12      20      43      75      90      96
780         UA     100
            * DDM   ***** Preserved *****
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781          KK     R70
782          KM   ROUTE FLOW FROM SUB-BASIN 440 TO C108
783          RS       1    FLOW      -1
784          RC     .05    .035     .05    2250     .08
785          RX    1000    1025    1050    1070    1075    1095    1120    1145
786          RY      30    22.9    15.7      10      10    15.7    22.9      30
             * DDM   ***** Updated *****

787          KK     441
788          KM   SUB-BASIN 441
789          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
790          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
791          KM     L =  .28  Kb = .069  Adj. Slope =  315.0
792          BA    .010
793          LG    .300    .250   5.600    .220   5.000
794          UC    .162    .245
795          UA       0       5      16      30      65      77      84      90      94      97
796          UA     100
             * DDM   ***** Preserved *****

797          KK    C108
798          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 440 & 441
799          HC       2
             * DDM   ***** Preserved *****

800          KK    DIV4
801          KM        SPLIT FLOW WITH TWO 42 INCH PIPES TO WEST AND SOUTH
             *      1
802          DT   SPLIT
803          DI       0      14      40      82     120     154     180
804          DQ       0       7      20      41      60      77      90
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

805          KK    R108
806          KM        ROUTE FLOW FROM SUB-BASIN C108 TO C67
807          RS       2    FLOW      -1
808          RC     .05    .035     .05    3200      .1
809          RX    1000    1025    1050    1070    1075    1095    1120    1145
810          RY      30    22.9    15.7      10      10    15.7    22.9      30
             * DDM   ***** Updated *****

811          KK     442
812          KM   SUB-BASIN 442
813          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
814          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
815          KM     L =  .83  Kb = .055  Adj. Slope =  274.2
816          BA    .100
817          LG    .300    .270   3.290    .770   5.000
818          UC    .300    .311
819          UA       0       5      16      30      65      77      84      90      94      97
820          UA     100
             * DDM   ***** Preserved *****

821          KK     C67
822          KM   COMBINE FLOW FROM SUB-BASIN 442 & DIV4
823          HC       2
             * DDM   ***** Preserved *****

824          KK    DIV6
825          KM        OFFLINE BASIN WITH 25 FOOT WEIR SET AT 2.5 FEET ABOVE BOTTOM OF CHANNEL
826          KM        FLOW CONTINUES BEYOND BASIN THROUGH 2-30" PIPES
             *      1
827          DT  BASIN4
828          DI       0      10      32      44    79.9   132.5     198   272.9   356.8
829          DQ       0       0       0       0    23.9    67.5     124   190.9   266.8
             * DDM   ***** Preserved *****

830          KK  RTDIV6
831          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
832          DR  BASIN4
             * DDM   ***** Preserved *****

833          KK  RFDIV6
834          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
835          KM     3.3 ACRE-FEETx43560/36x3600=1.1cfs
             *      1
836          RS       1    STOR       0
837          SV       0     .01     3.3
838          SQ       0     1.1     1.1
             * DDM   ***** Preserved *****

839          KK   CDIV6
840          KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
841          HC       2
             * DDM   ***** Updated *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

842          KK     443
843          KM   SUB-BASIN 443
844          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
845          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
846          KM     L =  .71  Kb = .050  Adj. Slope =  315.0
847          BA    .080
848          LG    .250    .190   8.000    .080  10.000
849          UC    .208    .208
850          UA       0       5      16      30      65      77      84      90      94      97
851          UA     100
             * DDM   ***** Preserved *****

852          KK   DIV66
853          KM        DIVERT FLOW INTO 3 NATURAL WASHES WITH ONE 24" PIPE IN EACH WASH.
854          KM        EACH PIPE CAPACITY BASED ON 4 FEET OF HEAD
855          DT   WSH66
856          DI       0      78     100     200
857          DQ       0      78      78      78
             * DDM   ***** Preserved *****
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858          KK    R113
859          KM        ROUTE FLOW FROM C113 TO C114
860          RS       1    FLOW      -1
861          RC    .019    .019    .019    1300    .029
862          RX    1000    1004    1008    1012    1018    1022    1026    1030
863          RY      17   15.33   12.67      10      10   12.67   15.33      17
             * DDM   ***** Preserved *****

864          KK    C114
865          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 67 AND C113
866          HC       2
             * DDM   ***** Updated *****

867          KK     444
868          KM   SUB-BASIN 444
869          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
870          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
871          KM     L =  .33  Kb = .034  Adj. Slope =  315.0
872          BA    .040
873          LG    .130    .350   4.450    .320   1.000
874          UC    .125    .095
875          UA       0       3       5       8      12      20      43      75      90      96
876          UA     100
             * DDM   ***** Preserved *****

877          KK     R58
878          KM   ROUTE FLOW FROM SUB-BASIN 444 TO C107
879          RS       2    FLOW      -1
880          RC     .05    .035     .05    2370   .0516
881          RX    1000    1010    1020    1050    1055    1085    1095    1105
882          RY      19      18      17      10      10      17      18      19
             * DDM   ***** Updated *****
1                                        HEC-1 INPUT                                          PAGE 23

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


883          KK     445
884          KM   SUB-BASIN 445
885          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
886          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
887          KM     L =  .82  Kb = .036  Adj. Slope =  315.0
888          BA    .190
889          LG    .170    .320   3.470    .590   3.000
890          UC    .208    .143
891          UA       0       5      16      30      65      77      84      90      94      97
892          UA     100
             * DDM   ***** Preserved *****

893          KK    C107
894          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 444 & 445
895          HC       2
             * DDM   ***** Preserved *****

896          KK    R107
897          KM        ROUTE FLOW FROM C107 TO C109
898          RS       1    FLOW      -1
899          RC     .05    .035     .05     700   .0516
900          RX    1000    1010    1020    1050    1055    1085    1095    1105
901          RY      19      18      17      10      10      17      18      19
             * DDM   ***** Preserved *****

902          KK    RTB2
903          KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
             *      1
904          DR   SPLIT
             * DDM   ***** Preserved *****

905          KK  RSPLIT
906          KM        ROUTE FLOW FROM SPLIT TO C109
907          RS       1    FLOW      -1
908          RC     .05    .035     .05     800     .05
909          RX    1000    1025    1050    1070    1075    1095    1120    1145
910          RY      30    22.9    15.7      10      10    15.7    22.9      30
             * DDM   ***** Updated *****

911          KK     446
912          KM   SUB-BASIN 446
913          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
914          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
915          KM     L =  .46  Kb = .061  Adj. Slope =  303.9
916          BA    .040
917          LG    .270    .250   4.500    .400  19.000
918          UC    .200    .209
919          UA       0       5      16      30      65      77      84      90      94      97
920          UA     100
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 24

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


921          KK    C109
922          KM        COMBINE HYDROGRAPHS FROM COMBINES C107 AND C108
923          HC       3
             * DDM   ***** Preserved *****

924          KK    DIV5
925          KM        DIVERT FLOW INTO WASHES TOWARDS WEST
926          KM        DIVERSION THROUGH 36" PIPE WITH 3 FEET OF HEAD
             *      1
927          DT  WSH404
928          DI       0    40.7    71.2   121.6     190     276   379.4   500.6
929          DQ       0      35      35      35      35      35      35      35
             * DDM   ***** Preserved *****

930          KK    R109
931          KM        ROUTE FLOW FROM C109 TO C110
932          RS       1    FLOW      -1
933          RC    .019    .019    .019    3080     .05
934          RX    1000    1005    1010    1015    1025    1030    1035    1040
935          RY   13.75    12.5   11.25      10      10   11.25    12.5   13.75
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                * DDM   ***** Updated *****

 936            KK     447
 937            KM   SUB-BASIN 447
 938            KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 939            KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
 940            KM     L =  .49  Kb = .056  Adj. Slope =  221.0
 941            BA    .090
 942            LG    .250    .270   3.350    .870  30.000
 943            UC    .229    .161
 944            UA       0       5      16      30      65      77      84      90      94      97
 945            UA     100
                * DDM   ***** Preserved *****

 946            KK   RT404
 947            KM         RETRIEVE DIVERTED FLOW FOR WASH 109
 948            DR  WSH404
                * DDM   ***** Preserved *****

 949            KK    R404
 950            KM        ROUTE FLOW FROM C110 TO C110
 951            RS       5    FLOW      -1
 952            RC    .019    .019    .019    3540     .03
 953            RX    1000    1012    1016    1020    1025    1029    1033    1045
 954            RY      15      12      11      10      10      11      12      15
                * DDM   ***** Preserved *****

 955            KK    C110
 956            KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 447 AND R404
 957            HC       3
                * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 25

LINE            ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 958            KK    R110
 959            KM        ROUTE FLOW FROM C110 TO C115
 960            RS       1    FLOW      -1
 961            RC    .019    .019    .019     580   .0291
 962            RX    1000    1012    1016    1020    1035    1039    1043    1055
 963            RY      15      12      11      10      10      11      12      15
                * DDM   ***** Preserved *****

 964            KK    C115
 965            KM        COMBINE HYDROGRAPHS FROM C114 AND C110
 966            HC       2
                * DDM   ***** Preserved *****

 967            KK    R115
 968            KM        ROUTE FLOW FROM C115 TO C119
 969            RS       1    FLOW      -1
 970            RC    .019    .019    .019    2125    .029
 971            RC    .019    .019    .019     580   .0291
 972            RX    1000    1012    1016    1020    1035    1039    1043    1055
 973            RY      15      12      11      10      10      11      12      15
                * DDM   ***** Updated *****

 974            KK     448
 975            KM   SUB-BASIN 448
 976            KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 977            KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
 978            KM     L =  .36  Kb = .042  Adj. Slope =  315.0
 979            BA    .045
 980            LG    .170    .310   4.200    .390  11.000
 981            UC    .146    .113
 982            UA       0       5      16      30      65      77      84      90      94      97
 983            UA     100
                * DDM   ***** Updated *****

 984            KK     449
 985            KM   SUB-BASIN 449
 986            KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 987            KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
 988            KM     L =  .40  Kb = .054  Adj. Slope =  315.0
 989            BA    .050
 990            LG    .260    .280   3.500    .640   6.000
 991            UC    .183    .149
 992            UA       0       5      16      30      65      77      84      90      94      97
 993            UA     100
                * DDM   ***** Preserved *****

 994            KK   C6364
 995            KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 448 & 449
 996            HC       2
                * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 26

LINE            ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 997            KK   R6364
 998            KM   ROUTE FLOW FROM C116 AND SUB-BASINS 448 AND 449
 999            RS       5    FLOW      -1
1000            RC     .05    .035     .05    4375   .0333
1001            RX    1000    1027    1053    1080    1090    1117    1143    1170
1002            RY      15   13.33   11.67      10      10   11.67   13.33      15
                * DDM   ***** Updated *****

1003            KK     450
1004            KM   SUB-BASIN 450
1005            KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1006            KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1007            KM     L =  .85  Kb = .057  Adj. Slope =  210.5
1008            BA    .070
1009            LG    .340    .350   3.630    .570   4.000
1010            UC    .346    .455
1011            UA       0       3       5       8      12      20      43      75      90      96
1012            UA     100
                * DDM   ***** Updated *****

1013            KK     451
1014            KM   SUB-BASIN 451
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1015        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1016        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1017        KM     L =  .57  Kb = .063  Adj. Slope =  175.0
1018        BA    .025
1019        LG    .340    .340   3.290    .750   3.000
1020        UC    .321    .547
1021        UA       0       3       5       8      12      20      43      75      90      96
1022        UA     100
            * DDM   ***** Preserved *****

1023        KK    RT66
1024        KM        RETRIEVE DIVERTED FLOW FROM SUB-BASIN 66
1025        DR   WSH66
            * DDM   ***** Updated *****

1026        KK     452
1027        KM   SUB-BASIN 452
1028        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1029        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1030        KM     L =  .43  Kb = .055  Adj. Slope =  315.0
1031        BA    .040
1032        LG    .260    .280   3.700    .550   9.000
1033        UC    .188    .184
1034        UA       0       5      16      30      65      77      84      90      94      97
1035        UA     100
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1036        KK   C6465
1037        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 443 AND 452
1038        HC       2
            * DDM   ***** Preserved *****

1039        KK   R6566
1040        KM        ROUTE FLOW FROM DIVERSIONS 65 AND 66 TO C116
1041        RS       2    FLOW      -1
1042        RC     .05    .035     .05    2435   .0282
1043        RX    1000    1045    1090    1150    1160    1220    1265    1310
1044        RY      25      23      20      10      10      20      23      25
            * DDM   ***** Preserved *****

1045        KK    C116
1046        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 450 & 451 AND R6364 & R6465
1047        HC       4
            * DDM   ***** Preserved *****

1048        KK  BASIN5
1049        KM        RESERVOIR WITHIN PARCEL 31      2-48 INCH PIPES AT OUTFALL
1050        KM        BASIN 5 FEET DEEP
1051        RS       1    ELEV       0
1052        SV       0     4.5     9.9
1053        SQ       0      69     190
1054        SE       0     2.5       5
            * DDM   ***** Preserved *****

1055        KK    R116
1056        KM   ROUTE FLOW FROM C116 TO C117
1057        RS       2    FLOW      -1
1058        RC     .05    .035     .05    1300   .0333
1059        RX    1000    1100    1200    1300    1320    1420    1520    1620
1060        RY      13      12      11      10      10      11      12      13
            * DDM   ***** Updated *****

1061        KK     453
1062        KM   SUB-BASIN 453
1063        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1064        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1065        KM     L =  .58  Kb = .058  Adj. Slope =  138.0
1066        BA    .060
1067        LG    .290    .300   3.290    .820  18.000
1068        UC    .321    .337
1069        UA       0       5      16      30      65      77      84      90      94      97
1070        UA     100
            * DDM   ***** Preserved *****

1071        KK    C117
1072        KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 453 AND R116
1073        HC       2
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1074        KK    C118
1075        KM   COMBINE HYDROGRAPHS FROM R115 AND C117
1076        HC       2
            * DDM   ***** Preserved *****

1077        KK    R118
1078        KM        ROUTE FLOW FROM C118 TO  DIV7
1079        RS       1    FLOW      -1
1080        RC    .019    .019    .019    1500    .024
1081        RX    1000    1012    1016    1020    1035    1039    1043    1055
1082        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Preserved *****

1083        KK    DIV7
1084        KM        OFFLINE BASIN AT NORTH MOUNTAIN RIDGE   FLOWS ENTER BASIN OVER
1085        KM        30' WEIR SET AT 5.3' ABOVE THE CHANNEL BOTTOM
            *      1
1086        DT  BASIN6
1087        DI       0     363     487     563     645     844
1088        DQ       0       3      47      83     125     244
            * DDM   ***** Preserved *****

1089        KK  RTDIV7
1090        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1091        DR  BASIN6
            * DDM   ***** Preserved *****
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1092        KK  RFDIV7
1093        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1094        KM     3.6 ACRE-FEETx43560/36x3600=1.2cfs
1095        RS       1    STOR       0
1096        SV       0     .01     3.6
1097        SQ       0     1.2     1.2
            * DDM   ***** Preserved *****

1098        KK   CDIV7
1099        KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1100        HC       2
            * DDM   ***** Updated *****

1101        KK     454
1102        KM   SUB-BASIN 454
1103        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1104        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1105        KM     L = 1.23  Kb = .051  Adj. Slope =  163.0
1106        BA    .180
1107        LG    .300    .310   3.780    .560  14.000
1108        UC    .438    .464
1109        UA       0       5      16      30      65      77      84      90      94      97
1110        UA     100
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1111        KK    C119
1112        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 454 AND C119
            *      1       2
1113        HC       2
            * DDM   ***** Preserved *****

1114        KK    R454
1115        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1116        KM   ROUTE FLOW FROM C119 TO 415C
1117        RS       3    FLOW      -1
1118        RC    .045    .035    .045    2200    .009
1119        RX       0      .5       1      33      42      67    67.5      68
1120        RY       5       4       4       0       0       6       6       6
            * DDM   ***** Updated *****

1121        KK     415
1122        KM   SUB-BASIN 415
1123        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1124        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
1125        KM     L = 2.10  Kb = .046  Adj. Slope =  266.0
1126        BA    .448
1127        LG    .310    .270   4.250    .480  15.000
1128        UC    .463    .450
1129        UA       0       5      16      30      65      77      84      90      94      97
1130        UA     100
            * DDM   ***** Preserved *****

1131        KK   RT385
1132        KM   RETRIEVE FLOW FROM DIVERSION OF SUB-BASIN 385 INTO SUB-BASIN 415
1133        DR   SF385
            * DDM   ***** Preserved *****

1134        KK   RR385
1135        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1136        KM   ROUTING OF SPLIT FLOW FROM SUB-BASIN 385 TO SUB-BASIN 415
1137        RS       5    FLOW      -1
1138        RC    .045     .04    .045    5878    .024
1139        RX       0       1      40      46      56      62     102     103
1140        RY       3       2       2       0       0       2       2       3
            * DDM   ***** Preserved *****

1141        KK    415C
1142        KM   HYDROGRAPH COMBINATION OF SUB-BASINS 415, R454 & SPLIT FLOW FROM 385
1143        HC       3    1.71
            * DDM   ***** Preserved *****

1144        KK    R415
1145        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1146        KM   ROUTING OF FLOW FROM 415C TO 455C
1147        RS       2    FLOW      -1
1148        RC    .045     .03    .045    4100    .024
1149        RX       0      .5       1       8      16      23    23.5      24
1150        RY       8       8       8       0       0       8       8       8
            * DDM   ***** Updated *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1151        KK     455
1152        KM   SUB-BASIN 455
1153        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1154        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
1155        KM     L = 1.70  Kb = .041  Adj. Slope =  146.0
1156        BA   1.111
1157        LG    .270    .280   3.700    .640  24.000
1158        UC    .479    .235
1159        UA       0       5      16      30      65      77      84      90      94      97
1160        UA     100
            * DDM   ***** Preserved *****

1161        KK    D455
1162        KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1163        KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1164        KM   FOR BASIN #: 30      34      43      47&58
1165        KM        MAXIMUM VOLUME DIVERSION = 74.1 acre-feet
            *      1
1166        DT   BS455    74.1
1167        DI       0   10000
1168        DQ       0   10000
            * DDM   ***** Preserved *****

1169        KK   RT455
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1170        KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1171        DR   BS455
            * DDM   ***** Preserved *****

1172        KK   SR455
1173        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1174        KM    74.1 ACRE-FEETx43560/36x3600=25cfs
1175        RS       1    STOR       0
1176        SV       0     .01    74.1
1177        SQ       0      25      25
            * DDM   ***** Preserved *****

1178        KK    C455
1179        KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 455 AND DIVERTED BASIN STORAGE OF 455
1180        HC       2
            * DDM   ***** Preserved *****

1181        KK    455C
1182        KM  HYDROGRAPH COMBINATION OF 420C, R415 AND C455
            *      1       2
1183        HC       3
            * DDM   ***** Preserved *****

1184        KK   SR440
1185        KM   SPOOK HILL FRS PLANS DATED 6/15/77
1186        KM   OUTLET PIPE=7'x7.5'RCBC; L=70 INLET INV.=1566; OUTLET INV.=1566
1187        KM   EMERGENCY SPILLWAY ELEV.=1582; PRINCIPLE SPILLWAY ELEV.=1577.5
1188        KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 200 ACRE-FEET
1189        RS       1    STOR       0
1190        SV       0      10     100     300     500     680
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1191        SQ       0     640     720     780     825     860
1192        SE      66    77.5      79    80.2    81.2      82
            * DDM   ***** Preserved *****

1193        KK   RR455
1194        KM   ROUTE FLOW FROM SPOOK HILL FRS TO SUB-BASIN 462
1195        RS       9    FLOW      -1
1196        RC    .035    .025    .035    9200    .002
1197        RX       0       1       2      28      58      84      85      86
1198        RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
            * DDM   ***** Updated *****

1199        KK     456
1200        KM   SUB-BASIN 456
1201        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1202        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1203        KM     L =  .94  Kb = .045  Adj. Slope =  315.0
1204        BA    .260
1205        LG    .300    .380   5.600    .200  12.000
1206        UC    .237    .154
1207        UA       0       5      16      30      65      77      84      90      94      97
1208        UA     100
            * DDM   ***** Preserved *****

1209        KK    DIV1
1210        KM        DIVERT FLOW INTO OFFLINE DETENTION BASIN
1211        KM        WEIR FOR BASIN SET AT 4 FEET ABOVE CHANNEL BOTTOM
            *      1
1212        DT  BASIN1
1213        DI       0    11.1   127.9   234.4   577.7   789.9  1025.5  1280.9  1555.7
1214        DQ       0       0       0    47.7     248   381.8   533.6   701.5     884
            * DDM   ***** Preserved *****

1215        KK    DIV2
1216        KM        SPLIT OUT FLOW FOR WASHES THAT FLOW TO THE SOUTH FROM
1217        KM        WASHES THAT DRAIN TO THE WES, SOUTHERN WASHES FED BY 30" & 24" PIPE
1218        DT    WA30
1219        DI       0    11.1   127.9   189.6   329.7     408   491.9   579.4   671.7
1220        DQ       0    11.1    38.4    48.2      63    69.5      76      81      86
            * DDM   ***** Preserved *****

1221        KK    R456
1222        KM        ROUTE FLOW FROM SUB-BASIN 51 TO C101
1223        RS       2    FLOW      -1
1224        RC     .05    .035     .05    3800    .044
1225        RX    1000    1010    1020    1036    1041    1057    1067    1077
1226        RY   14.88   14.44      14      10      10      14   14.44   14.88
            * DDM   ***** Updated *****

1227        KK     457
1228        KM   SUB-BASIN 457
1229        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1230        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1231        KM     L = 1.01  Kb = .045  Adj. Slope =  308.8
1232        BA    .190
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1233        LG    .270    .330   3.950    .460   6.000
1234        UC    .262    .218
1235        UA       0       5      16      30      65      77      84      90      94      97
1236        UA     100
            * DDM   ***** Preserved *****

1237        KK    C101
1238        KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 50 AND 51
1239        HC       2
            * DDM   ***** Preserved *****

1240        KK    DIV3
1241        KM        RESERVOIR AT THE EDGE OF THE PROPERTY   FLOW FROM CHANNEL
1242        KM        DIVERTED  INTO OFFLINE BASIN A 25' WEIR SET AT ELEVATION 1808 FT
            *      1
1243        DT  BASIN2
1244        DI       0      36      70     110     180   313.5     402   500.9
1245        DQ       0       0       0       0       0    67.5     124   190.9
            * DDM   ***** Preserved *****
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1246        KK  RTDIV3
1247        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1248        DR  BASIN2
            * DDM   ***** Preserved *****

1249        KK  RFDIV3
1250        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1251        KM     5.0 ACRE-FEETx43560/36x3600=1.7cfs
1252        RS       1    STOR       0
1253        SV       0     .01       5
1254        SQ       0     1.7     1.7
            * DDM   ***** Preserved *****

1255        KK   CDIV3
1256        KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1257        HC       2
            * DDM   ***** Preserved *****

1258        KK    R101
1259        KM        ROUTE FLOW FROM SUBBASIN C101 TO C103
1260        RS       1    FLOW      -1
1261        RC     .05    .035     .05    1450     .05
1262        RX    1000    1010    1020    1036    1041    1057    1067    1077
1263        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Updated *****

1264        KK     458
1265        KM   SUB-BASIN 458
1266        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1267        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1268        KM     L =  .76  Kb = .048  Adj. Slope =  299.0
1269        BA    .190
1270        LG    .290    .330   5.800    .190   6.000
1271        UC    .225    .146
1272        UA       0       5      16      30      65      77      84      90      94      97
```



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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1273        UA     100
            * DDM   ***** Preserved *****

1274        KK    C103
1275        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 55 AND C101
1276        HC       2
            * DDM   ***** Preserved *****

1277        KK    R103
1278        KM        ROUTE FLOW FROM SUBBASIN C103 TO C106
1279        RS       1    FLOW      -1
1280        RC     .05    .035     .05     900     .03
1281        RX    1000    1010    1020    1030    1050    1060    1070    1080
1282        RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
            * DDM   ***** Preserved *****

1283        KK    RT30
1284        KM        RETRIEVE DIVERTED FLOW FOR WASH BELOW 30 INCH PIPE
1285        DR    WA30
            * DDM   ***** Preserved *****

1286        KK     R30
1287        KM        ROUTE FLOW FROM WASH DIVERSION TO COMBINE C52
1288        RS       1    FLOW      -1
1289        RC     .05    .035     .05    1630     .05
1290        RX    1000    1010    1020    1036    1041    1057    1067    1077
1291        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Preserved *****

1292        KK    RTB1
1293        KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
            *      1       2
1294        DR  BASIN1
            * DDM   ***** Preserved *****

1295        KK      B1
1296        KM        ROUTE FLOW THROUGH OFFLINE DETENTION BASIN
1297        KM        FLOW OUTLETS THROUGH A 30 INCH OUTLET PIPE
            *      1       2
1298        RS       1    ELEV       0
1299        SV              .7     1.4     2.3     2.7     3.2
1300        SQ       0       5      16      28    32.5      37
1301        SE       0       1       2       3     3.5       4
            * DDM   ***** Preserved *****

1302        KK     RB1
1303        KM        ROUTE FLOW FROM BASIN DIVERSION TO COMBINE C52
1304        RS       2    FLOW      -1
1305        RC     .05    .035     .05    1720     .05
1306        RX    1000    1010    1020    1036    1041    1057    1067    1077
1307        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1308        KK    CDIV
1309        KM        COMBINE FLOWS FROM WA30 AND BASIN 1
1310        HC       2     .12
            * DDM   ***** Updated *****

1311        KK     459
1312        KM   SUB-BASIN 459
1313        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1314        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1315        KM     L =  .35  Kb = .052  Adj. Slope =  251.6
1316        BA    .030
1317        LG    .220    .300   3.330    .710   8.000
1318        UC    .179    .175
1319        UA       0       5      16      30      65      77      84      90      94      97
1320        UA     100
            * DDM   ***** Preserved *****
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```
1321        KK     C52
1322        KM        COMBINE FLOWS FROM SUB-BASIN 52 WA30 AND BASIN 1
1323        HC       2
            * DDM   ***** Preserved *****

1324        KK     R52
1325        KM        ROUTE FLOW FROM SUBBASIN 52 TO C102
1326        RS       2    FLOW      -1
1327        RC     .05    .035     .05    2000     .05
1328        RX    1000    1010    1020    1036    1041    1057    1067    1077
1329        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Updated *****

1330        KK     460
1331        KM   SUB-BASIN 460
1332        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1333        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1334        KM     L =  .62  Kb = .058  Adj. Slope =  194.0
1335        BA    .140
1336        LG    .250    .260   3.740    .690  27.000
1337        UC    .271    .182
1338        UA       0       5      16      30      65      77      84      90      94      97
1339        UA     100
            * DDM   ***** Preserved *****

1340        KK    C102
1341        KM      COMBINE HYDROGRAPHS FROM SUB-BASINS 52 AND 53
1342        HC       2
            * DDM   ***** Preserved *****

1343        KK  BASIN3
1344        KM        RESERVOIR AT CLUBHOUSE LOCATION 1-30 INCH PIPE AT OUTFALL
1345        KM        BOTTOM OF BASIN AT 6 FEET ABOVE 1795 ELEVATION
1346        RS       1    ELEV       0
1347        SA       0       0       0       0     .34    1.59    1.81    1.96    2.13     2.3
            *      0       0       0       0    1.14    3.25    5.52    9.23
1348        SQ       0      22      45    47.4      48      51      57      62      67      73
```



```
LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1349        SE    1795  1797.5    1800  1800.4  1800.5    1801    1802    1803    1804  1805.5
            * DDM   ***** Preserved *****

1350        KK      R3
1351        KM        ROUTE FLOW FROM C102 to C106
1352        RS       4    FLOW      -1
1353        RC     .05     .03     .05    2750   .0375
1354        RX    1000    1010    1020    1052    1086    1118    1128    1138
1355        RY    19.2    18.4      18      10      10      18    18.4    19.2
            * DDM   ***** Updated *****

1356        KK     461
1357        KM   SUB-BASIN 461
1358        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1359        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1360        KM     L =  .83  Kb = .052  Adj. Slope =  181.0
1361        BA    .120
1362        LG    .270    .250   4.250    .450  21.000
1363        UC    .304    .285
1364        UA       0       5      16      30      65      77      84      90      94      97
1365        UA     100
            * DDM   ***** Preserved *****

1366        KK    C104
1367        KM       COMBINE HYDROGRAPHS FROM SUB-BASIN 54 AND R102
1368        HC       2
            * DDM   ***** Preserved *****

1369        KK    C106
1370        KM       COMBINE HYDROGRAPHS FROM SUB-BASIN C103 AND C104
1371        HC       2
            * DDM   ***** Preserved *****

1372        KK    R106
1373        KM       ROUTE FLOW FROM C106 TO C49
1374        RS       2    FLOW      -1
1375        RC     .05    .035     .05    3950    .033
1376        RX    1000    1010    1020    1030    1050    1060    1070    1080
1377        RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
            * DDM   ***** Updated *****

1378        KK     462
1379        KM   SUB-BASIN 462
1380        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1381        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1382        KM     L =  .97  Kb = .045  Adj. Slope =  297.7
1383        BA    .301
1384        LG    .300    .330   5.300    .240  12.000
1385        UC    .246    .151
1386        UA       0       5      16      30      65      77      84      90      94      97
1387        UA     100
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1388        KK     C56
1389        KM       COMBINE HYDROGRAPHS FROM SUB-BASIN 56 AND C106
            *      1       2
1390        HC       2
            * DDM   ***** Updated *****

1391        KK     480
1392        KM   SUB-BASIN 480
1393        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1394        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
1395        KM     L = 1.21  Kb = .042  Adj. Slope =  165.0
1396        BA    .731
1397        LG    .270    .270   3.580    .730  27.000
1398        UC    .371    .171
1399        UA       0       5      16      30      65      77      84      90      94      97
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1400        UA     100
            * DDM   ***** Preserved *****

1401        KK    D480
1402        KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1403        KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1404        KM   FOR BASIN #: 18 & 26
1405        KM        MAXIMUM VOLUME DIVERSION = 16.5 acre-feet
            *      1
1406        DT   BS480    16.5
1407        DI        0   10000
1408        DQ        0   10000
            * DDM   ***** Preserved *****

1409        KK   RT480
1410        KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1411        DR   BS480
            * DDM   ***** Preserved *****

1412        KK   SR480
1413        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1414        KM    16.5 ACRE-FEETx43560/36x3600=5.5cfs
1415        RS        1    STOR        0
1416        SV        0     .01    16.5
1417        SQ        0     5.6     5.6
            * DDM   ***** Preserved *****

1418        KK    C480
1419        KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1420        HC        2
            * DDM   ***** Preserved *****

1421        KK    480C
1422        KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1423        HC        3    2.09
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1424        KK   RR480
1425        KM   ROUTE FLOW FROM SUB-BASIN 480 TO SUB-BASIN 500
1426        RS        2    FLOW       -1
1427        RC     .025     .025     .025    6500      .05
1428        RX        0        1        2      28       58       84       85       86
1429        RY     13.5     13.5     13.5       0        0     13.5     13.5     13.5
            * DDM   ***** Updated *****

1430        KK     500
1431        KM   SUB-BASIN 500
1432        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1433        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
1434        KM     L = 2.77  Kb = .042  Adj. Slope =  286.8
1435        BA     .930
1436        LG     .350     .400    6.000     .170    9.000
1437        UC     .471     .378
1438        UA        0        3        5        8       12       20       43       75       90       96
1439        UA      100
            * DDM   ***** Preserved *****

1440        KK    500C
1441        KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1442        HC        2    3.02
1443        ZZ
```

SCHEMATIC DIAGRAM OF STREAM NETWORK

```
INPUT
 LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW
  NO.      (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

  49         10
              V
              V
  59        R10
              V
              V
  65        R12
              .
              .
  71          .          20
              .           .
              .           .
  81        C20............
              .
              .
  84          .          40
              .           .
              .           .
  94          .           .          60
              .           .           .
              .           .           .
 104        60C........................
              V
              V
 107       SR60
              V
              V
 116        R60
              V
              V
 122       RR60
              .
              .
 128          .          80
              .           .
              .           .
 138        80C............
              V
              V
 141        R80
              .
              .
 147          .         100
              .           .
              .           .
 157       100C............
              V
              V
 160       R100
              .
              .
 166          .         120
              .           .
              .           .
 176       120C............
              V
              V
 179       R120
              .
              .
 185          .         140
              .           .
              .           .
 195          .           .         150
              .           .           V
              .           .           V
 205          .           .        R150
              .           .           V
              .           .           V
 211          .           .        R152
              .           .           .
              .           .           .
 217          .           .           .         160
              .           .           .           .
              .           .           .           .
 227          .           .           .           .         180
              .           .           .           .           .
              .           .           .           .           .
 237       180C...............................................
              .
              .
 240          .         210
              .           V
              .           V
 250          .        R210
              .           .
              .           .
 256          .           .         240
              .           .           .
              .           .           .
 266          .       240C............
              .           V
              .           V
 269          .      SR240
              .           .
              .           .
 276          .           .         220
              .           .           .
              .           .           .
 286          .       220C............
              .           V
              .           V
 289          .      SR220
              .           .
              .           .
 296          .           .         190
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                .          .          V
                .          .          V
306             .          .       R190
                .          .          V
                .          .          V
312             .          .       R192
                .          .          .
                .          .          .
318             .          .          .        200
                .          .          .          .
                .          .          .          .
328             .       200C.......................
                .          V
                .          V
331             .      SR200
                .          V
                .          V
338             .      200SR
                .          .
                .          .
345          C180............
                V
                V
348         SR180
                V
                V
357          R180
                .
                .
364             .        260
                .          .
                .          .
374          260C............
                V
                V
377          R260
                .
                .
384             .        280
                .          .
                .          .
394          280C............
                V
                V
397          R280
                .
                .
404             .        300
                .          .
                .          .
414          300C............
                V
                V
417          R300
                V
                V
424         RR300
                .
                .
431             .        350
                .          .
                .          .
444             .          .-------->   SF350
441             .       D350
                .          V
                .          V
447             .       350R
                .          .
                .          .
454             .          .        310
                .          .          .
                .          .          .
464             .       C310............
                .          V
                .          V
467             .       R310
                .          .
                .          .
474             .          .        320
                .          .          .
                .          .          .
489             .          .          .-------->   BS320
484             .          .       D320
                .          .          .
                .          .          .
494             .          .          .          .<--------   BS320
492             .          .          .      RT320
                .          .          .          V
                .          .          .          V
495             .          .          .      SR320
                .          .          .          .
                .          .          .          .
501          C320.................................
                .
                .
504             .        340
                .          .
                .          .
519             .          .-------->   BS340
514             .       D340
                .          .
                .          .
524             .          .          .<--------   BS340
522             .          .      RT340
                .          .          V
                .          .          V
525             .          .      SR340
                .          .          .
                .          .          .
531          C340........................
                .
                .
536             .          .<--------   SF350
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534          .       RT350
             .           V
             .           V
537          .       RR350
             .           .
             .           .
544          .           .         355
             .           .           .
             .           .           .
554          .        C355............
             .           V
             .           V
557          .        R355
             .           .
             .           .
564          .           .         360
             .           .           .
             .           .           .
578          .           .           .-------->   BS360
574          .           .       D360
             .           .           .
             .           .           .
583          .           .           .           .<-------   BS360
581          .           .           .       RT360
             .           .           .           V
             .           .           .           V
584          .           .           .       SR360
             .           .           .           .
             .           .           .           .
590       360C...................................
             .
             .
593          .        370
             .           .
             .           .
603          .           .         395
             .           .           .
             .           .           .
613          .        370C............
             .           V
             .           V
616          .        R370
             .           .
             .           .
623          .           .         380
             .           .           .
             .           .           .
637          .           .           .-------->   BS380
633          .           .       D380
             .           .           .
             .           .           .
642          .           .           .           .<-------   BS380
640          .           .           .       RT380
             .           .           .           V
             .           .           .           V
643          .           .           .       SR380
             .           .           .           .
             .           .           .           .
649       380C...................................
             .
             .
652          .        390
             .           .
             .           .
666          .           .-------->   BS390
662          .        D390
             .           .
             .           .
671          .           .           .<-------   BS390
669          .           .       RT390
             .           .           V
             .           .           V
672          .           .       SR390
             .           .           .
             .           .           .
678          .        390C............
             .           V
             .           V
681          .       RR390
             .           .
             .           .
688          .           .         400
             .           .           .
             .           .           .
702          .           .           .-------->   BS400
698          .           .       D400
             .           .           .
             .           .           .
707          .           .           .           .<-------   BS400
705          .           .           .       RT400
             .           .           .           V
             .           .           .           V
708          .           .           .       SR400
             .           .           .           .
             .           .           .           .
714          .           .       C400............
             .           .           .
             .           .           .
717       400C........................
             .
             .
720          .        385
             .           .
             .           .
732          .           .-------->   SF385
730          .        D385
             .           V
             .           V
735          .        385R
             .           .
             .           .
742          .           .         420
             .           .           .
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756          .          .          .-------->  BS420
752          .          .      D420
             .          .          .
             .          .          .
761          .          .          .          .<--------  BS420
759          .          .          .      RT420
             .          .          .          V
             .          .          .          V
762          .          .          .      SR420
             .          .          .          .
             .          .          .          .
768       420C...................................
             .
             .
771          .       440
             .         V
             .         V
781          .       R70
             .          .
             .          .
787          .          .        441
             .          .          .
             .          .          .
797          .      C108............
             .          .
             .          .
802          .          .-------->  SPLIT
800          .      DIV4
             .         V
             .         V
805          .      R108
             .          .
             .          .
811          .          .        442
             .          .          .
             .          .          .
821          .       C67............
             .          .
             .          .
827          .          .-------->  BASIN4
824          .      DIV6
             .          .
             .          .
832          .          .          .<--------  BASIN4
830          .          .     RTDIV6
             .          .          V
             .          .          V
833          .          .     RFDIV6
             .          .          .
             .          .          .
839          .     CDIV6............
             .          .
             .          .
842          .          .        443
             .          .          .
             .          .          .
855          .          .          .-------->  WSH66
852          .          .      DIV66
             .          .          V
             .          .          V
858          .          .      R113
             .          .          .
             .          .          .
864          .      C114............
             .          .
             .          .
867          .          .        444
             .          .          V
             .          .          V
877          .          .        R58
             .          .          .
             .          .          .
883          .          .          .        445
             .          .          .          .
             .          .          .          .
893          .          .      C107............
             .          .          V
             .          .          V
896          .          .      R107
             .          .          .
             .          .          .
904          .          .          .          .<--------  SPLIT
902          .          .          .      RTB2
             .          .          .          V
             .          .          .          V
905          .          .          .     RSPLIT
             .          .          .          .
             .          .          .          .
911          .          .          .          .        446
             .          .          .          .          .
             .          .          .          .          .
921          .          .      C109........................
             .          .          .
             .          .          .
927          .          .          .-------->  WSH404
924          .          .      DIV5
             .          .          V
             .          .          V
930          .          .      R109
             .          .          .
             .          .          .
936          .          .          .        447
             .          .          .          .
             .          .          .          .
948          .          .          .          .          .<--------  WSH404
946          .          .          .          .      RT404
             .          .          .          .          V
             .          .          .          .          V
949          .          .          .          .      R404
             .          .          .          .          .
             .          .          .          .          .
955          .          .      C110........................
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                 .          .          V
                 .          .          V
958              .          .       R110
                 .          .          .
                 .          .          .
964              .      C115............
                 .         V
                 .         V
967              .      R115
                 .          .
                 .          .
974              .          .       448
                 .          .          .
                 .          .          .
984              .          .          .        449
                 .          .          .          .
                 .          .          .          .
994              .          .     C6364............
                 .          .          V
                 .          .          V
997              .          .     R6364
                 .          .          .
                 .          .          .
1003             .          .          .        450
                 .          .          .          .
                 .          .          .          .
1013             .          .          .          .        451
                 .          .          .          .          .
                 .          .          .          .          .
1025             .          .          .          .          .<-------   WSH66
1023             .          .          .          .       RT66
                 .          .          .          .          .
                 .          .          .          .          .
1026             .          .          .          .          .        452
                 .          .          .          .          .          .
                 .          .          .          .          .          .
1036             .          .          .          .     C6465............
                 .          .          .          .         V
                 .          .          .          .         V
1039             .          .          .          .     R6566
                 .          .          .          .          .
                 .          .          .          .          .
1045             .          .     C116.................................
                 .          .          V
                 .          .          V
1048             .          .    BASIN5
                 .          .          V
                 .          .          V
1055             .          .     R116
                 .          .          .
                 .          .          .
1061             .          .          .        453
                 .          .          .          .
                 .          .          .          .
1071             .          .     C117............
                 .          .          .
                 .          .          .
1074             .      C118............
                 .         V
                 .         V
1077             .      R118
                 .          .
                 .          .
1086             .          .-------> BASIN6
1083             .      DIV7
                 .          .
                 .          .
1091             .          .          .<-------  BASIN6
1089             .          .    RTDIV7
                 .          .          V
                 .          .          V
1092             .          .    RFDIV7
                 .          .          .
                 .          .          .
1098             .     CDIV7............
                 .          .
                 .          .
1101             .          .       454
                 .          .          .
                 .          .          .
1111             .      C119............
                 .         V
                 .         V
1114             .      R454
                 .          .
                 .          .
1121             .          .       415
                 .          .          .
                 .          .          .
1133             .          .          .          .<-------   SF385
1131             .          .          .      RT385
                 .          .          .          V
                 .          .          .          V
1134             .          .          .      RR385
                 .          .          .          .
                 .          .          .          .
1141             .      415C........................
                 .         V
                 .         V
1144             .      R415
                 .          .
                 .          .
1151             .          .       455
                 .          .          .
                 .          .          .
1166             .          .          .------->   BS455
1161             .          .     D455
                 .          .          .
                 .          .          .
1171             .          .          .          .<-------   BS455
1169             .          .          .      RT455
                 .          .          .          V
                 .          .          .          V
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1172          .          .          .      SR455
              .          .          .          .
              .          .          .          .
1178          .          .      C455...........
              .          .          .
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1181       455C......................
              V
              V
1184      SR440
              V
              V
1193      RR455
              .
              .
1199          .       456
              .          .
              .          .
1212          .          .-------> BASIN1
1209          .      DIV1
              .          .
              .          .
1218          .          .------->   WA30
1215          .      DIV2
              .          V
              .          V
1221          .      R456
              .          .
              .          .
1227          .          .        457
              .          .          .
              .          .          .
1237          .      C101...........
              .          .
              .          .
1243          .          .-------> BASIN2
1240          .      DIV3
              .          .
              .          .
1248          .          .          .<------- BASIN2
1246          .          .     RTDIV3
              .          .          V
              .          .          V
1249          .          .     RFDIV3
              .          .          .
              .          .          .
1255          .     CDIV3...........
              .          V
              .          V
1258          .      R101
              .          .
              .          .
1264          .          .        458
              .          .          .
              .          .          .
1274          .      C103...........
              .          V
              .          V
1277          .      R103
              .          .
              .          .
1285          .          .          .<-------   WA30
1283          .          .       RT30
              .          .          V
              .          .          V
1286          .          .        R30
              .          .          .
              .          .          .
1294          .          .          .          .<------- BASIN1
1292          .          .          .       RTB1
              .          .          .          V
              .          .          .          V
1295          .          .          .         B1
              .          .          .          V
              .          .          .          V
1302          .          .          .        RB1
              .          .          .          .
              .          .          .          .
1308          .          .       CDIV...........
              .          .          .
              .          .          .
1311          .          .          .        459
              .          .          .          .
              .          .          .          .
1321          .          .        C52...........
              .          .          V
              .          .          V
1324          .          .        R52
              .          .          .
              .          .          .
1330          .          .          .        460
              .          .          .          .
              .          .          .          .
1340          .          .       C102...........
              .          .          V
              .          .          V
1343          .          .     BASIN3
              .          .          V
              .          .          V
1350          .          .         R3
              .          .          .
              .          .          .
1356          .          .          .        461
              .          .          .          .
              .          .          .          .
1366          .          .       C104...........
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              .          .          .
1369          .      C106...........
              .          V
              .          V
1372          .      R106
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1378          .          .        462
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              .          .          .
1388          .        C56...........
              .          .
              .          .
1391          .          .        480
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              .          .          .
1406          .          .          .-------->   BS480
1401          .          .       D480
              .          .          .
              .          .          .
1411          .          .          .          .<-------   BS480
1409          .          .          .      RT480
              .          .          .          V
              .          .          .          V
1412          .          .          .      SR480
              .          .          .          .
              .          .          .          .
1418          .          .       C480...........
              .          .          .
              .          .          .
1421       480C......................
              V
              V
1424      RR480
              .
              .
1430          .        500
              .          .
              .          .
1440       500C...........
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(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
HYDROGRAPH AT	10	699.	12.30	86.	24.	12.	.70		
+ ROUTED TO	R10	652.	12.47	86.	24.	12.	.70		
+ ROUTED TO	R12	613.	12.67	86.	24.	12.	.70		
+ HYDROGRAPH AT	20	597.	12.53	91.	23.	11.	1.12		
+ 2 COMBINED AT	C20	1164.	12.60	175.	47.	22.	1.82		
+ HYDROGRAPH AT	40	1677.	12.37	180.	48.	23.	2.23		
+ HYDROGRAPH AT	60	1013.	12.47	167.	45.	22.	1.75		
+ 3 COMBINED AT	60C	3508.	12.43	513.	137.	66.	5.80		
+ ROUTED TO	SR60	88.	14.57	88.	85.	65.	5.80		
+ ROUTED TO	R60	88.	14.57	88.	85.	65.	5.80		
+ ROUTED TO	RR60	88.	14.67	88.	85.	65.	5.80		
+ HYDROGRAPH AT	80	1289.	12.30	130.	34.	16.	1.48		
+ 2 COMBINED AT	80C	1361.	12.30	213.	117.	81.	1.48		
+ ROUTED TO	R80	1349.	12.33	213.	117.	81.	1.48		
+ HYDROGRAPH AT	100	257.	12.27	42.	11.	5.	.48		
2 COMBINED AT	100C	1588.	12.33	252.	127.	86.	1.96		
ROUTED TO	R100	1587.	12.33	252.	127.	86.	1.96		
+ HYDROGRAPH AT	120	2361.	12.30	246.	67.	32.	2.20		
+ 2 COMBINED AT	120C	3881.	12.30	489.	188.	118.	4.16		
+ ROUTED TO	R120	3842.	12.33	488.	188.	117.	4.16		
+ HYDROGRAPH AT	140	400.	12.17	44.	12.	6.	.60		
+ HYDROGRAPH AT	150	393.	12.20	35.	9.	5.	.41		
+ ROUTED TO	R150	373.	12.27	35.	9.	5.	.41		
+ ROUTED TO	R152	343.	12.40	35.	9.	5.	.41		
+ HYDROGRAPH AT	160	123.	12.50	24.	6.	3.	.37		
+ HYDROGRAPH AT	180	455.	12.47	61.	15.	7.	1.00		
+ 5 COMBINED AT	180C	4811.	12.33	642.	227.	136.	6.54		
+ HYDROGRAPH AT	210	631.	12.20	59.	15.	7.	.58		
+ ROUTED TO	R210	596.	12.30	59.	15.	7.	.58		
+ HYDROGRAPH AT	240	906.	12.37	110.	28.	13.	1.40		
+ 2 COMBINED AT	240C	1467.	12.33	167.	43.	21.	1.98		
ROUTED TO	SR240	371.	12.93	120.	32.	15.	1.98		
HYDROGRAPH AT	220	813.	12.20	72.	19.	9.	.73		
+ 2 COMBINED AT	220C	799.	12.20	180.	50.	24.	2.71		
+ ROUTED TO	SR220	567.	12.40	180.	48.	23.	2.71		

HYDROGRAPH AT	190	998.	12.20	85.	23.	11.	.92
ROUTED TO	R190	947.	12.27	85.	23.	11.	.92
ROUTED TO	R192	894.	12.33	84.	23.	11.	.92
HYDROGRAPH AT	200	571.	12.20	51.	14.	7.	.54
3 COMBINED AT	200C	1834.	12.30	307.	83.	40.	4.16
ROUTED TO	SR200	1725.	12.40	300.	79.	38.	4.16
ROUTED TO	200SR	722.	12.90	179.	49.	23.	4.16
2 COMBINED AT	C180	4811.	12.33	814.	274.	160.	10.69
ROUTED TO	SR180	130.	17.90	130.	129.	103.	10.69
ROUTED TO	R180	130.	17.90	130.	129.	103.	10.69
HYDROGRAPH AT	260	314.	12.13	33.	9.	4.	.27
2 COMBINED AT	260C	422.	12.13	158.	137.	108.	.27
ROUTED TO	R260	405.	12.20	158.	137.	108.	.27
HYDROGRAPH AT	280	339.	12.10	32.	9.	4.	.30
2 COMBINED AT	280C	712.	12.17	187.	145.	112.	.57
ROUTED TO	R280	687.	12.23	187.	145.	112.	.57
HYDROGRAPH AT	300	530.	12.27	77.	21.	10.	.99
2 COMBINED AT	300C	1203.	12.23	261.	163.	121.	1.56
ROUTED TO	R300	1178.	12.30	260.	163.	121.	1.56
ROUTED TO	RR300	1159.	12.37	260.	163.	120.	1.56
HYDROGRAPH AT	350	783.	12.27	71.	19.	9.	.97
DIVERSION TO	SF350	470.	12.27	43.	11.	5.	.97
HYDROGRAPH AT	D350	313.	12.27	29.	7.	4.	.97
ROUTED TO	350R	278.	12.47	29.	7.	4.	.97
HYDROGRAPH AT	310	215.	12.40	33.	8.	4.	.56
2 COMBINED AT	C310	487.	12.43	61.	16.	7.	.94
ROUTED TO	R310	422.	12.90	61.	16.	7.	.94
HYDROGRAPH AT	320	620.	12.23	90.	26.	12.	.97
DIVERSION TO	BS320	421.	12.07	22.	6.	3.	.97
HYDROGRAPH AT	D320	620.	12.23	74.	19.	9.	.97
HYDROGRAPH AT	RT320	421.	12.07	22.	6.	3.	.97
ROUTED TO	SR320	4.	6.23	4.	4.	3.	.97
4 COMBINED AT	C320	1696.	12.33	394.	201.	139.	3.47
HYDROGRAPH AT	340	951.	12.23	138.	42.	20.	1.45
DIVERSION TO	BS340	951.	12.23	105.	28.	14.	1.45
HYDROGRAPH AT	D340	408.	12.70	46.	13.	6.	1.45
HYDROGRAPH AT	RT340	951.	12.23	105.	28.	14.	1.45
ROUTED TO	SR340	19.	9.90	19.	19.	14.	1.45

+ 3 COMBINED AT	C340	1716.	12.70	453.	232.	158.	4.92
+ HYDROGRAPH AT	RT350	470.	12.27	43.	11.	5.	.97
ROUTED TO	RR350	403.	12.57	43.	11.	5.	.97
+ HYDROGRAPH AT	355	300.	12.40	48.	13.	6.	.66
+ 2 COMBINED AT	C355	666.	12.53	90.	24.	11.	1.24
+ ROUTED TO	R355	606.	12.87	90.	24.	11.	1.24
+ HYDROGRAPH AT	360	318.	12.30	62.	19.	9.	.67
+ DIVERSION TO	BS360	318.	12.30	54.	14.	7.	.67
+ HYDROGRAPH AT	D360	66.	13.50	14.	4.	2.	.67
+ HYDROGRAPH AT	RT360	318.	12.30	54.	14.	7.	.67
+ ROUTED TO	SR360	10.	10.63	10.	10.	7.	.67
+ 4 COMBINED AT	360C	2118.	12.70	558.	267.	178.	6.83
+ HYDROGRAPH AT	370	378.	12.37	57.	16.	8.	.67
+ HYDROGRAPH AT	395	121.	12.30	18.	5.	2.	.20
+ 2 COMBINED AT	370C	490.	12.33	74.	20.	10.	.87
+ ROUTED TO	R370	426.	12.83	74.	20.	10.	.87
+ HYDROGRAPH AT	380	390.	12.33	69.	19.	9.	.97
+ DIVERSION TO	BS380	390.	12.33	56.	14.	7.	.97
HYDROGRAPH AT	D380	110.	13.27	16.	4.	2.	.97
+ HYDROGRAPH AT	RT380	390.	12.33	56.	14.	7.	.97
+ ROUTED TO	SR380	10.	11.67	10.	10.	7.	.97
+ 4 COMBINED AT	380C	2457.	12.80	650.	298.	196.	8.67
+ HYDROGRAPH AT	390	343.	12.03	25.	7.	4.	.24
+ DIVERSION TO	BS390	123.	11.87	6.	2.	1.	.24
+ HYDROGRAPH AT	D390	343.	12.03	21.	6.	3.	.24
+ HYDROGRAPH AT	RT390	123.	11.87	6.	2.	1.	.24
+ ROUTED TO	SR390	1.	4.07	1.	1.	1.	.24
+ 2 COMBINED AT	390C	344.	12.03	22.	7.	4.	.24
+ ROUTED TO	RR390	233.	12.57	22.	7.	4.	.24
+ HYDROGRAPH AT	400	196.	12.30	32.	9.	4.	.62
+ DIVERSION TO	BS400	195.	12.27	10.	3.	1.	.62
+ HYDROGRAPH AT	D400	190.	12.37	23.	6.	3.	.62
+ HYDROGRAPH AT	RT400	195.	12.27	10.	3.	1.	.62
+ ROUTED TO	SR400	2.	9.57	2.	2.	1.	.62
2 COMBINED AT	C400	192.	12.37	25.	8.	4.	.62
3 COMBINED AT	400C	2665.	12.70	692.	312.	203.	9.53
+ HYDROGRAPH AT	385	537.	12.27	64.	18.	9.	.65
+ DIVERSION TO	SF385	134.	12.27	16.	4.	2.	.65

+	HYDROGRAPH AT	D385	402.	12.27	48.	13.	6.	.65
+	ROUTED TO	385R	326.	12.87	48.	13.	6.	.65
+	HYDROGRAPH AT	420	464.	12.23	67.	19.	9.	.85
+	DIVERSION TO	BS420	319.	12.10	15.	4.	2.	.85
+	HYDROGRAPH AT	D420	464.	12.23	56.	15.	7.	.85
+	HYDROGRAPH AT	RT420	319.	12.10	15.	4.	2.	.85
+	ROUTED TO	SR420	13.	11.40	12.	4.	2.	.85
+	4 COMBINED AT	420C	3105.	12.70	794.	339.	217.	10.87
+	HYDROGRAPH AT	440	140.	12.03	9.	3.	1.	.08
+	ROUTED TO	R70	136.	12.07	9.	3.	1.	.08
+	HYDROGRAPH AT	441	12.	12.03	1.	0.	0.	.01
+	2 COMBINED AT	C108	147.	12.07	10.	3.	1.	.09
+	DIVERSION TO	SPLIT	74.	12.07	5.	1.	1.	.09
+	HYDROGRAPH AT	DIV4	74.	12.07	5.	1.	1.	.09
+	ROUTED TO	R108	67.	12.13	5.	1.	1.	.09
+	HYDROGRAPH AT	442	64.	12.10	6.	2.	1.	.10
+	2 COMBINED AT	C67	129.	12.13	11.	3.	1.	.19
+	DIVERSION TO	BASIN4	65.	12.13	3.	1.	0.	.19
+	HYDROGRAPH AT	DIV6	64.	12.13	8.	2.	1.	.19
+	HYDROGRAPH AT	RTDIV6	65.	12.13	3.	1.	0.	.19
+	ROUTED TO	RFDIV6	1.	11.97	1.	1.	0.	.19
+	2 COMBINED AT	CDIV6	66.	12.13	9.	3.	1.	.19
+	HYDROGRAPH AT	443	116.	12.07	11.	3.	1.	.08
+	DIVERSION TO	WSH66	78.	11.93	10.	3.	1.	.08
+	HYDROGRAPH AT	DIV66	38.	12.07	1.	0.	0.	.08
+	ROUTED TO	R113	35.	12.10	1.	0.	0.	.08
+	2 COMBINED AT	C114	99.	12.10	10.	3.	2.	.27
+	HYDROGRAPH AT	444	61.	12.03	3.	1.	0.	.04
+	ROUTED TO	R58	57.	12.10	3.	1.	0.	.04
+	HYDROGRAPH AT	445	206.	12.07	12.	3.	2.	.19
+	2 COMBINED AT	C107	259.	12.07	16.	4.	2.	.23
+	ROUTED TO	R107	257.	12.07	16.	4.	2.	.23
+	HYDROGRAPH AT	RTB2	74.	12.07	5.	1.	1.	.09
+	ROUTED TO	RSPLIT	72.	12.10	5.	1.	1.	.09
+	HYDROGRAPH AT	446	47.	12.07	4.	1.	1.	.04
+	3 COMBINED AT	C109	372.	12.07	25.	7.	3.	.27
+	DIVERSION TO	WSH404	35.	11.83	7.	2.	1.	.27
+	HYDROGRAPH AT	DIV5	337.	12.07	18.	5.	2.	.27

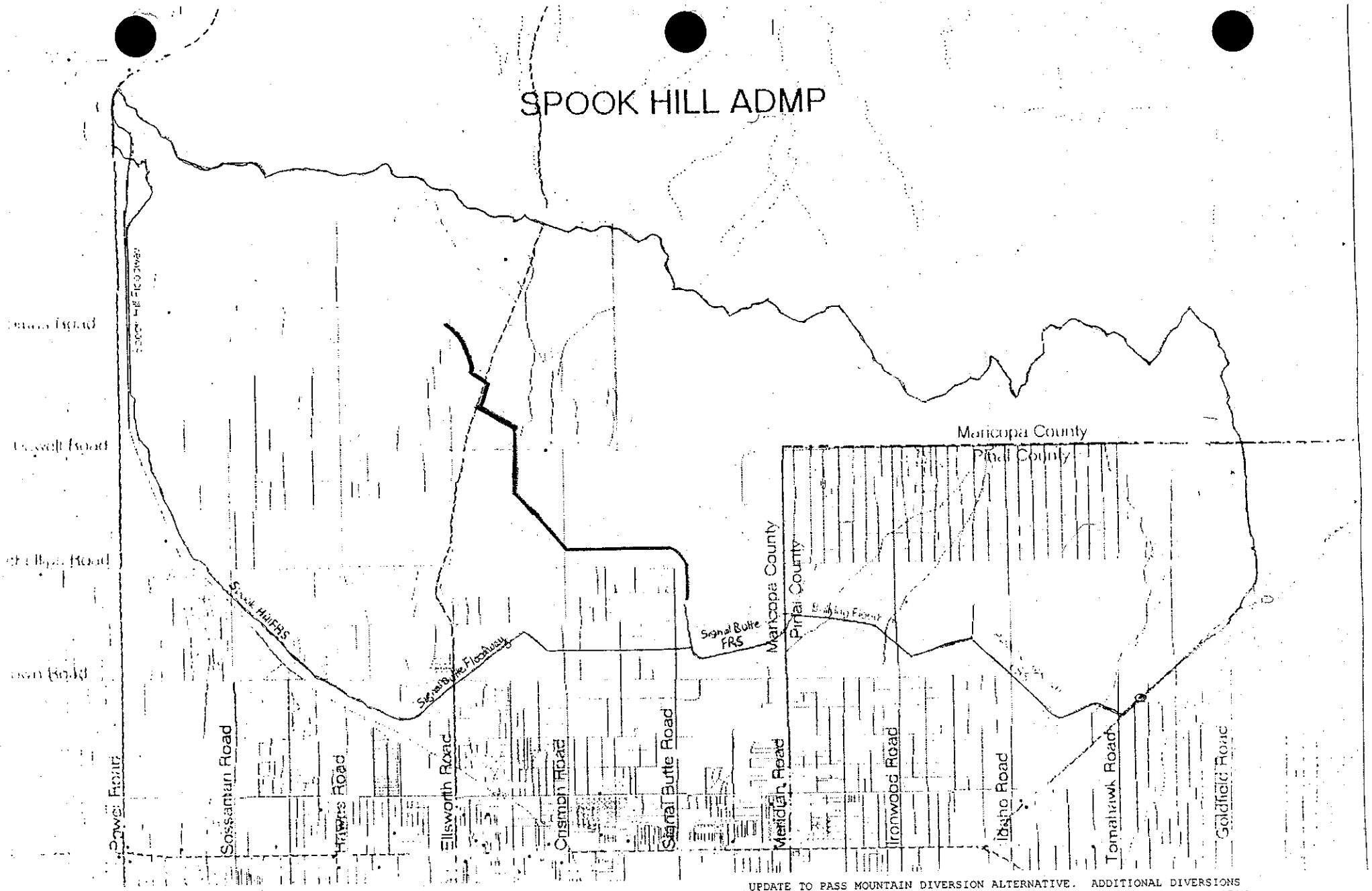
ROUTED TO	R109	324.	12.10	18.	5.	2.	.27
HYDROGRAPH AT	447	99.	12.07	9.	3.	1.	.09
HYDROGRAPH AT	RT404	35.	11.83	7.	2.	1.	.27
ROUTED TO	R404	35.	12.00	7.	2.	1.	.27
3 COMBINED AT	C110	449.	12.10	34.	10.	5.	.36
ROUTED TO	R110	448.	12.10	34.	10.	5.	.36
2 COMBINED AT	C115	541.	12.10	43.	13.	6.	.63
ROUTED TO	R115	538.	12.10	43.	13.	6.	.63
HYDROGRAPH AT	448	66.	12.03	4.	1.	1.	.05
HYDROGRAPH AT	449	55.	12.03	3.	1.	0.	.05
2 COMBINED AT	C6364	120.	12.03	8.	2.	1.	.09
ROUTED TO	R6364	98.	12.20	8.	2.	1.	.09
HYDROGRAPH AT	450	38.	12.23	4.	1.	1.	.07
HYDROGRAPH AT	451	10.	12.23	1.	0.	0.	.03
HYDROGRAPH AT	RT66	78.	11.93	10.	3.	1.	.08
HYDROGRAPH AT	452	43.	12.07	3.	1.	0.	.04
2 COMBINED AT	C6465	121.	12.07	13.	4.	2.	.04
ROUTED TO	R6566	117.	12.13	13.	4.	2.	.04
4 COMBINED AT	C116	254.	12.20	26.	7.	3.	.23
ROUTED TO	BASIN5	108.	12.53	26.	7.	3.	.23
ROUTED TO	R116	107.	12.60	26.	7.	3.	.23
HYDROGRAPH AT	453	40.	12.13	5.	2.	1.	.06
2 COMBINED AT	C117	120.	12.57	31.	9.	4.	.29
2 COMBINED AT	C118	589.	12.13	73.	21.	10.	.92
ROUTED TO	R118	587.	12.13	73.	21.	10.	.92
DIVERSION TO	BASIN6	95.	12.13	3.	1.	0.	.92
HYDROGRAPH AT	DIV7	492.	12.13	70.	20.	10.	.92
HYDROGRAPH AT	RTDIV7	95.	12.13	3.	1.	0.	.92
ROUTED TO	RFDIV7	1.	12.03	1.	1.	0.	.92
2 COMBINED AT	CDIV7	493.	12.13	71.	21.	10.	.92
HYDROGRAPH AT	454	99.	12.20	15.	4.	2.	.18
2 COMBINED AT	C119	585.	12.13	85.	25.	12.	1.10
ROUTED TO	R454	568.	12.23	85.	25.	12.	1.10
HYDROGRAPH AT	415	265.	12.20	40.	11.	6.	.45
HYDROGRAPH AT	RT385	134.	12.27	16.	4.	2.	.65
ROUTED TO	RR385	120.	12.47	16.	4.	2.	.65
3 COMBINED AT	415C	859.	12.23	139.	40.	20.	1.71
ROUTED TO	R415	847.	12.30	139.	40.	20.	1.71

+ HYDROGRAPH AT	455	910.	12.17	108.	33.	16.	1.11
+ DIVERSION TO	BS455	910.	12.17	108.	33.	16.	1.11
HYDROGRAPH AT	D455	0.	.00	0.	0.	0.	1.11
+ HYDROGRAPH AT	RT455	910.	12.17	108.	33.	16.	1.11
+ ROUTED TO	SR455	25.	10.80	25.	25.	16.	1.11
+ 2 COMBINED AT	C455	25.	10.80	25.	25.	16.	1.11
+ 3 COMBINED AT	455C	3732.	12.47	937.	395.	249.	13.69
+ ROUTED TO	SR440	763.	13.87	743.	395.	249.	13.69
+ ROUTED TO	RR455	762.	14.17	743.	395.	247.	13.69
+ HYDROGRAPH AT	456	348.	12.07	26.	7.	4.	.26
+ DIVERSION TO	BASIN1	114.	12.07	4.	1.	1.	.26
+ HYDROGRAPH AT	DIV1	234.	12.07	22.	6.	3.	.26
+ DIVERSION TO	WA30	53.	12.07	8.	3.	1.	.26
+ HYDROGRAPH AT	DIV2	181.	12.07	14.	3.	2.	.26
+ ROUTED TO	R456	169.	12.13	14.	3.	2.	.26
+ HYDROGRAPH AT	457	178.	12.10	14.	4.	2.	.19
+ 2 COMBINED AT	C101	338.	12.10	27.	7.	3.	.45
+ DIVERSION TO	BASIN2	83.	12.10	3.	1.	0.	.45
+ HYDROGRAPH AT	DIV3	255.	12.10	24.	6.	3.	.45
+ HYDROGRAPH AT	RTDIV3	83.	12.10	3.	1.	0.	.45
+ ROUTED TO	RFDIV3	2.	11.97	2.	1.	0.	.45
+ 2 COMBINED AT	CDIV3	257.	12.10	26.	7.	3.	.45
+ ROUTED TO	R101	254.	12.13	26.	7.	3.	.45
+ HYDROGRAPH AT	458	264.	12.07	18.	5.	2.	.19
+ 2 COMBINED AT	C103	498.	12.07	44.	12.	6.	.64
+ ROUTED TO	R103	494.	12.10	44.	12.	6.	.64
+ HYDROGRAPH AT	RT30	53.	12.07	8.	3.	1.	.26
+ ROUTED TO	R30	52.	12.10	8.	3.	1.	.26
+ HYDROGRAPH AT	RTB1	114.	12.07	4.	1.	1.	.26
+ ROUTED TO	B1	21.	12.23	4.	1.	1.	.26
+ ROUTED TO	RB1	21.	12.30	4.	1.	1.	.26
+ 2 COMBINED AT	CDIV	66.	12.20	12.	4.	2.	.12
+ HYDROGRAPH AT	459	30.	12.03	2.	1.	0.	.03
+ 2 COMBINED AT	C52	84.	12.13	15.	5.	2.	.15
ROUTED TO	R52	83.	12.17	15.	5.	2.	.15
HYDROGRAPH AT	460	149.	12.07	15.	5.	2.	.14
+ 2 COMBINED AT	C102	227.	12.10	29.	9.	4.	.29
+ ROUTED TO	BASIN3	65.	12.57	29.	9.	4.	.29

+	ROUTED TO	R3	65.	12.70	29.	9.	4.	.29
+	HYDROGRAPH AT	461	112.	12.10	13.	4.	2.	.12
+	2 COMBINED AT	C104	162.	12.10	41.	13.	6.	.41
+	2 COMBINED AT	C106	652.	12.10	84.	24.	12.	1.05
+	ROUTED TO	R106	615.	12.17	84.	24.	12.	1.05
+	HYDROGRAPH AT	462	399.	12.07	30.	8.	4.	.30
+	2 COMBINED AT	C56	919.	12.13	113.	32.	16.	1.35
+	HYDROGRAPH AT	480	717.	12.10	73.	23.	11.	.73
+	DIVERSION TO	BS480	543.	12.00	28.	8.	4.	.73
+	HYDROGRAPH AT	D480	717.	12.10	53.	15.	7.	.73
+	HYDROGRAPH AT	RT480	543.	12.00	28.	8.	4.	.73
+	ROUTED TO	SR480	6.	4.17	6.	6.	4.	.73
+	2 COMBINED AT	C480	722.	12.10	59.	20.	11.	.73
+	3 COMBINED AT	480C	1814.	12.13	860.	457.	280.	2.09
+	ROUTED TO	RR480	1738.	12.20	859.	457.	280.	2.09
+	HYDROGRAPH AT	500	739.	12.30	89.	24.	12.	.93
+	2 COMBINED AT	500C	2344.	12.23	938.	477.	290.	3.02

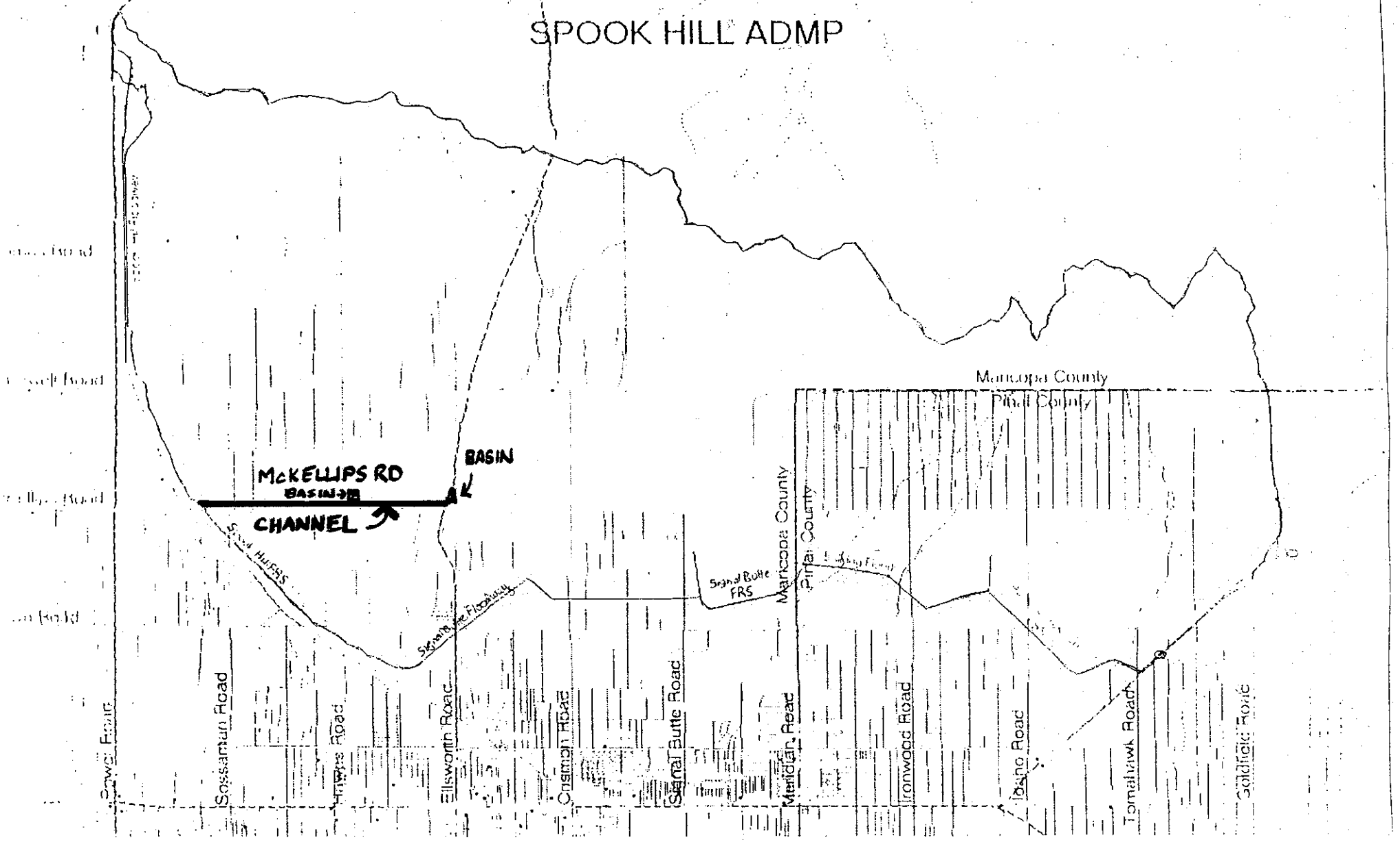
*** NORMAL END OF HEC-1 ***

SPOOK HILL ADMP



UPDATE TO PASS MOUNTAIN DIVERSION ALTERNATIVE. ADDITIONAL DIVERSIONS PLACED UPSTREAM OF ORIGINAL LEVEE EXTENSION AT PASS MOUNTAIN DIVERSION CREATING NEW DRAINAGE BASIN BOUNDARIES: 383 FROM 385; 393 FROM 395; 365 FROM 370; AND 353 FROM 355. 383, 393, 365, AND 353 WILL NOW BE ROUTED TO THE PASS MOUNTAIN DIVERSION AND ULTIMATELY INTO SIGNAL BUTTE FRS. SUB-BASINS: 385, 395, 370, AND 355 WILL REMAIN WITH REDUCED AREAS AND CONTINUE TO BE ROUTED ON THEIR ORIGINAL WATERCOURSES.

SPOOK HILL ADMP



HEC-1 Existing Conditions 100-Year, 24hr Storm

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1****************************************
*************************************
 *                                   *                                                    *
 *                                   *                                                    *   U.S. ARMY CORPS OF ENGINEERS
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *                                                    *   HYDROLOGIC ENGINEERING CENTER
 *                                   *                                                    *
 *              JUN   1998           *                                                    *         609 SECOND STREET
 *                                   *                                                    *
 *           VERSION 4.1             *                                                    *      DAVIS, CALIFORNIA 95616
 *                                   *                                                    *
 *                                   *                                                    *          (916) 756-1104
 *  RUN DATE   14JUN00  TIME  18:35:26   *                                                    *
 *                                   *                                                    *
 *                                   *
 ****************************************
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X     X  XXXXXXX   XXXXX          X
X     X  X        X     X        XX
X     X  X        X               X
XXXXXXX  XXXX     X        XXXXX  X
X     X  X        X               X
X     X  X        X     X         X
X     X  XXXXXXX   XXXXX         XXX
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THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

1 HEC-1 INPUT PAGE 1

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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  1           ID   EXISTING LAND USE CALCULATIONS WERE BASED ON 1 YR. FROM 11/5/99
  2           ID   FOR LAS SENDAS       AND LANDISCOR JAN.1999 AERIAL PHOTOGRAPHS
  3           ID
  4           ID   ALL DAMS WERE ANALYZED WITH NO STORAGE BELOW PRINCIPLE SPILLWAY ELEVATIONS
  5           ID
  6           ID   A CONSERVATIVE ESTIMATE WAS USED FOR THE LOCATION OF THE CENTROID FOR
  7           ID   PRECIPITATION VALUES
  8           ID
  9           ID   ALL CHANNEL ROUTING INFORMATION WAS OBTAINED FROM MCFCD SPOOK HILL   SIGNAL
 10           ID   BUTTE        AND BULLDOG FLOODWAY PLANS
 11           ID
 12           ID   ANALYSIS PREPARED BY WOOD/PATEL - JCD; 11/05/99; FILE:  SPHEX1.DAT
 13           ID
 14           ID   MODEL UPDATE WITH LAS SENDAS WEST BASINS & ALL RETENTION BASINS
 15           ID   DRAINING BACK INTO THE SYSTEM WITHIN 36 HOURS
 16           ID   BY: JCD; 1/4/2000            FILE: SPHEX1RV.DAT
 17           ID
 18           ID   CURRENT MODEL UPDATED WITH ALL PREVIOUS MODEL RUNS
 19           ID   NOTED ABOVE, AND COUNTY COMMENTS DATED MARCH 20, 2000
 20           ID   BY: MW; 04/06/2000       FILE:  S24CE0.DAT
 21           ID
 22           ID   MODEL UPDATED TO ALIGN SUB-BASIN CONCENTRATION POINTS WITH PASS MOUNTAIN
 23           ID   DIVERSION.  NEW BOUNDARIES CREATED FOR SUB-BASINS 240, 220, & 200
 24           ID   ANALYSIS PERFORMED BY WOOD/PATEL; MW;  ON 05/12/2000;  FILE: S24CE10.DAT
 25           ID
 26           ID  ***********************************************************************
 27           ID   ALTERNATIVE 15 - REFLECTS IMPLEMENTATION OF McKELLIPS RD INTERCEPTOR CHANNEL
 28           ID   EXTENDING FROM JUST EAST OF ELLSWORTH ROAD TO THE SPOOK HILL FRS.
 29           ID   ORIGINAL SUB-BASINS 340, 360, 380, AND 400 ARE SUBDIVIDED INTO 340,341,
 30           ID   342, 360, 361, 380, 381, 400, AND 401.
 31           ID   CONCEPTUAL DETENTION BASINS ARE ALSO INCLUDED AT THE INTERSECTIONS OF
 32           ID   McKELLIPS/HAWES AND McKELLIPS/ELLSWORTH.
 33           ID   MODEL IS CREATED FROM THE BASE EXISTING MODEL S24CE10.DAT
 34           ID   GENERATED BY SC ON 05/24/00          FILE: S24CE15.DAT
 35           ID  ***********************************************************************
 36           ID
 37           ID
              *DIAGRAM
 38           IT       2                    1500
 39           IO       3
 40           IN      15
 41           JD    3.81    0.01
 42           PC    .000    .002    .005    .008    .011    .014    .017    .020    .023    .026
 43           PC    .029    .032    .035    .038    .041    .044    .048    .052    .056    .060
 44           PC    .064    .068    .072    .076    .080    .085    .090    .095    .100    .105
 45           PC    .110    .115    .120    .126    .133    .140    .147    .155    .163    .172
 46           PC    .181    .191    .203    .218    .236    .257    .283    .387    .663    .707
 47           PC    .735    .758    .776    .791    .804    .815    .825    .834    .842    .849
 48           PC    .856    .863    .869    .875    .881    .887    .893    .898    .903    .908
 49           PC    .913    .918    .922    .926    .930    .934    .938    .942    .946    .950
 50           PC    .953    .956    .959    .962    .965    .968    .971    .974    .977    .980
 51           PC    .983    .986    .989    .992    .995    .998   1.000
 52           JD    3.58   10.00
 53           JD    3.43   30.00
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 54          JD    3.28   60.00
1                                        HEC-1 INPUT                                                    PAGE  2

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 55          JD    3.22   90.00
 56          JD    3.18  120.00
 57          JD    3.14  150.00
 58          JD    3.05  300.00
 59          JD    2.97  500.00
             * DDM   ***** Updated *****

 60          KK      10
 61          KM   SUB-BASIN 10
 62          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 63          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
 64          KM     L = 2.00  Kb = .044  Adj. Slope =  165.0
 65          BA    .702
 66          LG    .350    .320   7.600    .090  15.000
 67          UC    .421    .302
 68          UA       0       3       5       8      12      20      43      75      90      96
 69          UA     100
             * DDM   ***** Preserved *****

 70          KK     R10
 71          KM   ROUTING OF FLOW FROM SUB-BASIN 10 TO R12
 72          RS       4    FLOW      -1
 73          RC    .045     .03    .045    8700    .021
 74          RX       0       1       2      17      27      42      43      44
 75          RY       5       5       5       0       0       5       5       5
             * DDM   ***** Preserved *****

 76          KK     R12
 77          KM   ROUTING OF FLOW FROM R12 TO SUB-BASIN 20
 78          RS       6    FLOW      -1
 79          RC    .045     .03    .045    4500     .01
 80          RX       0       1      30    37.5    57.5      65      94      95
 81          RY       3     2.5     2.5       0       0     2.5     2.5       3
             * DDM   ***** Updated *****

 82          KK      20
 83          KM   SUB-BASIN 20
 84          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 85          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
 86          KM     L = 2.50  Kb = .041  Adj. Slope =   88.0
 87          BA   1.120
 88          LG    .350    .390   5.800    .190   1.000
 89          UC    .658    .454
 90          UA       0       3       5       8      12      20      43      75      90      96
 91          UA     100
             * DDM   ***** Preserved *****

 92          KK     C20
 93          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 10 AND 20
 94          HC       2
             * DDM   ***** Updated *****
1                                        HEC-1 INPUT                                                    PAGE  3

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 95          KK      40
 96          KM   SUB-BASIN 40
 97          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 98          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
 99          KM     L = 3.08  Kb = .036  Adj. Slope =  189.0
100          BA   2.233
101          LG    .340    .340   4.900    .280   5.000
102          UC    .496    .264
103          UA       0       3       5       8      12      20      43      75      90      96
104          UA     100
             * DDM   ***** Updated *****

105          KK      60
106          KM   SUB-BASIN 60
107          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
108          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .990
109          KM     L = 4.19  Kb = .038  Adj. Slope =  209.6
110          BA   1.746
111          LG    .330    .350   5.800    .190   9.000
112          UC    .596    .477
113          UA       0       3       5       8      12      20      43      75      90      96
114          UA     100
             * DDM   ***** Preserved *****

115          KK     60C
116          KM   HYDROGRAPH COMBINATION FOR APACHE JUNCTION FRS
             *      1       2
117          HC       3
             * DDM   ***** Preserved *****

118          KK    SR60
119          KM   APACHE JUNCTION FRS AS-BUILT PLANS 12/19/88
120          KM   OUTLET PIPE=30"RCP; L=136.6'; INLET INV.=1783.5; OUTLET INV.=1783
121          KM   EMERGENCY SPILLWAY ELEV.=1799.77'; PRINCIPLE SPILLWAY ELEV.=1793.5'
122          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 100 ACRE-FEET
123          RS       1    STOR       0
124          SV       0       1     100     200     300     400
125          SQ       0      71      81      87    91.5      94
126          SE    83.5    93.5      96    97.7      99   99.77
             * DDM   ***** Preserved *****
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 127          KK     R60
 128          KM        ROUTE FLOW THROUGH BULLDOG FLOODWAY FROM APACHE JUNCTION FRS
 129          RS       1    FLOW      -1
 130          RC    .016    .016    .016    2850    .012
 131          RX       0       1       2     2.1     5.6     5.7       6       7
 132          RY     3.5     3.5     3.5       0       0     3.5     3.5     3.5
              * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                                    PAGE  4

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


 133          KK    RR60
 134          KM   ROUTE FLOW FROM BULLDOG FLOODWAY TO SUB-BASIN 80
 135          RS       4    FLOW      -1
 136          RC    .016    .016    .016    3500    .005
 137          RX       0       1       2     2.1     7.1     7.2       8       9
 138          RY     3.5     3.5     3.5       0       0     3.5     3.5     3.5
              * DDM   ***** Updated *****

 139          KK      80
 140          KM   SUB-BASIN 80
 141          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 142          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .991
 143          KM     L = 2.69  Kb = .039  Adj. Slope =  229.8
 144          BA   1.475
 145          LG    .330    .330   5.600    .210   4.000
 146          UC    .433    .259
 147          UA       0       3       5       8      12      20      43      75      90      96
 148          UA     100
              * DDM   ***** Preserved *****

 149          KK     80C
 150          KM   HYDROGRAPH COMBINATION FOR FLOW FROM APACHE JUNCTION FRS & SUB-BASIN 80
 151          HC       2   1.475
              * DDM   ***** Preserved *****

 152          KK     R80
 153          KM   ROUTE FLOW FROM SUB-BASIN 80 TO SUB-BASIN 100
 154          RS       1    FLOW      -1
 155          RC    .025    .016    .025    1200    .003
 156          RX       0       2       6     6.1    41.1    41.2    56.2    58.2
 157          RY     5.5     4.5     4.5       0       0     4.5     4.5     5.5
              * DDM   ***** Updated *****

 158          KK     100
 159          KM   SUB-BASIN 100
 160          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 161          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
 162          KM     L = 1.94  Kb = .046  Adj. Slope =  108.0
 163          BA    .484
 164          LG    .320    .290   5.100    .260   3.000
 165          UC    .533    .473
 166          UA       0       5      16      30      65      77      84      90      94      97
 167          UA     100
              * DDM   ***** Preserved *****

 168          KK    100C
 169          KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 80 & 100
 170          HC       2
              * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                                    PAGE  5

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


 171          KK    R100
 172          KM   ROUTE FLOW FROM SUB-BASIN 100 TO SUB-BASIN 120
 173          RS       1    FLOW      -1
 174          RC    .016    .016    .016     940    .005
 175          RX       0       1       2     2.1    52.1    52.2      53      54
 176          RY     4.5     4.5     4.5       0       0     4.5     4.5     4.5
              * DDM   ***** Updated *****

 177          KK     120
 178          KM   SUB-BASIN 120
 179          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 180          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
 181          KM     L = 3.07  Kb = .037  Adj. Slope =  239.0
 182          BA   2.202
 183          LG    .330    .280   6.800    .130  11.000
 184          UC    .429    .226
 185          UA       0       3       5       8      12      20      43      75      90      96
 186          UA     100
              * DDM   ***** Preserved *****

 187          KK    120C
 188          KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 100 & 120
 189          HC       2
              * DDM   ***** Preserved *****

 190          KK    R120
 191          KM   ROUTE FLOW FROM SUB-BASIN 120 TO SIGNAL BUTTE FRS
 192          RS       1    FLOW      -1
 193          RC    .025    .016    .025    2100    .005
 194          RX       0       6      10    10.1    60.1    60.2    74.2    80.2
 195          RY       8       5       5       0       0       5       5       8
              * DDM   ***** Updated *****

 196          KK     140
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197          KM   SUB-BASIN 140
198          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
199          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
200          KM     L = 1.61  Kb = .044  Adj. Slope =  149.0
201          BA    .598
202          LG    .310    .280   4.200    .440   5.000
203          UC    .421    .278
204          UA       0       5      16      30      65      77      84      90      94      97
205          UA     100
             * DDM   ***** Updated *****

206          KK     150
207          KM   SUB-BASIN 150
208          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
209          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
210          KM     L = 1.50  Kb = .047  Adj. Slope =  315.0
211          BA    .408
212          LG    .350    .360   5.100    .260   7.000
213          UC   1.579   1.417
214          UA       0       3       5       8      12      20      43      75      90      96
1                                          HEC-1 INPUT                                          PAGE  6

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

215          UA     100
             * DDM   ***** Preserved *****

216          KK    R150
217          KM   ROUTING OF FLOW FROM SUB-BASIN 150 TO R152
218          RS       3    FLOW      -1
219          RC    .045     .04    .045    3100    .032
220          RX       0       1       2      23      33      54      55      56
221          RY       7       7       7       0       0       7       7       7
             * DDM   ***** Preserved *****

222          KK    R152
223          KM   ROUTING OF FLOW FROM R152 TO SUB-BASIN 160
224          RS       6    FLOW      -1
225          RC    .045     .03    .045    5900    .019
226          RX       0       1       2       8      33      39      40      41
227          RY       2       2       2       0       0       2       2       2
             * DDM   ***** Updated *****

228          KK     160
229          KM   SUB-BASIN 160
230          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
231          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
232          KM     L = 2.10  Kb = .047  Adj. Slope =  129.0
233          BA    .369
234          LG    .340    .330   4.150    .440   1.000
235          UC    .587    .655
236          UA       0       3       5       8      12      20      43      75      90      96
237          UA     100
             * DDM   ***** Updated *****

238          KK     180
239          KM   SUB-BASIN 180
240          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
241          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
242          KM     L = 2.42  Kb = .041  Adj. Slope =  140.0
243          BA   1.000
244          LG    .350    .350   4.150    .430    .000
245          UC    .571    .403
246          UA       0       3       5       8      12      20      43      75      90      96
247          UA     100
             * DDM   ***** Preserved *****

248          KK    180C
249          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
250          HC       5
             * DDM   ***** Updated *****

251          KK     210
252          KM   SUB-BASIN 210
253          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
254          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
255          KM     L = 1.84  Kb = .045  Adj. Slope =  315.0
256          BA    .583
257          LG    .350    .350   7.000    .120   5.000
1                                          HEC-1 INPUT                                          PAGE  7

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

258          UC    .321    .232
259          UA       0       3       5       8      12      20      43      75      90      96
260          UA     100
             * DDM   ***** Preserved *****

261          KK    R210
262          KM   ROUTING OF FLOW FROM SUB-BASIN 210 TO SUB-BASIN 220
263          RS       2    FLOW      -1
264          RC    .045     .03    .045    5100    .022
265          RX       0       1       2      14      34      46      47      48
266          RY       4       4       4       0       0       4       4       4
             * DDM   ***** Updated *****

267          KK     240
268          KM   SUB-BASIN 240
269          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
270          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .992
271          KM     L = 3.50  Kb = .039  Adj. Slope =  298.6
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272          BA   1.398
273          LG    .350    .370   5.200    .240   2.000
274          UC    .471    .361
275          UA       0       3       5       8      12      20      43      75      90      96
276          UA     100
             * DDM   ***** Preserved *****

277          KK    240C
278          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
279          HC       2
             * DDM   ***** Preserved *****

280          KK   SR240
281          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
282          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
283          RS       1    STOR       0
284          SA    1.38    14.2    36.5
285          SE     1.7       5      11
286          SS       5      42       3     1.5
             * DDM   ***** Updated *****

287          KK     220
288          KM   SUB-BASIN 220
289          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
290          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
291          KM     L = 1.92  Kb = .043  Adj. Slope =  315.0
292          BA    .725
293          LG    .350    .350   7.000    .120   4.000
294          UC    .317    .209
295          UA       0       3       5       8      12      20      43      75      90      96
296          UA     100
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE  8

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

297          KK    220C
298          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
299          HC       2
             * DDM   ***** Preserved *****

300          KK   SR220
301          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
302          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
303          RS       1    STOR       0
304          SA     .78     4.1    13.7
305          SE       1       3      10
306          SS       3      65       3     1.5
             * DDM   ***** Updated *****

307          KK     190
308          KM   SUB-BASIN 190
309          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
310          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
311          KM     L = 1.91  Kb = .042  Adj. Slope =  315.0
312          BA    .918
313          LG    .350    .390   5.800    .190   8.000
314          UC    .321    .185
315          UA       0       3       5       8      12      20      43      75      90      96
316          UA     100
             * DDM   ***** Preserved *****

317          KK    R190
318          KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
319          RS       2    FLOW      -1
320          RC    .045     .03    .045    4740     .03
321          RX       0       1       2      17      37      52      53      54
322          RY       5       5       5       0       0       5       5       5
             * DDM   ***** Preserved *****

323          KK    R192
324          KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
325          RS       2    FLOW      -1
326          RC    .045    .035    .045    2200    .018
327          RX       0       1      50      59      79      88     137     138
328          RY     3.5       3       3       0       0       3       3     3.5
             * DDM   ***** Updated *****

329          KK     200
330          KM   SUB-BASIN 200
331          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
332          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
333          KM     L = 1.58  Kb = .045  Adj. Slope =  305.6
334          BA    .535
335          LG    .350    .390   5.700    .200  10.000
336          UC    .300    .200
337          UA       0       3       5       8      12      20      43      75      90      96
338          UA     100
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE  9

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

339          KK    200C
340          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 220 & 200
341          HC       3
             * DDM   ***** Preserved *****

342          KK   SR200
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343          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
344          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
345          RS       1    STOR       0
346          SA    2.56     3.1     9.4
347          SE       0       3      10
348          SS       3     112       3     1.5
             * DDM   ***** Preserved *****

349          KK    R200
350          KM   ROUTE FLOW FROM SUB-BASIN 200 TO SIGNAL BUTTE FRS
351          RS       1    FLOW      -1
352          RC    .035    .025    .035    1300    .005
353          RX       0       1       2      17     117     132     133     134
354          RY       5       5       5       0       0       5       5       5
             * DDM   ***** Preserved *****

355          KK    C180
356          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
             *      1       2
357          HC       2
             * DDM   ***** Preserved *****

358          KK   SR180
359          KM   SIGNAL BUTTE FRS DATED 1/28/85
360          KM   OUTLET PIPE=36"RCP; L= 147';  INLET INV.=1690; OUTLET INV.=1687
361          KM   EMERGENCY SPILLWAY ELEV.=1712.4; PRINCIPLE SPILLWAY ELEV.=1701
362          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 250 ACRE-FEET
363          RS       1    STOR       0
364          SV       0       1     250     500     750    1060
365          SQ       0   106.5   125.5   137.5     146     160
366          SE      90     101   104.5     107     109   112.4
             * DDM   ***** Preserved *****

367          KK    R180
368          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
369          KM   ROUTE FLOW FROM SIGNAL BUTTE FRS TO SUB-BASIN 260
370          RS       3    FLOW      -1
371          RC    .035    .025    .035    1500    .003
372          RX       0       1       2    22.6    38.6    59.2      60      61
373          RY     9.3     9.3     9.3       0       0     9.3     9.3     9.3
             * DDM   ***** Updated *****

374          KK     260
375          KM   SUB-BASIN 260
376          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
377          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
378          KM     L =  .81  Kb = .049  Adj. Slope =   68.0
379          BA    .267
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

380          LG    .300    .170   6.800    .160  15.000
381          UC    .363    .215
382          UA       0       5      16      30      65      77      84      90      94      97
383          UA     100
             * DDM   ***** Preserved *****

384          KK    260C
385          KM   HYDROGRAPH COMBINATION FOR OUTFLOW OF SIGNAL BUTTE FRS & SUB-BASIN 260
386          HC       2    .267
             * DDM   ***** Preserved *****

387          KK    R260
388          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
389          KM   ROUTE FLOW FROM SUB-BASIN 260 TO SUB-BASIN 280
390          RS       3    FLOW      -1
391          RC    .035    .025    .035    2300    .003
392          RX       0       1       2    23.4    43.4    64.8      65      66
393          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Updated *****

394          KK     280
395          KM   SUB-BASIN 280
396          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
397          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
398          KM     L =  .77  Kb = .049  Adj. Slope =   84.0
399          BA    .304
400          LG    .300    .250   5.300    .290  15.000
401          UC    .333    .175
402          UA       0       5      16      30      65      77      84      90      94      97
403          UA     100
             * DDM   ***** Preserved *****

404          KK    280C
405          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 260 & SUB-BASIN 280
406          HC       2
             * DDM   ***** Preserved *****

407          KK    R280
408          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
409          KM   ROUTE FLOW FROM SUB-BASIN 280 TO SUB-BASIN 300
410          RS       2    FLOW      -1
411          RC    .035    .025    .035    2500    .003
412          RX       0       1       2    23.4    43.4    64.8      65      66
413          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Updated *****

414          KK     300
415          KM   SUB-BASIN 300
416          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
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 417          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
 418          KM     L = 2.28  Kb = .041  Adj. Slope =  127.0
 419          BA    .988
 420          LG    .340    .320   4.500    .370   7.000
 421          UC    .538    .362
 422          UA       0       5      16      30      65      77      84      90      94      97
1                                          HEC-1 INPUT                                                    PAGE 11

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 423          UA     100
              * DDM   ***** Preserved *****

 424          KK    300C
 425          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 280 & 300
 426          HC       2
              * DDM   ***** Preserved *****

 427          KK    R300
 428          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
 429          KM   ROUTE FLOW FROM SUB-BASIN 300 TO START OF FLOODWAY CONCRETE CHANNEL
 430          RS       2    FLOW      -1
 431          RC    .035    .025    .035    2200    .003
 432          RX       0       1       2    23.4    55.4    76.8      77      78
 433          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
              * DDM   ***** Preserved *****

 434          KK   RR300
 435          KM   CHANNEL GEOMETRY FOR SPOOK HILL FRS OBTAINED FROM AS-BUILTS PLANS.
 436          KM   CONTINUE TO ROUTE FLOW WITHIN CONCRETE CHANNEL TO SPOOK HILL FRS
 437          RS       2    FLOW      -1
 438          RC    .016    .016    .016    6050   .0146
 439          RX       0       1       2     2.1    16.1    16.2      17      18
 440          RY     7.5     7.5     7.5       0       0     7.5     7.5     7.5
              *      1       2
              * DDM   ***** Updated *****

 441          KK     350
 442          KM   SUB-BASIN 350
 443          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 444          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
 445          KM     L = 2.22  Kb = .042  Adj. Slope =  315.0
 446          BA    .970
 447          LG    .350    .350   4.550    .340   4.000
 448          UC    .367    .234
 449          UA       0       3       5       8      12      20      43      75      90      96
 450          UA     100
              * DDM   ***** Preserved *****

 451          KK    D350
 452          KM   DIVERT FLOW FROM SUB-BASIN 350. FOR MODELING PURPOSES THE SPLIT FLOW WILL
 453          KM   BE ROUTED BETWEEN SUB-BASINS 355 & 310. THE MAIN FLOW WILL ROUTED TO 310
 454          DT   SF350
 455          DI       0   10000
 456          DQ       0    6000
              * DDM   ***** Preserved *****

 457          KK    350R
 458          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING
 459          KM   ROUTING OF MAIN FLOW FROM DIVERSION OF SUB-BASIN 350 TO SUB-BASIN 310
 460          RS       7    FLOW      -1
 461          RC    .045    .035    .045    5150    .025
 462          RX       0       1      40      46      56      62     102     103
 463          RY       3       2       2       0       0       2       2       3
              * DDM   ***** Updated *****
1                                          HEC-1 INPUT                                                    PAGE 12

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 464          KK     310
 465          KM   SUB-BASIN 310
 466          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 467          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
 468          KM     L = 2.70  Kb = .045  Adj. Slope =  283.5
 469          BA    .555
 470          LG    .350    .350   3.910    .480    .000
 471          UC    .483    .511
 472          UA       0       3       5       8      12      20      43      75      90      96
 473          UA     100
              * DDM   ***** Preserved *****

 474          KK    C310
 475          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 350 & 310
 476          HC       2    .943
              * DDM   ***** Preserved *****

 477          KK    R310
 478          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
 479          KM   ROUTING OF FLOW FROM SUB-BASIN 310 TO 320
 480          RS      11    FLOW      -1
 481          RC    .045    .035    .045   10050    .022
 482          RX       0       1      40      46      56      62     102     103
 483          RY       3       2       2       0       0       2       2       3
              * DDM   ***** Updated *****

 484          KK     320
 485          KM   SUB-BASIN 320
 486          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 487          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
 488          KM     L = 2.20  Kb = .042  Adj. Slope =  132.0
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489          BA    .972
490          LG    .310    .300   4.550    .360  14.000
491          UC    .508    .333
492          UA       0       5      16      30      65      77      84      90      94      97
493          UA     100
             * DDM   ***** Preserved *****

494          KK    D320
495          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
496          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
497          KM   SIERRA HEIGHTS       FALCON RIDGE    & MARBLE CREEK
498          KM        MAXIMUM VOLUME DIVERSION = 12.27acre-feet
             *      1
499          DT   BS320   12.27
500          DI       0   10000
501          DQ       0   10000
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                                PAGE 13

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

502          KK   RT320
503          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
504          DR   BS320
             * DDM   ***** Preserved *****

505          KK   SR320
506          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
507          KM   12.27 ACRE-FEETx43560/36x3600=4.1cfs
             *      1
508          RS       1    STOR       0
509          SV       0     .01    12.3
510          SQ       0     4.2     4.2
             * DDM   ***** Preserved *****

511          KK    C320
512          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
513          HC       4
             *
             *
             * BEGINNING OF ALTERNATIVE 15 REVISIONS WHICH INCLUDE AN INTERCEPTOR CHANNEL
             * ALONG McKELLIPS RD.
             *
             *
             * DDM   ***** Updated *****

514          KK     340
515          KM   SUB-BASIN 340
516          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
517          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
518          KM     L = 1.78  Kb = .047  Adj. Slope =   99.0
519          BA   1.024
520          LG    .250    .250   4.200    .540  26.000
521          UC    .546    .296
522          UA       0       5      16      30      65      77      84      90      94      97
523          UA     100
             * DDM   ***** Preserved *****

524          KK    D340
525          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
526          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
527          KM   GRANDVIEW ESTATES    BOULDER MOUNTAIN & 33% OF MESA HIGHLANDS
528          KM        MAXIMUM VOLUME DIVERSION =39.2 acre feet
             *      1
529          DT   BS340    39.2
530          DI       0   10000
531          DQ       0   10000
             * DDM   ***** Preserved *****

532          KK   RT340
533          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
534          DR   BS340
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                                PAGE 14

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

535          KK   SR340
536          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
537          KM    39.2 ACRE-FEETx43560\36x3600=13.2cfs
             *      1
538          RS       1    STOR       0
539          SV       0     .01    39.2
540          SQ       0    13.2    13.2
             * DDM   ***** Preserved *****

541          KK    C340
542          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
543          HC       3
             * DDM   ***** Updated *****

544          KK     360
545          KM   SUB-BASIN 360
546          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
547          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
548          KM     L = 1.21  Kb = .062  Adj. Slope =  104.0
549          BA    .315
550          LG    .220    .250   4.100    .640  29.000
551          UC    .504    .389
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552          UA       0       5      16      30      65      77      84      90      94      97
553          UA     100
             * DDM   ***** Preserved *****

554          KK    D360
555          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
556          KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
557          KM        MAXIMUM VOLUME DIVERSION = 15.7 acre-feet
             *      1
558          DT   BS360    15.7
559          DI       0   10000
560          DQ       0   10000
             * DDM   ***** Preserved *****

561          KK   RT360
562          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
563          DR   BS360
             * DDM   ***** Preserved *****

564          KK   SR360
565          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
566          KM    15.7 ACRE-FEETx43560/36x3600=5.3 cfs
567          RS       1    STOR       0
568          SV       0     .01    15.7
569          SQ       0     5.3     5.3
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 15

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

570          KK    360C
571          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
572          HC       3
             * DDM   ***** Updated *****

573          KK     380
574          KM   SUB-BASIN 380
575          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
576          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
577          KM     L =  .67  Kb = .078  Adj. Slope =  119.0
578          BA    .268
579          LG    .180    .250   4.100    .710  19.000
580          UC    .392    .201
581          UA       0       5      16      30      65      77      84      90      94      97
582          UA     100
             * DDM   ***** Preserved *****

583          KK    D380
584          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
585          KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
586          KM        MAXIMUM VOLUME DIVERSION  = 7.1 acre-feet
             *      1
587          DT   BS380     7.1
588          DI       0   10000
589          DQ       0   10000
             * DDM   ***** Preserved *****

590          KK   RT380
591          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
592          DR   BS380
             * DDM   ***** Preserved *****

593          KK   SR380
594          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
595          KM    7.1  ACRE-FEETx43560\36x3600=2.4 cfs
596          RS       1    STOR       0
597          SV       0     .01     7.1
598          SQ       0     2.4     2.4
             * DDM   ***** Preserved *****

599          KK    380C
600          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
601          HC       3
             * DDM   ***** Updated *****

602          KK     400
603          KM   SUB-BASIN 400
604          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
605          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
606          KM     L =  .30  Kb = .112  Adj. Slope =  107.0
607          BA    .053
608          LG    .200    .250   4.000    .740    .000
609          UC    .321    .213
610          UA       0       5      16      30      65      77      84      90      94      97
1                                    HEC-1 INPUT                                          PAGE 16

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

611          UA     100
             * DDM   ***** Preserved *****

612          KK    D400
613          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
614          KM   DETENTION/RETENTION BASIN LOCATED WITHIN SAGUARO VISTA SUBDIVISION
615          KM        MAXIMUM VOLUME DIVERSION = 1.6 ACRE-FEET
             *      1
616          DT   BS400     1.6
617          DI       0   10000
618          DQ       0   10000
             * DDM   ***** Preserved *****
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619          KK   RT400
620          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
621          DR   BS400
             * DDM   ***** Preserved *****

622          KK   SR400
623          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
624          KM     1.6 ACRE-FEETx43560/36x3600 = 0.5 cfs
625          RS       1    STOR       0
626          SV       0     .01     1.6
627          SQ       0     0.5     0.5
             * DDM   ***** Preserved *****

628          KK    C400
629          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
630          HC       2
             * DDM   ***** Updated *****

631          KK    400C
632          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
633          HC       2
             * DDM   ***** Preserved *****

634          KK   RT350
635          KM   RETRIEVE SPLIT FLOW FROM DIVERSION OF SUB-BASIN 350
636          DR   SF350
             * DDM   ***** Preserved *****

637          KK   RR350
638          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
639          KM   ROUTING OF FLOW FROM SPLIT OF SUB-BASIN 350 TO 355
640          RS       7    FLOW      -1
641          RC    .045    .035    .045    6050    .025
642          RX       0       1      40      46      56      62     102     103
643          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****
1                                        HEC-1 INPUT                                                    PAGE 17

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

644          KK     355
645          KM   SUB-BASIN 355
646          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
647          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
648          KM     L = 3.00  Kb = .044  Adj. Slope =  284.0
649          BA    .659
650          LG    .340    .340   4.450    .370   4.000
651          UC    .488    .509
652          UA       0       3       5       8      12      20      43      75      90      96
653          UA     100
             * DDM   ***** Preserved *****

654          KK    C355
655          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 355 AND THE SPLIT FLOW FROM SUB-BASIN 350
656          HC       2    1.24
             * DDM   ***** Preserved *****

657          KK    R355
658          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
659          KM   ROUTING OF FLOW FROM SUB-BASIN 355 TO SUB-BASIN 361
660          RS       6    FLOW      -1
661          RC    .045    .035    .045    5868   0.021
662          RX       0       1      40      46      56      62     102     103
663          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

664          KK     361
665          KM   SUB-BASIN 361
666          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
667          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
668          KM     L = 1.03  Kb = .047  Adj. Slope =  142.0
669          BA    .359
670          LG    .270    .250   4.100    .540  24.000
671          UC    .329    .198
672          UA       0       5      16      30      65      77      84      90      94      97
673          UA     100
             * DDM   ***** Preserved *****

674          KK    D361
675          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
676          KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
677          KM        MAXIMUM VOLUME DIVERSION = 12.9 acre-feet
             *      1
678          DT   BS361    12.9
679          DI       0   10000
680          DQ       0   10000
             * DDM   ***** Preserved *****

681          KK   RT361
682          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
683          DR   BS361
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                                    PAGE 18

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

684          KK   SR361
685          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
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686          KM    12.9 ACRE-FEETx43560/36x3600=4.3 cfs
687          RS       1    STOR       0
688          SV       0     .01    12.9
689          SQ       0     4.3     4.3
             * DDM   ***** Preserved *****

690          KK    361C
691          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
692          HC       3
             * DDM   ***** Updated *****

693          KK     342
694          KM   SUB-BASIN 342.
695          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
696          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
697          KM     L = 1.01  Kb = .048  Adj. Slope =  213.1
698          BA    .298
699          LG    .310    .280   3.950    .530  16.000
700          UC    .279    .180
701          UA       0       5      16      30      65      77      84      90      94      97
702          UA     100
             *

703          KK   D3421
704          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
705          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
706          KM   GRANDVIEW ESTATES    BOULDER MOUNTAIN & 33% OF MESA HIGHLANDS
707          KM       MAXIMUM VOLUME DIVERSION  =8.4 Acre feet
             *      1
708          DT  BS3421     8.4
709          DI       0   10000
710          DQ       0   10000
             * DDM   ***** Preserved *****

711          KK  RT3421
712          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
713          DR  BS3421
             * DDM   ***** Preserved *****

714          KK  SR3421
715          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
716          KM     8.4 ACRE-FEETx43560\36x3600=2.8 cfs
             *      1
717          RS       1    STOR       0
718          SV       0     .01     8.4
719          SQ       0     2.8     2.8
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

720          KK    C342
721          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
722          HC       2
             *

723          KK   D3422
724          KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN AT NE CORNER OF ELLSWORTH
725          KM   AND  McKELLIPS ROAD
726          KM   MAXIMUM VOLUME OF DIVERSION IS 15 ACRE FEET
727          DT  BS3422      15
728          DI       0      20   10000
729          DQ       0       0    9980
             *

730          KK  RT3422
731          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
732          DR  BS3422
             *

733          KK  SR3422
734          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS
735          KM      15 ACRE-FEETx43560/36x3600 =5.0 cfs
736          RS       1    STOR       0
737          SV       0     .01      15
738          SQ       0     5.0     5.0
             *

739          KK   CC342
740          KM   HYDROGRAPH COMBINATION AT McKELLIPS RD CHANNEL
741          HC       2
             *

742          KK    R342
743          KM   ROUTING OF FLOW FROM SUB-BASIN 342 TO 341
744          RS       7    FLOW      -1
745          RC    0.05    0.03    0.05    2198  0.0118
746          RX       0     0.1     0.2       4       9      13     213   213.1
747          RY     3.0     1.5     1.0       0       0     1.0     2.0     3.0
             *

748          KK     341
749          KM   SUB-BASIN 341
750          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
751          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
752          KM     L = 1.01  Kb = .048  Adj. Slope =  123.0
753          BA    .229
754          LG    .250    .250   3.910    .600  34.000
755          UC    .346    .266
756          UA       0       5      16      30      65      77      84      90      94      97
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757          UA     100
             *
             * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                                    PAGE 20

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


758          KK    D341
759          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
760          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
761          KM   GRANDVIEW ESTATES    BOULDER MOUNTAIN & 33% OF MESA HIGHLANDS
762          KM        MAXIMUM VOLUME DIVERSION  =8.4 Acre feet
             *
763          DT   BS341     8.4
764          DI       0   10000
765          DQ       0   10000
             * DDM   ***** Preserved *****

766          KK   RT341
767          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
768          DR   BS341
             * DDM   ***** Preserved *****

769          KK   SR341
770          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
771          KM     8.4 ACRE-FEETx43560\36x3600=2.8 cfs
             *
772          RS       1    STOR       0
773          SV       0     .01     8.4
774          SQ       0     2.8     2.8
             * DDM   ***** Preserved *****

775          KK    C341
776          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
777          HC       3
             * DDM   ***** Preserved *****

778          KK   RR341
779          KM   ROUTING OF FLOW FROM SUB-BASIN 341 TO 361
780          KM   ARTIFICIALLY HIGH VALUE FOR NSTPS IS USED TO PRESERVE PEAK INFLOW
781          RS      50    FLOW      -1
782          RC   0.050   0.030   0.050    4143  0.0126
783          RX       0     0.1     0.2       4       9      13     213   213.1
784          RY     3.0     1.5     1.0       0       0     1.0     2.0     3.0
             * DDM   ***** Preserved *****

785          KK   361CC
786          KM   HYDROGRAPH COMBINATION AT McKELLIPS ROAD INTERCEPTOR CHANNEL
787          HC       2
             *

788          KK   D3612
789          KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN AT NE CORNER OF ELLSWORTH
790          KM   AND  McKELLIPS ROAD
791          KM   MAXIMUM VOLUME OF DIVERSION IS 50 ACRE FEET
792          DT  BS3612      50
793          DI       0     400    5000
794          DQ       0       0    4600
             *
1                                          HEC-1 INPUT                                                    PAGE 21

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


795          KK  RT3612
796          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
797          DR  BS3612
             *

798          KK  SR3612
799          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS
800          KM    50.0 ACRE-FEETx43560/36x3600=16.8 cfs
801          RS       1    STOR       0
802          SV       0     .01      50
803          SQ       0    16.8    16.8
             *

804          KK   C3612
805          KM   HYDROGRAPH COMBINATION AT McKELLIPS RD CHANNEL
806          HC       2
             * DDM   ***** Preserved *****

807          KK   RR361
808          KM   ROUTING OF FLOW FROM SUB-BASIN 361 TO 381
809          KM   A VALUE OF 5 WAS USED FOR NSTPS TO KEEP OUTFLOW AT OR BELOW INFLOW
810          RS       5    FLOW      -1
811          RC   0.050   0.030   0.050    3854  0.0156
812          RX       0     0.1     0.2       8      28      36     236   236.1
813          RY     3.5     2.5       2       0       0       2       3     3.5
             * DDM   ***** Updated *****

814          KK     370
815          KM   SUB-BASIN 370
816          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
817          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
818          KM     L = 2.90  Kb = .044  Adj. Slope =  294.6
819          BA    .667
820          LG    .340    .320   4.650    .330   9.000
821          UC    .454    .455
822          UA       0       3       5       8      12      20      43      75      90      96
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 823          UA     100
              * DDM   ***** Updated *****

 824          KK     395
 825          KM   SUB-BASIN 395
 826          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 827          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
 828          KM     L = 1.60  Kb = .051  Adj. Slope =  215.8
 829          BA    .198
 830          LG    .330    .320   4.900    .300  10.000
 831          UC    .383    .468
 832          UA       0       3       5       8      12      20      43      75      90      96
 833          UA     100
              * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                          PAGE 22

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 834          KK    370C
 835          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
 836          HC       2
              * DDM   ***** Preserved *****

 837          KK    R370
 838          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
 839          KM   ROUTING OF FLOW FROM SUB-BASINS 370 AND 395 TO SUB-BASIN 381.
 840          RS      10    FLOW      -1
 841          RC    .045    .035    .045    8633   0.022
 842          RX       0       1      40      46      56      62     102     103
 843          RY       3       2       2       0       0       2       2       3
              * DDM   ***** Updated *****

 844          KK     381
 845          KM   SUB-BASIN 381
 846          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 847          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
 848          KM     L = 1.65  Kb = .043  Adj. Slope =  119.0
 849          BA    .726
 850          LG    .310    .280   4.200    .490  13.000
 851          UC    .463    .282
 852          UA       0       5      16      30      65      77      84      90      94      97
 853          UA     100
              * DDM   ***** Preserved *****

 854          KK    D381
 855          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
 856          KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
 857          KM        MAXIMUM VOLUME DIVERSION  =21.5 acre-feet
              *      1
 858          DT   BS381    21.5
 859          DI       0   10000
 860          DQ       0   10000
              * DDM   ***** Preserved *****

 861          KK   RT381
 862          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
 863          DR   BS381
              * DDM   ***** Preserved *****

 864          KK   SR381
 865          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
 866          KM   21.5  ACRE-FEETx43560/36x3600=7.2 cfs
 867          RS       1    STOR       0
 868          SV       0     .01    21.5
 869          SQ       0     7.2     7.2
              * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                          PAGE 23

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 870          KK    381C
 871          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
 872          HC       4
              *
              * DDM   ***** Preserved *****

 873          KK   RR381
 874          KM   ROUTING OF FLOW FROM SUB-BASIN 381 TO 401
 875          RS       5    FLOW      -1
 876          RC    0.05    0.03    0.05    2992  0.0134
 877          RX       0     0.1     0.2       8      33      41     241   241.1
 878          RY     3.5     2.5       2       0       0       2       3     3.5
              * DDM   ***** Updated *****

 879          KK     390
 880          KM   SUB-BASIN 390
 881          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 882          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
 883          KM     L =  .70  Kb = .050  Adj. Slope =  299.4
 884          BA    .244
 885          LG    .300    .250   4.700    .380  18.000
 886          UC    .204    .107
 887          UA       0       5      16      30      65      77      84      90      94      97
 888          UA     100
              * DDM   ***** Preserved *****

 889          KK    D390
 890          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
 891          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THUNDER MOUNTAIN ESTATES
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892          KM        MAXIMUM VOLUME DIVERSION  = 3.5 acre-feet
             *      1
893          DT   BS390     3.5
894          DI       0   10000
895          DQ       0   10000
             * DDM   ***** Preserved *****

896          KK   RT390
897          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
898          DR   BS390
             * DDM   ***** Preserved *****

899          KK   SR390
900          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
901          KM     3.5 ACRE-FEETx43560/36x3600=1.2cfs
902          RS       1    STOR       0
903          SV       0     .01     3.5
904          SQ       0     1.2     1.2
             * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                                    PAGE 24

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

905          KK    390C
906          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
907          HC       2
             * DDM   ***** Preserved *****

908          KK   RR390
909          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
910          KM   FROM SUB-BASIN 390 TO SUB-BASIN 401
911          RS      14    FLOW      -1
912          RC    .045    .045    .045    8800    .020
913          RX       0       1      40      46      56      62     102     103
914          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

915          KK     401
916          KM   SUB-BASIN 401
917          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
918          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
919          KM     L = 1.71  Kb = .051  Adj. Slope =   97.0
920          BA    .605
921          LG    .280    .250   4.150    .570  12.000
922          UC    .604    .433
923          UA       0       5      16      30      65      77      84      90      94      97
924          UA     100
             * DDM   ***** Preserved *****

925          KK    D401
926          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
927          KM   DETENTION/RETENTION BASIN LOCATED WITHIN SAGUARO VISTA SUBDIVISION
928          KM        MAXIMUM VOLUME DIVERSION = 4.0 ACRE-FEET
             *      1
929          DT   BS401     4.0
930          DI       0   10000
931          DQ       0   10000
             * DDM   ***** Preserved *****

932          KK   RT401
933          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
934          DR   BS401
             * DDM   ***** Preserved *****

935          KK   SR401
936          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
937          KM     4.0 ACRE-FEETx43560/36x3600= 1.3 cfs
938          RS       1    STOR       0
939          SV       0     .01     4.0
940          SQ       0     1.3     1.3
             * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                                    PAGE 25

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

941          KK    C401
942          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
943          HC       5
             *
             *
             * END OF ALTERNATIVE 15 REVISIONS
             *
             * DDM   ***** Updated *****

944          KK     385
945          KM   SUB-BASIN 385
946          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
947          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
948          KM     L = 2.30  Kb = .044  Adj. Slope =  303.0
949          BA    .647
950          LG    .350    .370   5.600    .210  13.000
951          UC    .375    .311
952          UA       0       3       5       8      12      20      43      75      90      96
953          UA     100
             * DDM   ***** Preserved *****

954          KK    D385
955          KM   DIVERT FLOW INTO SUB-BASINS 415 & 420
956          DT   SF385
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 957          DI       0   10000
 958          DQ       0    2500
              * DDM   ***** Preserved *****

 959          KK    385R
 960          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
 961          KM   ROUTING OF FLOW DIVERSION FROM SUB-BASIN 385 INTO SUB-BASIN 420
 962          RS      14    FLOW      -1
 963          RC    .045     .04    .045   10250     .022
 964          RX       0       1      40      46      56      62     102     103
 965          RY       3       2       2       0       0       2       2       3
              * DDM   ***** Updated *****

 966          KK     420
 967          KM   SUB-BASIN 420
 968          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 969          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .995
 970          KM     L = 1.91  Kb = .042  Adj. Slope =  120.0
 971          BA    .849
 972          LG    .310    .270   3.880    .580  12.000
 973          UC    .512    .325
 974          UA       0       5      16      30      65      77      84      90      94      97
 975          UA     100
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 26

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 976          KK    D420
 977          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
 978          KM   DETENTION/RETENTION BASINS LOCATED WITHIN GRAY FOX SUBDIVISION
 979          KM        MAXIMUM VOLUME DIVERSION = 8.65 acre-feet
              *
 980          DT   BS420    8.65
 981          DI       0   10000
 982          DQ       0   10000
              * DDM   ***** Preserved *****

 983          KK   RT420
 984          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
 985          DR   BS420
              * DDM   ***** Preserved *****

 986          KK   SR420
 987          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
 988          KM   38.55 ACRE-FEETx43560/36x3600=13cfs
 989          RS       1    STOR       0
 990          SV       0     .01   38.55
 991          SQ       0      13      13
              * DDM   ***** Preserved *****

 992          KK    420C
 993          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
 994          HC       4   10.87
              * DDM   ***** Updated *****

 995          KK     440
 996          KM   SUB-BASIN 440
 997          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 998          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
 999          KM     L =  .40  Kb = .039  Adj. Slope =  315.0
1000          BA    .080
1001          LG    .190    .380   6.400    .140  13.000
1002          UC    .129    .077
1003          UA       0       3       5       8      12      20      43      75      90      96
1004          UA     100
              * DDM   ***** Preserved *****

1005          KK     R70
1006          KM   ROUTE FLOW FROM SUB-BASIN 440 TO C108
1007          RS       1    FLOW      -1
1008          RC     .05    .035     .05    2250     .08
1009          RX    1000    1025    1050    1070    1075    1095    1120    1145
1010          RY      30    22.9    15.7      10      10    15.7    22.9      30
              * DDM   ***** Updated *****

1011          KK     441
1012          KM   SUB-BASIN 441
1013          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1014          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1015          KM     L =  .28  Kb = .069  Adj. Slope =  315.0
1016          BA    .010
1                                        HEC-1 INPUT                                          PAGE 27

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1017          LG    .300    .250   5.600    .220   5.000
1018          UC    .150    .225
1019          UA       0       5      16      30      65      77      84      90      94      97
1020          UA     100
              * DDM   ***** Preserved *****

1021          KK    C108
1022          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 440 & 441
1023          HC       2
              * DDM   ***** Preserved *****

1024          KK    DIV4
1025          KM        SPLIT FLOW WITH TWO 42 INCH PIPES TO WEST AND SOUTH
              *      1
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```
1026        DT   SPLIT
1027        DI       0      14      40      82     120     154     180
1028        DQ       0       7      20      41      60      77      90
            * DDM   ***** Preserved *****

1029        KK    R108
1030        KM        ROUTE FLOW FROM SUB-BASIN C108 TO C67
1031        RS       2    FLOW      -1
1032        RC     .05    .035     .05    3200      .1
1033        RX    1000    1025    1050    1070    1075    1095    1120    1145
1034        RY      30    22.9    15.7      10      10    15.7    22.9      30
            * DDM   ***** Updated *****

1035        KK     442
1036        KM   SUB-BASIN 442
1037        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1038        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1039        KM     L =  .83  Kb = .055  Adj. Slope =  274.2
1040        BA    .100
1041        LG    .300    .270   3.290    .770   5.000
1042        UC    .258    .264
1043        UA       0       5      16      30      65      77      84      90      94      97
1044        UA     100
            * DDM   ***** Preserved *****

1045        KK     C67
1046        KM   COMBINE FLOW FROM SUB-BASIN 442 & DIV4
1047        HC       2
            * DDM   ***** Preserved *****

1048        KK    DIV6
1049        KM        OFFLINE BASIN WITH 25 FOOT WEIR SET AT 2.5 FEET ABOVE BOTTOM OF CHANNEL
1050        KM        FLOW CONTINUES BEYOND BASIN THROUGH 2-30" PIPES
            *      1
1051        DT  BASIN4
1052        DI       0      10      32      44    79.9   132.5     198   272.9   356.8
1053        DQ       0       0       0       0    23.9    67.5     124   190.9   266.8
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1054        KK  RTDIV6
1055        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1056        DR  BASIN4
            * DDM   ***** Preserved *****

1057        KK  RFDIV6
1058        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1059        KM     3.3 ACRE-FEETx43560/36x3600=1.1cfs
            *      1
1060        RS       1    STOR       0
1061        SV       0     .01     3.3
1062        SQ       0     1.1     1.1
            * DDM   ***** Preserved *****

1063        KK   CDIV6
1064        KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1065        HC       2
            * DDM   ***** Updated *****

1066        KK     443
1067        KM   SUB-BASIN 443
1068        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1069        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1070        KM     L =  .71  Kb = .050  Adj. Slope =  315.0
1071        BA    .080
1072        LG    .250    .190   8.000    .080  10.000
1073        UC    .196    .194
1074        UA       0       5      16      30      65      77      84      90      94      97
1075        UA     100
            * DDM   ***** Preserved *****

1076        KK   DIV66
1077        KM        DIVERT FLOW INTO 3 NATURAL WASHES WITH ONE 24" PIPE IN EACH WASH.
1078        KM        EACH PIPE CAPACITY BASED ON 4 FEET OF HEAD
1079        DT   WSH66
1080        DI       0      78     100     200
1081        DQ       0      78      78      78
            * DDM   ***** Preserved *****

1082        KK    R113
1083        KM        ROUTE FLOW FROM C113 TO C114
1084        RS       1    FLOW      -1
1085        RC    .019    .019    .019    1300    .029
1086        RX    1000    1004    1008    1012    1018    1022    1026    1030
1087        RY      17   15.33   12.67      10      10   12.67   15.33      17
            * DDM   ***** Preserved *****

1088        KK    C114
1089        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 67 AND C113
1090        HC       2
            * DDM   ***** Updated *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1091        KK     444
1092        KM   SUB-BASIN 444
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1093        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1094        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1095        KM     L =  .33  Kb = .034  Adj. Slope =  315.0
1096        BA    .040
1097        LG    .130    .350   4.450    .320   1.000
1098        UC    .112    .084
1099        UA       0       3       5       8      12      20      43      75      90      96
1100        UA     100
            * DDM   ***** Preserved *****

1101        KK     R58
1102        KM   ROUTE FLOW FROM SUB-BASIN 444 TO C107
1103        RS       1    FLOW      -1
1104        RC     .05    .035     .05    2370   .0516
1105        RX    1000    1010    1020    1050    1055    1085    1095    1105
1106        RY      19      18      17      10      10      17      18      19
            * DDM   ***** Updated *****

1107        KK     445
1108        KM   SUB-BASIN 445
1109        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1110        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1111        KM     L =  .82  Kb = .036  Adj. Slope =  315.0
1112        BA    .190
1113        LG    .170    .320   3.470    .590   3.000
1114        UC    .192    .130
1115        UA       0       5      16      30      65      77      84      90      94      97
1116        UA     100
            * DDM   ***** Preserved *****

1117        KK    C107
1118        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 444 & 445
1119        HC       2
            * DDM   ***** Preserved *****

1120        KK    R107
1121        KM        ROUTE FLOW FROM C107 TO C109
1122        RS       1    FLOW      -1
1123        RC     .05    .035     .05     700   .0516
1124        RX    1000    1010    1020    1050    1055    1085    1095    1105
1125        RY      19      18      17      10      10      17      18      19
            * DDM   ***** Preserved *****

1126        KK    RTB2
1127        KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
            *      1
1128        DR   SPLIT
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1129        KK  RSPLIT
1130        KM        ROUTE FLOW FROM SPLIT TO C109
1131        RS       1    FLOW      -1
1132        RC     .05    .035     .05     800     .05
1133        RX    1000    1025    1050    1070    1075    1095    1120    1145
1134        RY      30    22.9    15.7      10      10    15.7    22.9      30
            * DDM   ***** Updated *****

1135        KK     446
1136        KM   SUB-BASIN 446
1137        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1138        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1139        KM     L =  .46  Kb = .061  Adj. Slope =  303.9
1140        BA    .040
1141        LG    .270    .250   4.500    .400  19.000
1142        UC    .183    .189
1143        UA       0       5      16      30      65      77      84      90      94      97
1144        UA     100
            * DDM   ***** Preserved *****

1145        KK    C109
1146        KM        COMBINE HYDROGRAPHS FROM COMBINES C107 AND C108
1147        HC       3
            * DDM   ***** Preserved *****

1148        KK    DIV5
1149        KM        DIVERT FLOW INTO WASHES TOWARDS WEST
1150        KM        DIVERSION THROUGH 36" PIPE WITH 3 FEET OF HEAD
            *      1
1151        DT  WSH404
1152        DI       0    40.7    71.2   121.6     190     276   379.4   500.6
1153        DQ       0      35      35      35      35      35      35      35
            * DDM   ***** Preserved *****

1154        KK    R109
1155        KM        ROUTE FLOW FROM C109 TO C110
1156        RS       1    FLOW      -1
1157        RC    .019    .019    .019    3080     .05
1158        RX    1000    1005    1010    1015    1025    1030    1035    1040
1159        RY   13.75    12.5   11.25      10      10   11.25    12.5   13.75
            * DDM   ***** Updated *****

1160        KK     447
1161        KM   SUB-BASIN 447
1162        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1163        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1164        KM     L =  .49  Kb = .056  Adj. Slope =  221.0
1165        BA    .090
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1166        LG    .250    .270   3.350    .870  30.000
1167        UC    .208    .145
1168        UA       0       5      16      30      65      77      84      90      94      97
1169        UA     100
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1170        KK   RT404
1171        KM        RETRIEVE DIVERTED FLOW FOR WASH 109
1172        DR  WSH404
            * DDM   ***** Preserved *****

1173        KK    R404
1174        KM        ROUTE FLOW FROM C110 TO C110
1175        RS       5    FLOW      -1
1176        RC    .019    .019    .019    3540     .03
1177        RX    1000    1012    1016    1020    1025    1029    1033    1045
1178        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Preserved *****

1179        KK    C110
1180        KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 447 AND R404
1181        HC       3
            * DDM   ***** Preserved *****

1182        KK    R110
1183        KM        ROUTE FLOW FROM C110 TO C115
1184        RS       1    FLOW      -1
1185        RC    .019    .019    .019     580   .0291
1186        RX    1000    1012    1016    1020    1035    1039    1043    1055
1187        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Preserved *****

1188        KK    C115
1189        KM        COMBINE HYDROGRAPHS FROM C114 AND C110
1190        HC       2
            * DDM   ***** Preserved *****

1191        KK    R115
1192        KM        ROUTE FLOW FROM C115 TO C119
1193        RS       1    FLOW      -1
1194        RC    .019    .019    .019    2125    .029
1195        RC    .019    .019    .019     580   .0291
1196        RX    1000    1012    1016    1020    1035    1039    1043    1055
1197        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Updated *****

1198        KK     448
1199        KM   SUB-BASIN 448
1200        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1201        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1202        KM     L =  .36  Kb = .042  Adj. Slope =  315.0
1203        BA    .045
1204        LG    .170    .310   4.200    .390  11.000
1205        UC    .133    .102
1206        UA       0       5      16      30      65      77      84      90      94      97
1207        UA     100
            * DDM   ***** Updated *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1208        KK     449
1209        KM   SUB-BASIN 449
1210        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1211        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1212        KM     L =  .40  Kb = .054  Adj. Slope =  315.0
1213        BA    .050
1214        LG    .260    .280   3.500    .640   6.000
1215        UC    .167    .134
1216        UA       0       5      16      30      65      77      84      90      94      97
1217        UA     100
            * DDM   ***** Preserved *****

1218        KK   C6364
1219        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 448 & 449
1220        HC       2
            * DDM   ***** Preserved *****

1221        KK   R6364
1222        KM   ROUTE FLOW FROM C116 AND SUB-BASINS 448 AND 449
1223        RS       4    FLOW      -1
1224        RC     .05    .035     .05    4375   .0333
1225        RX    1000    1027    1053    1080    1090    1117    1143    1170
1226        RY      15   13.33   11.67      10      10   11.67   13.33      15
            * DDM   ***** Updated *****

1227        KK     450
1228        KM   SUB-BASIN 450
1229        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1230        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1231        KM     L =  .85  Kb = .057  Adj. Slope =  210.5
1232        BA    .070
1233        LG    .340    .350   3.630    .570   4.000
1234        UC    .296    .383
1235        UA       0       3       5       8      12      20      43      75      90      96
1236        UA     100
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                 * DDM   ***** Updated *****

1237             KK     451
1238             KM   SUB-BASIN 451
1239             KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1240             KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1241             KM     L =  .57  Kb = .063  Adj. Slope =  175.0
1242             BA    .025
1243             LG    .340    .340   3.290    .750   3.000
1244             UC    .271    .453
1245             UA       0       3       5       8      12      20      43      75      90      96
1246             UA     100
                 * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                          PAGE 33

LINE             ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1247             KK    RT66
1248             KM        RETRIEVE DIVERTED FLOW FROM SUB-BASIN 66
1249             DR   WSH66
                 * DDM   ***** Updated *****

1250             KK     452
1251             KM   SUB-BASIN 452
1252             KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1253             KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1254             KM     L =  .43  Kb = .055  Adj. Slope =  315.0
1255             BA    .040
1256             LG    .260    .280   3.700    .550   9.000
1257             UC    .171    .166
1258             UA       0       5      16      30      65      77      84      90      94      97
1259             UA     100
                 * DDM   ***** Preserved *****

1260             KK   C6465
1261             KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 443 AND 452
1262             HC       2
                 * DDM   ***** Preserved *****

1263             KK   R6566
1264             KM        ROUTE FLOW FROM DIVERSIONS 65 AND 66 TO C116
1265             RS       2    FLOW      -1
1266             RC     .05    .035     .05    2435   .0282
1267             RX    1000    1045    1090    1150    1160    1220    1265    1310
1268             RY      25      23      20      10      10      20      23      25
                 * DDM   ***** Preserved *****

1269             KK    C116
1270             KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 450 & 451 AND R6364 & R6465
1271             HC       4
                 * DDM   ***** Preserved *****

1272             KK  BASIN5
1273             KM        RESERVOIR WITHIN PARCEL 31      2-48 INCH PIPES AT OUTFALL
1274             KM        BASIN 5 FEET DEEP
1275             RS       1    ELEV       0
1276             SV       0     4.5     9.9
1277             SQ       0      69     190
1278             SE       0     2.5       5
                 * DDM   ***** Preserved *****

1279             KK    R116
1280             KM   ROUTE FLOW FROM C116 TO C117
1281             RS       2    FLOW      -1
1282             RC     .05    .035     .05    1300   .0333
1283             RX    1000    1100    1200    1300    1320    1420    1520    1620
1284             RY      13      12      11      10      10      11      12      13
                 * DDM   ***** Updated *****
1                                          HEC-1 INPUT                                          PAGE 34

LINE             ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1285             KK     453
1286             KM   SUB-BASIN 453
1287             KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1288             KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1289             KM     L =  .58  Kb = .058  Adj. Slope =  138.0
1290             BA    .060
1291             LG    .290    .300   3.290    .820  18.000
1292             UC    .275    .284
1293             UA       0       5      16      30      65      77      84      90      94      97
1294             UA     100
                 * DDM   ***** Preserved *****

1295             KK    C117
1296             KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 453 AND R116
1297             HC       2
                 * DDM   ***** Preserved *****

1298             KK    C118
1299             KM   COMBINE HYDROGRAPHS FROM R115 AND C117
1300             HC       2
                 * DDM   ***** Preserved *****

1301             KK    R118
1302             KM        ROUTE FLOW FROM C118 TO  DIV7
1303             RS       1    FLOW      -1
1304             RC    .019    .019    .019    1500    .024
1305             RX    1000    1012    1016    1020    1035    1039    1043    1055
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1306        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Preserved *****

1307        KK    DIV7
1308        KM        OFFLINE BASIN AT NORTH MOUNTAIN RIDGE   FLOWS ENTER BASIN OVER
1309        KM        30' WEIR SET AT 5.3' ABOVE THE CHANNEL BOTTOM
            *      1
1310        DT  BASIN6
1311        DI       0     363     487     563     645     844
1312        DQ       0       3      47      83     125     244
            * DDM   ***** Preserved *****

1313        KK  RTDIV7
1314        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1315        DR  BASIN6
            * DDM   ***** Preserved *****

1316        KK  RFDIV7
1317        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1318        KM     3.6 ACRE-FEETx43560/36x3600=1.2cfs
1319        RS       1    STOR       0
1320        SV       0     .01     3.6
1321        SQ       0     1.2     1.2
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1322        KK   CDIV7
1323        KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1324        HC       2
            * DDM   ***** Updated *****

1325        KK     454
1326        KM   SUB-BASIN 454
1327        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1328        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1329        KM     L = 1.23  Kb = .051  Adj. Slope =  163.0
1330        BA    .180
1331        LG    .300    .310   3.780    .560  14.000
1332        UC    .379    .395
1333        UA       0       5      16      30      65      77      84      90      94      97
1334        UA     100
            * DDM   ***** Preserved *****

1335        KK    C119
1336        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 454 AND C119
            *      1       2
1337        HC       2
            * DDM   ***** Preserved *****

1338        KK    R454
1339        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1340        KM   ROUTE FLOW FROM C119 TO 415C
1341        RS       2    FLOW      -1
1342        RC    .045    .035    .045    2200    .009
1343        RX       0      .5       1      33      42      67    67.5      68
1344        RY       5       4       4       0       0       6       6       6
            * DDM   ***** Updated *****

1345        KK     415
1346        KM   SUB-BASIN 415
1347        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1348        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
1349        KM     L = 2.10  Kb = .046  Adj. Slope =  266.0
1350        BA    .448
1351        LG    .310    .270   4.250    .480  15.000
1352        UC    .404    .387
1353        UA       0       5      16      30      65      77      84      90      94      97
1354        UA     100
            * DDM   ***** Preserved *****

1355        KK   RT385
1356        KM   RETRIEVE FLOW FROM DIVERSION OF SUB-BASIN 385 INTO SUB-BASIN 415
1357        DR   SF385
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1358        KK   RR385
1359        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1360        KM   ROUTING OF SPLIT FLOW FROM SUB-BASIN 385 TO SUB-BASIN 415
1361        RS       5    FLOW      -1
1362        RC    .045     .04    .045    5878    .024
1363        RX       0       1      40      46      56      62     102     103
1364        RY       3       2       2       0       0       2       2       3
            * DDM   ***** Preserved *****

1365        KK    415C
1366        KM   HYDROGRAPH COMBINATION OF SUB-BASINS 415, R454 & SPLIT FLOW FROM 385
1367        HC       3    1.71
            * DDM   ***** Preserved *****

1368        KK    R415
1369        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1370        KM   ROUTING OF FLOW FROM 415C TO 455C
1371        RS       2    FLOW      -1
1372        RC    .045     .03    .045    4100    .024
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1373          RX       0      .5       1       8      16      23    23.5      24
1374          RY       8       8       8       0       0       8       8       8
              * DDM   ***** Updated *****

1375          KK     455
1376          KM   SUB-BASIN 455
1377          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1378          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
1379          KM     L = 1.70  Kb = .041  Adj. Slope =  146.0
1380          BA   1.111
1381          LG    .270    .280   3.700    .640  24.000
1382          UC    .421    .204
1383          UA       0       5      16      30      65      77      84      90      94      97
1384          UA     100
              * DDM   ***** Preserved *****

1385          KK    D455
1386          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1387          KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1388          KM   FOR BASIN #: 30      34      43      47&58
1389          KM        MAXIMUM VOLUME DIVERSION = 74.1 acre-feet
              *      1
1390          DT   BS455    74.1
1391          DI       0   10000
1392          DQ       0   10000
              * DDM   ***** Preserved *****

1393          KK   RT455
1394          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1395          DR   BS455
              * DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1396          KK   SR455
1397          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1398          KM    74.1 ACRE-FEETx43560/36x3600=25cfs
1399          RS       1    STOR       0
1400          SV       0     .01    74.1
1401          SQ       0      25      25
              * DDM   ***** Preserved *****

1402          KK    C455
1403          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 455 AND DIVERTED BASIN STORAGE OF 455
1404          HC       2
              * DDM   ***** Preserved *****

1405          KK    455C
1406          KM  HYDROGRAPH COMBINATION OF 420C, R415 AND C455
              *      1       2
1407          HC       3
              * DDM   ***** Preserved *****

1408          KK   SR440
1409          KM   SPOOK HILL FRS PLANS DATED 6/15/77
1410          KM   OUTLET PIPE=7'x7.5'RCBC; L=70 INLET INV.=1566; OUTLET INV.=1566
1411          KM   EMERGENCY SPILLWAY ELEV.=1582; PRINCIPLE SPILLWAY ELEV.=1577.5
1412          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 200 ACRE-FEET
1413          RS       1    STOR       0
1414          SV       0      10     100     300     500     680
1415          SQ       0     640     720     780     825     860
1416          SE      66    77.5      79    80.2    81.2      82
              * DDM   ***** Preserved *****

1417          KK   RR455
1418          KM   ROUTE FLOW FROM SPOOK HILL FRS TO SUB-BASIN 462
1419          RS       9    FLOW      -1
1420          RC    .035    .025    .035    9200    .002
1421          RX       0       1       2      28      58      84      85      86
1422          RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
              * DDM   ***** Updated *****

1423          KK     456
1424          KM   SUB-BASIN 456
1425          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1426          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1427          KM     L =  .94  Kb = .045  Adj. Slope =  315.0
1428          BA    .260
1429          LG    .300    .380   5.600    .200  12.000
1430          UC    .217    .139
1431          UA       0       5      16      30      65      77      84      90      94      97
1432          UA     100
              * DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1433          KK    DIV1
1434          KM        DIVERT FLOW INTO OFFLINE DETENTION BASIN
1435          KM        WEIR FOR BASIN SET AT 4 FEET ABOVE CHANNEL BOTTOM
              *      1
1436          DT  BASIN1
1437          DI       0    11.1   127.9   234.4   577.7   789.9  1025.5  1280.9  1555.7
1438          DQ       0       0       0    47.7     248   381.8   533.6   701.5     884
              * DDM   ***** Preserved *****

1439          KK    DIV2
1440          KM        SPLIT OUT FLOW FOR WASHES THAT FLOW TO THE SOUTH FROM
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1441          KM        WASHES THAT DRAIN TO THE WES, SOUTHERN WASHES FED BY 30" & 24" PIPE
1442          DT    WA30
1443          DI       0    11.1   127.9   189.6   329.7     408   491.9   579.4   671.7
1444          DQ       0    11.1    38.4    48.2      63    69.5      76      81      86
              * DDM   ***** Preserved *****

1445          KK    R456
1446          KM        ROUTE FLOW FROM SUB-BASIN 51 TO C101
1447          RS       2    FLOW      -1
1448          RC     .05    .035     .05    3800    .044
1449          RX    1000    1010    1020    1036    1041    1057    1067    1077
1450          RY   14.88   14.44      14      10      10      14   14.44   14.88
              * DDM   ***** Updated *****

1451          KK     457
1452          KM   SUB-BASIN 457
1453          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1454          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1455          KM     L = 1.01  Kb = .045  Adj. Slope =  308.8
1456          BA    .190
1457          LG    .270    .330   3.950    .460   6.000
1458          UC    .237    .195
1459          UA       0       5      16      30      65      77      84      90      94      97
1460          UA     100
              * DDM   ***** Preserved *****

1461          KK    C101
1462          KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 50 AND 51
1463          HC       2
              * DDM   ***** Preserved *****

1464          KK    DIV3
1465          KM        RESERVOIR AT THE EDGE OF THE PROPERTY   FLOW FROM CHANNEL
1466          KM        DIVERTED  INTO OFFLINE BASIN A 25' WEIR SET AT ELEVATION 1808 FT
              *      1
1467          DT  BASIN2
1468          DI       0      36      70     110     180   313.5     402   500.9
1469          DQ       0       0       0       0       0    67.5     124   190.9
              * DDM   ***** Preserved *****
```



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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1470          KK  RTDIV3
1471          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1472          DR  BASIN2
              * DDM   ***** Preserved *****

1473          KK  RFDIV3
1474          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1475          KM     5.0 ACRE-FEETx43560/36x3600=1.7cfs
1476          RS       1    STOR       0
1477          SV       0     .01       5
1478          SQ       0     1.7     1.7
              * DDM   ***** Preserved *****

1479          KK   CDIV3
1480          KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1481          HC       2
              * DDM   ***** Preserved *****

1482          KK    R101
1483          KM        ROUTE FLOW FROM SUBBASIN C101 TO C103
1484          RS       1    FLOW      -1
1485          RC     .05    .035     .05    1450     .05
1486          RX    1000    1010    1020    1036    1041    1057    1067    1077
1487          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Updated *****

1488          KK     458
1489          KM   SUB-BASIN 458
1490          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1491          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1492          KM     L =  .76  Kb = .048  Adj. Slope =  299.0
1493          BA    .190
1494          LG    .290    .330   5.800    .190   6.000
1495          UC    .204    .131
1496          UA       0       5      16      30      65      77      84      90      94      97
1497          UA     100
              * DDM   ***** Preserved *****

1498          KK    C103
1499          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 55 AND C101
1500          HC       2
              * DDM   ***** Preserved *****

1501          KK    R103
1502          KM        ROUTE FLOW FROM SUBBASIN C103 TO C106
1503          RS       1    FLOW      -1
1504          RC     .05    .035     .05     900     .03
1505          RX    1000    1010    1020    1030    1050    1060    1070    1080
1506          RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
              * DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1507          KK    RT30
1508          KM        RETRIEVE DIVERTED FLOW FOR WASH BELOW 30 INCH PIPE
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1509          DR    WA30
              * DDM   ***** Preserved *****

1510          KK     R30
1511          KM        ROUTE FLOW FROM WASH DIVERSION TO COMBINE C52
1512          RS       1    FLOW      -1
1513          RC     .05    .035     .05    1630     .05
1514          RX    1000    1010    1020    1036    1041    1057    1067    1077
1515          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Preserved *****

1516          KK    RTB1
1517          KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
              *      1       2
1518          DR  BASIN1
              * DDM   ***** Preserved *****

1519          KK      B1
1520          KM        ROUTE FLOW THROUGH OFFLINE DETENTION BASIN
1521          KM        FLOW OUTLETS THROUGH A 30 INCH OUTLET PIPE
              *      1       2
1522          RS       1    ELEV       0
1523          SV              .7     1.4     2.3     2.7     3.2
1524          SQ       0       5      16      28    32.5      37
1525          SE       0       1       2       3     3.5       4
              * DDM   ***** Preserved *****

1526          KK     RB1
1527          KM        ROUTE FLOW FROM BASIN DIVERSION TO COMBINE C52
1528          RS       2    FLOW      -1
1529          RC     .05    .035     .05    1720     .05
1530          RX    1000    1010    1020    1036    1041    1057    1067    1077
1531          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Preserved *****

1532          KK    CDIV
1533          KM        COMBINE FLOWS FROM WA30 AND BASIN 1
1534          HC       2     .12
              * DDM   ***** Updated *****

1535          KK     459
1536          KM   SUB-BASIN 459
1537          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1538          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1539          KM     L =  .35  Kb = .052  Adj. Slope =  251.6
1540          BA    .030
1541          LG    .220    .300   3.330    .710   8.000
1542          UC    .162    .157
1543          UA       0       5      16      30      65      77      84      90      94      97
1544          UA     100
              * DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1545          KK     C52
1546          KM        COMBINE FLOWS FROM SUB-BASIN 52 WA30 AND BASIN 1
1547          HC       2
              * DDM   ***** Preserved *****

1548          KK     R52
1549          KM        ROUTE FLOW FROM SUBBASIN 52 TO C102
1550          RS       2    FLOW      -1
1551          RC     .05    .035     .05    2000     .05
1552          RX    1000    1010    1020    1036    1041    1057    1067    1077
1553          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Updated *****

1554          KK     460
1555          KM   SUB-BASIN 460
1556          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1557          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1558          KM     L =  .62  Kb = .058  Adj. Slope =  194.0
1559          BA    .140
1560          LG    .250    .260   3.740    .690  27.000
1561          UC    .242    .160
1562          UA       0       5      16      30      65      77      84      90      94      97
1563          UA     100
              * DDM   ***** Preserved *****

1564          KK    C102
1565          KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 52 AND 53
1566          HC       2
              * DDM   ***** Preserved *****

1567          KK  BASIN3
1568          KM        RESERVOIR AT CLUBHOUSE LOCATION 1-30 INCH PIPE AT OUTFALL
1569          KM        BOTTOM OF BASIN AT 6 FEET ABOVE 1795 ELEVATION
1570          RS       1    ELEV       0
1571          SA       0       0       0       0     .34    1.59    1.81    1.96    2.13     2.3
              *      0       0       0       0    1.14    3.25    5.52    9.23
1572          SQ       0      22      45    47.4      48      51      57      62      67      73
1573          SE    1795  1797.5    1800  1800.4  1800.5    1801    1802    1803    1804  1805.5
              * DDM   ***** Preserved *****

1574          KK      R3
1575          KM        ROUTE FLOW FROM C102 to C106
1576          RS       4    FLOW      -1
1577          RC     .05     .03     .05    2750   .0375
1578          RX    1000    1010    1020    1052    1086    1118    1128    1138
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1579          RY    19.2    18.4      18      10      10      18    18.4    19.2
              * DDM   ***** Updated *****

1580          KK     461
1581          KM   SUB-BASIN 461
1582          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1583          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1584          KM     L =  .83  Kb = .052  Adj. Slope =  181.0
1585          BA    .120
1                                        HEC-1 INPUT                                          PAGE 42

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1586          LG    .270    .250   4.250    .450  21.000
1587          UC    .271    .250
1588          UA       0       5      16      30      65      77      84      90      94      97
1589          UA     100
              * DDM   ***** Preserved *****

1590          KK    C104
1591          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 54 AND R102
1592          HC       2
              * DDM   ***** Preserved *****

1593          KK    C106
1594          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN C103 AND C104
1595          HC       2
              * DDM   ***** Preserved *****

1596          KK    R106
1597          KM        ROUTE FLOW FROM C106 TO C49
1598          RS       2    FLOW      -1
1599          RC     .05    .035     .05    3950    .033
1600          RX    1000    1010    1020    1030    1050    1060    1070    1080
1601          RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
              * DDM   ***** Updated *****

1602          KK     462
1603          KM   SUB-BASIN 462
1604          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1605          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1606          KM     L =  .97  Kb = .045  Adj. Slope =  297.7
1607          BA    .301
1608          LG    .300    .330   5.300    .240  12.000
1609          UC    .225    .137
1610          UA       0       5      16      30      65      77      84      90      94      97
1611          UA     100
              * DDM   ***** Preserved *****

1612          KK     C56
1613          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 56 AND C106
              *      1       2
1614          HC       2
              * DDM   ***** Updated *****

1615          KK     480
1616          KM   SUB-BASIN 480
1617          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1618          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
1619          KM     L = 1.21  Kb = .042  Adj. Slope =  165.0
1620          BA    .731
1621          LG    .270    .270   3.580    .730  27.000
1622          UC    .325    .148
1623          UA       0       5      16      30      65      77      84      90      94      97
1624          UA     100
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 43

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1625          KK    D480
1626          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1627          KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1628          KM   FOR BASIN #: 18 & 26
1629          KM        MAXIMUM VOLUME DIVERSION = 16.5 acre-feet
              *      1
1630          DT   BS480    16.5
1631          DI       0   10000
1632          DQ       0   10000
              * DDM   ***** Preserved *****

1633          KK   RT480
1634          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1635          DR   BS480
              * DDM   ***** Preserved *****

1636          KK   SR480
1637          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1638          KM    16.5 ACRE-FEETx43560/36x3600=5.5cfs
1639          RS       1    STOR       0
1640          SV       0     .01    16.5
1641          SQ       0     5.6     5.6
              * DDM   ***** Preserved *****

1642          KK    C480
1643          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1644          HC       2
              * DDM   ***** Preserved *****

1645          KK    480C
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1646          KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1647          HC       3    2.09
              * DDM   ***** Preserved *****

1648          KK   RR480
1649          KM   ROUTE FLOW FROM SUB-BASIN 480 TO SUB-BASIN 500
1650          RS       1    FLOW      -1
1651          RC    .025    .025    .025    6500     .05
1652          RX       0       1       2      28      58      84      85      86
1653          RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
              * DDM   ***** Updated *****

1654          KK     500
1655          KM   SUB-BASIN 500
1656          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1657          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
1658          KM     L = 2.77  Kb = .042  Adj. Slope =  286.8
1659          BA    .930
1660          LG    .350    .400   6.000    .170   9.000
1661          UC    .421    .333
1662          UA       0       3       5       8      12      20      43      75      90      96
1663          UA     100
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 44

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1664          KK    500C
1665          KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1666          HC       2    3.02
1667          ZZ
1
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SCHEMATIC DIAGRAM OF STREAM NETWORK

```
INPUT
 LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

  NO.      (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

  60          10
               V
               V
  70         R10
               V
               V
  76         R12
               .
               .
  82           .          20
               .           .
               .           .
  92         C20............
               .
               .
  95           .          40
               .           .
               .           .
 105           .           .          60
               .           .           .
               .           .           .
 115         60C........................
               V
               V
 118        SR60
               V
               V
 127         R60
               V
               V
 133        RR60
               .
               .
 139           .          80
               .           .
               .           .
 149         80C............
               V
               V
 152         R80
               .
               .
 158           .         100
               .           .
               .           .
 168        100C............
               V
               V
 171        R100
               .
               .
 177           .         120
               .           .
               .           .
 187        120C............
               V           '
               V
 190        R120
               .
               .
 196           .         140
               .           .
               .           .
 206           .           .         150
               .           .           V
               .           .           V
 216           .           .        R150
               .           .           V
               .           .           V
 222           .           .        R152
               .           .           .
               .           .           .
 228           .           .           .         160
               .           .           .           .
               .           .           .           .
 238           .           .           .           .         180
               .           .           .           .           .
               .           .           .           .           .
 248        180C.............................................
               .
               .
 251           .         210
               .           V
               .           V
 261           .        R210
               .           .
               .           .
 267           .           .         240
               .           .           .
               .           .           .
 277           .        240C............
               .           V
               .           V
 280           .       SR240
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                .          .
287             .          .        220
                .          .          .
                .          .          .
297             .       220C...........
                .          V
                .          V
300             .      SR220
                .          .
                .          .
307             .          .        190
                .          .          V
                .          .          V
317             .          .       R190
                .          .          V
                .          .          V
323             .          .       R192
                .          .          .
                .          .          .
329             .          .          .        200
                .          .          .          .
                .          .          .          .
339             .       200C......................
                .          V
                .          V
342             .      SR200
                .          V
                .          V
349             .       R200
                .          .
                .          .
355          C180...........
                V
                V
358         SR180
                V
                V
367          R180
                .
                .
374             .        260
                .          .
                .          .
384          260C...........
                V
                V
387          R260
                .
                .
394             .        280
                .          .
                .          .
404          280C...........
                V
                V
407          R280
                .
                .
414             .        300
                .          .
                .          .
424          300C...........
                V
                V
427          R300
                V
                V
434         RR300
                .
                .
441             .        350
                .          .
                .          .
454             .          .------->   SF350
451             .       D350
                .          V
                .          V
457             .       350R
                .          .
                .          .
464             .          .        310
                .          .          .
                .          .          .
474             .       C310...........
                .          V
                .          V
477             .       R310
                .          .
                .          .
484             .          .        320
                .          .          .
                .          .          .
499             .          .          .------->   BS320
494             .          .       D320
                .          .          .
                .          .          .
504             .          .          .          .<-------   BS320
502             .          .          .      RT320
                .          .          .          V
                .          .          .          V
```

```
505          .          .          .       SR320
             .          .          .           .
             .          .          .           .
511       C320.................................
             .
             .
514          .        340
             .          .
             .          .
529          .          .-------->   BS340
524          .       D340
             .          .
             .          .
534          .          .          .<-------   BS340
532          .          .      RT340
             .          .          V
             .          .          V
535          .          .      SR340
             .          .          .
             .          .          .
541       C340......................
             .
             .
544          .        360
             .          .
             .          .
550          .          .-------->   BS360
554          .       D360
             .          .
             .          .
563          .          .          .<-------   BS360
561          .          .      RT360
             .          .          V
             .          .          V
564          .          .      SR360
             .          .          .
             .          .          .
570       360C......................
             .
             .
573          .        380
             .          .
             .          .
587          .          .-------->   BS380
583          .       D380
             .          .
             .          .
592          .          .          .<-------   BS380
590          .          .      RT380
             .          .          V
             .          .          V
593          .          .      SR380
             .          .          .
             .          .          .
599       380C......................
             .
             .
602          .        400
             .          .
             .          .
616          .          .-------->   BS400
612          .       D400
             .          .
             .          .
621          .          .          .<-------   BS400
619          .          .      RT400
             .          .          V
             .          .          V
622          .          .      SR400
             .          .          .
             .          .          .
628          .       C400............
             .          .
             .          .
631       400C............
             .
             .
636          .          .<-------   SF350
634          .      RT350
             .          V
             .          V
637          .      RR350
             .          .
             .          .
644          .          .        355
             .          .          .
             .          .          .
654          .       C355............
             .          V
             .          V
657          .       R355
             .          .
             .          .
664          .          .        361
             .          .          .
             .          .          .
678          .          .          .-------->   BS361
674          .          .      D361
             .          .          .
             .          .          .
683          .          .          .           .<-------   BS361
```

```
681          .          .          .       RT361
             .          .          .          V
             .          .          .          V
684          .          .          .       SR361
             .          .          .          .
             .          .          .          .
690          .      361C.......................
             .          .
             .          .
693          .          .        342
             .          .          .
             .          .          .
708          .          .          .-------> BS3421
703          .          .      D3421
             .          .          .
             .          .          .
713          .          .          .          .<-------  BS3421
711          .          .          .     RT3421
             .          .          .          V
             .          .          .          V
714          .          .          .     SR3421
             .          .          .          .
             .          .          .          .
720          .          .       C342............
             .          .          .
             .          .          .
727          .          .          .-------> BS3422
723          .          .      D3422
             .          .          .
             .          .          .
732          .          .          .          .<-------  BS3422
730          .          .          .     RT3422
             .          .          .          V
             .          .          .          V
733          .          .          .     SR3422
             .          .          .          .
             .          .          .          .
739          .          .      CC342............
             .          .          V
             .          .          V
742          .          .       R342
             .          .          .
             .          .          .
748          .          .          .        341
             .          .          .          .
             .          .          .          .
763          .          .          .          .-------> BS341
758          .          .          .       D341
             .          .          .          .
             .          .          .          .
768          .          .          .          .          .<-------  BS341
766          .          .          .          .      RT341
             .          .          .          .          V
             .          .          .          .          V
769          .          .          .          .      SR341
             .          .          .          .          .
             .          .          .          .          .
775          .          .       C341........................
             .          .          V
             .          .          V
778          .          .      RR341
             .          .          .
             .          .          .
785          .      361CC............
             .          .
             .          .
792          .          .-------> BS3612
788          .      D3612
             .          .
             .          .
797          .          .          .<-------  BS3612
795          .          .     RT3612
             .          .          V
             .          .          V
798          .          .     SR3612
             .          .          .
             .          .          .
804          .      C3612............
             .          V
             .          V
807          .      RR361
             .          .
             .          .
814          .          .        370
             .          .          .
             .          .          .
824          .          .          .        395
             .          .          .          .
             .          .          .          .
834          .          .       370C............
             .          .          V
             .          .          V
837          .          .       R370
             .          .          .
             .          .          .
844          .          .          .        381
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             .          .          .          .
858          .          .          .          .-------> BS381
854          .          .          .       D381
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863          .           .           .           .           .<-------   BS381
861          .           .           .           .       RT381
             .           .           .           .           V
             .           .           .           .           V
864          .           .           .           .       SR381
             .           .           .           .           .
             .           .           .           .           .
870          .       381C.................................
             .          V
             .          V
873          .      RR381
             .           .
             .           .
879          .           .        390
             .           .          .
             .           .          .
893          .           .          .------->   BS390
889          .           .       D390
             .           .          .
             .           .          .
898          .           .          .           .<-------   BS390
896          .           .          .      RT390
             .           .          .          V
             .           .          .          V
899          .           .          .      SR390
             .           .          .          .
             .           .          .          .
905          .           .       390C............
             .           .          V
             .           .          V
908          .           .      RR390
             .           .          .
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915          .           .          .        401
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             .           .          .          .
929          .           .          .          .------->   BS401
925          .           .          .      D401
             .           .          .          .
             .           .          .          .
934          .           .          .          .           .<-------   BS401
932          .           .          .          .       RT401
             .           .          .          .           V
             .           .          .          .           V
935          .           .          .          .       SR401
             .           .          .          .           .
             .           .          .          .           .
941       C401.............................................
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944          .        385
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             .          .
956          .          .------->   SF385
954          .       D385
             .          V
             .          V
959          .       385R
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             .          .
966          .           .        420
             .           .          .
             .           .          .
980          .           .          .------->   BS420
976          .           .       D420
             .           .          .
             .           .          .
985          .           .          .           .<-------   BS420
983          .           .          .      RT420
             .           .          .          V
             .           .          .          V
986          .           .          .      SR420
             .           .          .          .
             .           .          .          .
992       420C.................................
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995          .        440
             .          V
             .          V
1005         .        R70
             .          .
             .          .
1011         .           .        441
             .           .          .
             .           .          .
1021         .       C108............
             .          .
             .          .
1026         .          .------->   SPLIT
1024         .       DIV4
             .          V
             .          V
1029         .       R108
             .          .
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1035         .           .        442
             .           .          .
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1045         .        C67............
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1051            .          .-------> BASIN4
1048            .      DIV6
                .          .
                .          .
1056            .          .        .<-------  BASIN4
1054            .          .    RTDIV6
                .          .        V
                .          .        V
1057            .          .    RFDIV6
                .          .        .
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1063            .     CDIV6...........
                .          .
                .          .
1066            .          .      443
                .          .        .
                .          .        .
1079            .          .        .-------> WSH66
1076            .          .     DIV66
                .          .        V
                .          .        V
1082            .          .     R113
                .          .        .
                .          .        .
1088            .      C114...........
                .          .
                .          .
1091            .          .      444
                .          .        V
                .          .        V
1101            .          .      R58
                .          .        .
                .          .        .
1107            .          .        .        445
                .          .        .          .
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1117            .          .     C107...........
                .          .        V
                .          .        V
1120            .          .     R107
                .          .        .
                .          .        .
1128            .          .        .          .<-------   SPLIT
1126            .          .        .       RTB2
                .          .        .          V
                .          .        .          V
1129            .          .        .     RSPLIT
                .          .        .          .
                .          .        .          .
1135            .          .        .          .         446
                .          .        .          .           .
                .          .        .          .           .
1145            .          .     C109........................
                .          .        .
                .          .        .
1151            .          .        .-------> WSH404
1148            .          .     DIV5
                .          .        V
                .          .        V
1154            .          .     R109
                .          .        .
                .          .        .
1160            .          .        .        447
                .          .        .          .
                .          .        .          .
1172            .          .        .          .           .<-------  WSH404
1170            .          .        .          .       RT404
                .          .        .          .          V
                .          .        .          .          V
1173            .          .        .          .        R404
                .          .        .          .           .
                .          .        .          .           .
1179            .          .     C110........................
                .          .        V
                .          .        V
1182            .          .     R110
                .          .        .
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1188            .      C115...........
                .         V
                .         V
1191            .      R115
                .          .
                .          .
1198            .          .      448
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1208            .          .        .        449
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1218            .          .    C6364...........
                .          .        V
                .          .        V
1221            .          .    R6364
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1227            .          .        .        450
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1237          .          .          .          .        451
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1249          .          .          .          .          .          .<-------   WSH66
1247          .          .          .          .          .       RT66
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1250          .          .          .          .          .          .         452
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1260          .          .          .          .          .      C6465............
              .          .          .          .          .          V
              .          .          .          .          .          V
1263          .          .          .          .          .      R6566
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1269          .          .       C116.................................
              .          .          V
              .          .          V
1272          .          .     BASIN5
              .          .          V
              .          .          V
1279          .          .       R116
              .          .          .
              .          .          .
1285          .          .          .        453
              .          .          .          .
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1295          .          .       C117............
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1298          .       C118............
              .          V
              .          V
1301          .       R118
              .          .
              .          .
1310          .          .-------> BASIN6
1307          .       DIV7
              .          .
              .          .
1315          .          .          .<-------  BASIN6
1313          .          .     RTDIV7
              .          .          V
              .          .          V
1316          .          .     RFDIV7
              .          .          .
              .          .          .
1322          .      CDIV7............
              .          .
              .          .
1325          .          .        454
              .          .          .
              .          .          .
1335          .       C119............
              .          V
              .          V
1338          .       R454
              .          .
              .          .
1345          .          .        415
              .          .          .
              .          .          .
1357          .          .          .          .<-------   SF385
1355          .          .          .      RT385
              .          .          .          V
              .          .          .          V
1358          .          .          .      RR385
              .          .          .          .
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1365          .       415C........................
              .          V
              .          V
1368          .       R415
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              .          .
1375          .          .        455
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              .          .          .
1390          .          .          .------->  BS455
1385          .          .       D455
              .          .          .
              .          .          .
1395          .          .          .          .<-------   BS455
1393          .          .          .      RT455
              .          .          .          V
              .          .          .          V
1396          .          .          .      SR455
              .          .          .          .
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1402          .          .       C455............
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1405       455C........................
              V
              V
1408      SR440
              V
              V
1417      RR455
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1423          .        456
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1436          .          .-------> BASIN1
1433          .       DIV1
              .          .
              .          .
1442          .          .------->   WA30
1439          .       DIV2
              .          V
              .          V
1445          .       R456
              .          .
              .          .
1451          .          .        457
              .          .          .
              .          .          .
1461          .       C101............
              .          .
              .          .
1467          .          .-------> BASIN2
1464          .       DIV3
              .          .
              .          .
1472          .          .          .<-------  BASIN2
1470          .          .     RTDIV3
              .          .          V
              .          .          V
1473          .          .     RFDIV3
              .          .          .
              .          .          .
1479          .      CDIV3............
              .          V
              .          V
1482          .       R101
              .          .
              .          .
1488          .          .        458
              .          .          .
              .          .          .
1498          .       C103............
              .          V
              .          V
1501          .       R103
              .          .
              .          .
1509          .          .          .<-------   WA30
1507          .          .       RT30
              .          .          V
              .          .          V
1510          .          .        R30
              .          .          .
              .          .          .
1518          .          .          .          .<-------  BASIN1
1516          .          .          .       RTB1
              .          .          .          V
              .          .          .          V
1519          .          .          .         B1
              .          .          .          V
              .          .          .          V
1526          .          .          .        RB1
              .          .          .          .
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1532          .          .       CDIV............
              .          .          .
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1535          .          .          .        459
              .          .          .          .
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1545          .          .        C52............
              .          .          V
              .          .          V
1548          .          .        R52
              .          .          .
              .          .          .
1554          .          .          .        460
              .          .          .          .
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1564          .          .       C102............
              .          .          V
              .          .          V
1567          .          .     BASIN3
              .          .          V
              .          .          V
1574          .          .         R3
              .          .          .
              .          .          .
1580          .          .          .        461
              .          .          .          .
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1590          .          .       C104............
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1593          .       C106............
              .          V
              .          V
1596          .       R106
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1602          .          .        462
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1612            .        C56..........
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1615            .          .        480
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1630            .          .          .-------->   BS480
1625            .          .       D480
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1635            .          .          .          .<-------   BS480
1633            .          .          .      RT480
                .          .          .          V
                .          .          .          V
1636            .          .          .      SR480
                .          .          .          .
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1642            .          .       C480...........
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1645         480C......................
               V
               V
1648        RR480
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1654            .        500
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                .          .
1664         500C...........
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RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT	10	951.	12.27	114.	31.	15.	.70		
+	ROUTED TO	R10	882.	12.40	114.	31.	15.	.70		
+	ROUTED TO	R12	833.	12.60	114.	31.	15.	.70		
+	HYDROGRAPH AT	20	959.	12.43	128.	32.	16.	1.12		
+	2 COMBINED AT	C20	1663.	12.53	240.	63.	30.	1.82		
+	HYDROGRAPH AT	40	2582.	12.30	252.	66.	32.	2.23		
+	HYDROGRAPH AT	60	1553.	12.40	228.	61.	29.	1.75		
+	3 COMBINED AT	60C	5274.	12.37	708.	188.	90.	5.80		
+	ROUTED TO	SR60	92.	14.40	92.	89.	70.	5.80		
+	ROUTED TO	R60	92.	14.40	92.	89.	70.	5.80		
+	ROUTED TO	RR60	92.	14.53	92.	89.	70.	5.80		
+	HYDROGRAPH AT	80	1868.	12.27	179.	46.	22.	1.48		
+	2 COMBINED AT	80C	1942.	12.27	266.	134.	92.	1.48		
+	ROUTED TO	R80	1919.	12.27	266.	134.	92.	1.48		
+	HYDROGRAPH AT	100	404.	12.20	58.	15.	7.	.48		
+	2 COMBINED AT	100C	2300.	12.27	321.	148.	99.	1.96		
+	ROUTED TO	R100	2292.	12.30	321.	148.	99.	1.96		
+	HYDROGRAPH AT	120	3232.	12.27	326.	88.	42.	2.20		
+	2 COMBINED AT	120C	5469.	12.27	636.	229.	141.	4.16		
+	ROUTED TO	R120	5397.	12.30	636.	229.	140.	4.16		
+	HYDROGRAPH AT	140	632.	12.13	64.	17.	8.	.60		
+	HYDROGRAPH AT	150	135.	13.20	47.	13.	6.	.41		
+	ROUTED TO	R150	134.	13.30	47.	13.	6.	.41		
+	ROUTED TO	R152	133.	13.50	47.	13.	6.	.41		
+	HYDROGRAPH AT	160	217.	12.40	35.	9.	4.	.37		
+	HYDROGRAPH AT	180	785.	12.37	90.	23.	11.	1.00		
+	5 COMBINED AT	180C	6707.	12.30	857.	286.	168.	6.54		
+	HYDROGRAPH AT	210	870.	12.20	80.	21.	10.	.58		
+	ROUTED TO	R210	815.	12.27	80.	21.	10.	.58		
+	HYDROGRAPH AT	240	1405.	12.30	155.	39.	19.	1.40		
+	2 COMBINED AT	240C	2185.	12.30	233.	60.	29.	1.98		

+	ROUTED TO	SR240	634.	12.77	186.	49.	23.	1.98
+	HYDROGRAPH AT	220	1126.	12.17	98.	25.	12.	.73
+	2 COMBINED AT	220C	1138.	12.20	279.	73.	35.	2.71
+	ROUTED TO	SR220	914.	12.43	272.	71.	34.	2.71
+	HYDROGRAPH AT	190	1403.	12.17	116.	31.	15.	.92
+	ROUTED TO	R190	1348.	12.23	116.	31.	15.	.92
+	ROUTED TO	R192	1267.	12.30	116.	31.	15.	.92
+	HYDROGRAPH AT	200	806.	12.17	69.	19.	9.	.54
+	3 COMBINED AT	200C	2624.	12.27	447.	119.	57.	4.16
+	ROUTED TO	SR200	2493.	12.37	442.	115.	55.	4.16
+	ROUTED TO	R200	2473.	12.40	441.	115.	55.	4.16
+	2 COMBINED AT	C180	8912.	12.30	1279.	396.	221.	10.69
+	ROUTED TO	SR180	140.	18.27	140.	139.	112.	10.69
+	ROUTED TO	R180	140.	18.33	140.	139.	112.	10.69
+	HYDROGRAPH AT	260	418.	12.10	43.	12.	6.	.27
+	2 COMBINED AT	260C	527.	12.10	177.	150.	119.	.27
+	ROUTED TO	R260	515.	12.20	177.	150.	119.	.27
+	HYDROGRAPH AT	280	478.	12.10	42.	12.	6.	.30
+	2 COMBINED AT	280C	945.	12.13	216.	160.	124.	.57
+	ROUTED TO	R280	909.	12.20	216.	160.	123.	.57
+	HYDROGRAPH AT	300	875.	12.20	109.	29.	14.	.99
+	2 COMBINED AT	300C	1769.	12.20	321.	187.	137.	1.56
+	ROUTED TO	R300	1733.	12.27	321.	187.	136.	1.56
+	ROUTED TO	RR300	1699.	12.33	321.	187.	136.	1.56
+	HYDROGRAPH AT	350	1192.	12.20	103.	27.	13.	.97
+	DIVERSION TO	SF350	715.	12.20	62.	16.	8.	.97
+	HYDROGRAPH AT	D350	477.	12.20	41.	11.	5.	.97
+	ROUTED TO	350R	414.	12.43	41.	11.	5.	.97
+	HYDROGRAPH AT	310	376.	12.33	49.	12.	6.	.56
+	2 COMBINED AT	C310	749.	12.40	89.	23.	11.	.94
+	ROUTED TO	R310	679.	12.77	89.	23.	11.	.94
+	HYDROGRAPH AT	320	965.	12.20	123.	34.	17.	.97
+	DIVERSION TO	BS320	377.	11.97	21.	6.	3.	.97
+	HYDROGRAPH AT	D320	965.	12.20	109.	28.	14.	.97

+	HYDROGRAPH AT	RT320	377.	11.97	21.	6.	3.	.97
+	ROUTED TO	SR320	4.	4.13	4.	4.	3.	.97
+	4 COMBINED AT	C320	2601.	12.33	516.	240.	162.	3.47
+	HYDROGRAPH AT	340	1056.	12.20	143.	43.	21.	1.02
+	DIVERSION TO	BS340	1056.	12.20	71.	20.	9.	1.02
+	HYDROGRAPH AT	D340	945.	12.30	85.	23.	11.	1.02
+	HYDROGRAPH AT	RT340	1056.	12.20	71.	20.	9.	1.02
+	ROUTED TO	SR340	13.	8.37	13.	13.	9.	1.02
+	3 COMBINED AT	C340	3515.	12.30	609.	275.	183.	4.50
+	HYDROGRAPH AT	360	283.	12.20	45.	14.	7.	.31
+	DIVERSION TO	BS360	283.	12.20	29.	8.	4.	.31
+	HYDROGRAPH AT	D360	173.	12.53	20.	6.	3.	.31
+	HYDROGRAPH AT	RT360	283.	12.20	29.	8.	4.	.31
+	ROUTED TO	SR360	5.	8.80	5.	5.	4.	.31
+	3 COMBINED AT	360C	3517.	12.30	632.	286.	189.	4.81
+	HYDROGRAPH AT	380	321.	12.13	32.	9.	5.	.27
+	DIVERSION TO	BS380	276.	12.07	13.	4.	2.	.27
+	HYDROGRAPH AT	D380	321.	12.13	21.	6.	3.	.27
+	HYDROGRAPH AT	RT380	276.	12.07	13.	4.	2.	.27
+	ROUTED TO	SR380	2.	8.20	2.	2.	2.	.27
+	3 COMBINED AT	380C	3718.	12.30	654.	293.	193.	5.08
+	HYDROGRAPH AT	400	58.	12.10	4.	1.	1.	.05
+	DIVERSION TO	BS400	58.	12.10	3.	1.	0.	.05
+	HYDROGRAPH AT	D400	21.	12.33	1.	0.	0.	.05
+	HYDROGRAPH AT	RT400	58.	12.10	3.	1.	0.	.05
+	ROUTED TO	SR400	1.	11.87	1.	1.	0.	.05
+	2 COMBINED AT	C400	22.	12.33	2.	1.	1.	.05
+	2 COMBINED AT	400C	3719.	12.30	655.	294.	194.	5.13
+	HYDROGRAPH AT	RT350	715.	12.20	62.	16.	8.	.97
+	ROUTED TO	RR350	630.	12.43	62.	16.	8.	.97
+	HYDROGRAPH AT	355	500.	12.33	69.	18.	9.	.66
+	2 COMBINED AT	C355	1080.	12.40	130.	34.	16.	1.24
+	ROUTED TO	R355	1013.	12.60	130.	34.	16.	1.24
+	HYDROGRAPH AT	361	499.	12.10	49.	15.	7.	.36

+	DIVERSION TO	BS361	475.	12.07	23.	7.	3.	.36
+	HYDROGRAPH AT	D361	486.	12.13	30.	8.	4.	.36
+	HYDROGRAPH AT	RT361	475.	12.07	23.	7.	3.	.36
+	ROUTED TO	SR361	4.	8.30	4.	4.	3.	.36
+	3 COMBINED AT	361C	1101.	12.57	162.	46.	23.	1.60
+	HYDROGRAPH AT	342	420.	12.07	36.	10.	5.	.30
+	DIVERSION TO	BS3421	358.	12.00	15.	4.	2.	.30
+	HYDROGRAPH AT	D3421	418.	12.10	23.	6.	3.	.30
+	HYDROGRAPH AT	RT3421	358.	12.00	15.	4.	2.	.30
+	ROUTED TO	SR3421	3.	8.57	3.	3.	2.	.30
+	2 COMBINED AT	C342	420.	12.10	26.	9.	5.	.30
+	DIVERSION TO	BS3422	400.	12.10	17.	4.	2.	.30
+	HYDROGRAPH AT	D3422	20.	12.07	9.	5.	3.	.30
+	HYDROGRAPH AT	RT3422	400.	12.10	17.	4.	2.	.30
+	ROUTED TO	SR3422	5.	12.07	5.	4.	2.	.30
+	2 COMBINED AT	CC342	25.	12.07	14.	9.	5.	.30
+	ROUTED TO	R342	25.	12.33	14.	9.	5.	.30
+	HYDROGRAPH AT	341	284.	12.13	35.	11.	5.	.23
+	DIVERSION TO	BS341	246.	12.03	15.	4.	2.	.23
+	HYDROGRAPH AT	D341	284.	12.13	25.	7.	3.	.23
+	HYDROGRAPH AT	RT341	246.	12.03	15.	4.	2.	.23
+	ROUTED TO	SR341	3.	4.57	3.	3.	2.	.23
+	3 COMBINED AT	C341	290.	12.13	41.	18.	10.	.53
+	ROUTED TO	RR341	267.	12.60	41.	18.	10.	.53
+	2 COMBINED AT	361CC	1351.	12.60	201.	63.	33.	2.13
+	DIVERSION TO	BS3612	951.	12.60	79.	20.	9.	2.13
+	HYDROGRAPH AT	D3612	400.	12.13	122.	44.	24.	2.13
+	HYDROGRAPH AT	RT3612	951.	12.60	79.	20.	9.	2.13
+	ROUTED TO	SR3612	17.	12.13	17.	17.	9.	2.13
+	2 COMBINED AT	C3612	417.	12.13	139.	60.	33.	2.13
+	ROUTED TO	RR361	417.	12.43	138.	60.	33.	2.13
+	HYDROGRAPH AT	370	588.	12.30	79.	21.	10.	.67
+	HYDROGRAPH AT	395	182.	12.23	25.	7.	3.	.20
+	2 COMBINED AT	370C	758.	12.30	103.	28.	13.	.87

+	ROUTED TO	R370	673.	12.60	103.	28.	13.	.87
+	HYDROGRAPH AT	381	749.	12.17	84.	24.	11.	.73
+	DIVERSION TO	BS381	749.	12.17	41.	11.	5.	.73
+	HYDROGRAPH AT	D381	658.	12.27	48.	13.	6.	.73
+	HYDROGRAPH AT	RT381	749.	12.17	41.	11.	5.	.73
+	ROUTED TO	SR381	7.	9.87	7.	7.	5.	.73
+	4 COMBINED AT	381C	1331.	12.57	291.	105.	57.	3.72
+	ROUTED TO	RR381	1295.	12.73	290.	105.	57.	3.72
+	HYDROGRAPH AT	390	463.	12.03	33.	10.	5.	.24
+	DIVERSION TO	BS390	95.	11.73	6.	2.	1.	.24
+	HYDROGRAPH AT	D390	463.	12.03	30.	8.	4.	.24
+	HYDROGRAPH AT	RT390	95.	11.73	6.	2.	1.	.24
+	ROUTED TO	SR390	1.	.90	1.	1.	1.	.24
+	2 COMBINED AT	390C	464.	12.03	31.	9.	5.	.24
+	ROUTED TO	RR390	324.	12.50	31.	9.	5.	.24
+	HYDROGRAPH AT	401	448.	12.23	67.	19.	9.	.61
+	DIVERSION TO	BS401	44.	11.80	6.	2.	1.	.61
+	HYDROGRAPH AT	D401	448.	12.23	65.	17.	8.	.61
+	HYDROGRAPH AT	RT401	44.	11.80	6.	2.	1.	.61
+	ROUTED TO	SR401	1.	.93	1.	1.	1.	.61
+	5 COMBINED AT	C401	4995.	12.37	1027.	422.	262.	9.70
+	HYDROGRAPH AT	385	782.	12.23	87.	24.	12.	.65
+	DIVERSION TO	SF385	195.	12.23	22.	6.	3.	.65
+	HYDROGRAPH AT	D385	586.	12.23	65.	18.	9.	.65
+	ROUTED TO	385R	475.	12.70	65.	18.	9.	.65
+	HYDROGRAPH AT	420	752.	12.20	92.	26.	12.	.85
+	DIVERSION TO	BS420	269.	11.97	15.	4.	2.	.85
+	HYDROGRAPH AT	D420	752.	12.20	83.	22.	10.	.85
+	HYDROGRAPH AT	RT420	269.	11.97	15.	4.	2.	.85
+	ROUTED TO	SR420	13.	11.03	12.	4.	2.	.85
+	4 COMBINED AT	420C	5747.	12.37	1169.	459.	281.	10.87
+	HYDROGRAPH AT	440	180.	12.03	12.	3.	2.	.08
+	ROUTED TO	R70	176.	12.07	12.	3.	2.	.08
+	HYDROGRAPH AT	441	16.	12.03	1.	0.	0.	.01

+	2 COMBINED AT	C108	191.	12.07	14.	4.	2.	.09
+	DIVERSION TO	SPLIT	96.	12.07	7.	2.	1.	.09
+	HYDROGRAPH AT	DIV4	96.	12.07	7.	2.	1.	.09
+	ROUTED TO	R108	88.	12.13	7.	2.	1.	.09
+	HYDROGRAPH AT	442	102.	12.10	9.	2.	1.	.10
+	2 COMBINED AT	C67	187.	12.10	15.	4.	2.	.19
+	DIVERSION TO	BASIN4	115.	12.10	6.	1.	1.	.19
+	HYDROGRAPH AT	DIV6	72.	12.10	10.	3.	1.	.19
+	HYDROGRAPH AT	RTDIV6	115.	12.10	6.	1.	1.	.19
+	ROUTED TO	RFDIV6	1.	11.90	1.	1.	1.	.19
+	2 COMBINED AT	CDIV6	74.	12.10	10.	4.	2.	.19
+	HYDROGRAPH AT	443	148.	12.07	14.	4.	2.	.08
+	DIVERSION TO	WSH66	78.	11.90	12.	3.	2.	.08
+	HYDROGRAPH AT	DIV66	70.	12.07	3.	1.	0.	.08
+	ROUTED TO	R113	69.	12.07	3.	1.	0.	.08
+	2 COMBINED AT	C114	140.	12.07	13.	4.	2.	.27
+	HYDROGRAPH AT	444	82.	12.03	5.	1.	1.	.04
+	ROUTED TO	R58	75.	12.07	5.	1.	1.	.04
+	HYDROGRAPH AT	445	296.	12.03	18.	5.	2.	.19
+	2 COMBINED AT	C107	365.	12.03	22.	6.	3.	.23
+	ROUTED TO	R107	365.	12.07	22.	6.	3.	.23
+	HYDROGRAPH AT	RTB2	96.	12.07	7.	2.	1.	.09
+	ROUTED TO	RSPLIT	95.	12.07	7.	2.	1.	.09
+	HYDROGRAPH AT	446	65.	12.03	6.	2.	1.	.04
+	3 COMBINED AT	C109	520.	12.07	35.	9.	4.	.27
+	DIVERSION TO	WSH404	35.	11.73	8.	2.	1.	.27
+	HYDROGRAPH AT	DIV5	485.	12.07	27.	7.	3.	.27
+	ROUTED TO	R109	469.	12.10	27.	7.	3.	.27
+	HYDROGRAPH AT	447	138.	12.07	12.	4.	2.	.09
+	HYDROGRAPH AT	RT404	35.	11.73	8.	2.	1.	.27
+	ROUTED TO	R404	35.	11.90	8.	2.	1.	.27
+	3 COMBINED AT	C110	635.	12.07	46.	13.	6.	.36
+	ROUTED TO	R110	632.	12.10	46.	13.	6.	.36
+	2 COMBINED AT	C115	764.	12.10	59.	17.	8.	.63

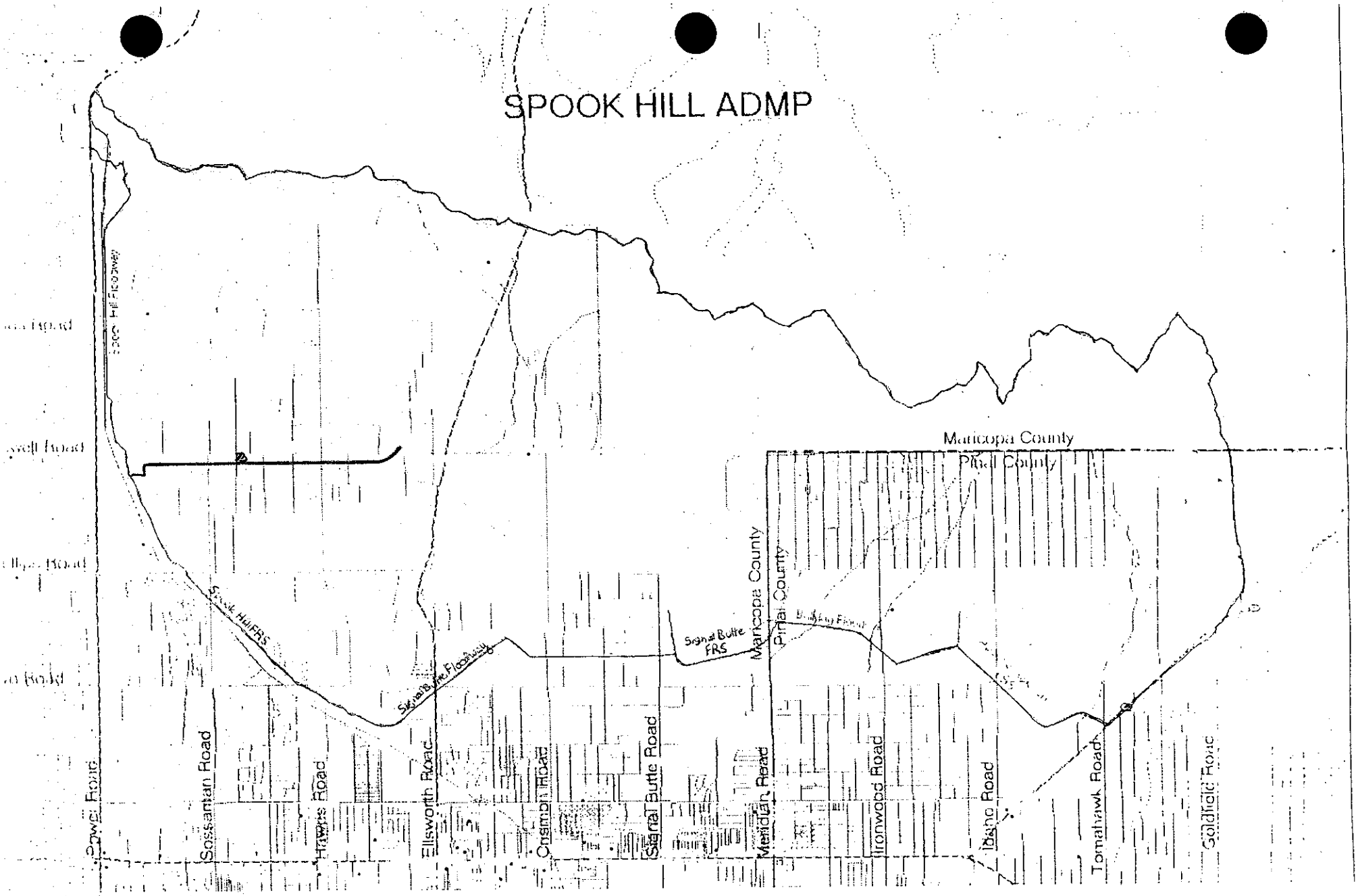
+	ROUTED TO	R115	767.	12.10	59.	17.	8.	.63
+	HYDROGRAPH AT	448	88.	12.03	6.	2.	1.	.05
+	HYDROGRAPH AT	449	80.	12.03	5.	1.	1.	.05
+	2 COMBINED AT	C6364	166.	12.03	11.	3.	1.	.09
+	ROUTED TO	R6364	137.	12.17	11.	3.	1.	.09
+	HYDROGRAPH AT	450	61.	12.20	6.	2.	1.	.07
+	HYDROGRAPH AT	451	18.	12.17	2.	1.	0.	.03
+	HYDROGRAPH AT	RT66	78.	11.90	12.	3.	2.	.08
+	HYDROGRAPH AT	452	62.	12.03	4.	1.	1.	.04
+	2 COMBINED AT	C6465	140.	12.03	16.	4.	2.	.04
+	ROUTED TO	R6566	135.	12.10	16.	4.	2.	.04
+	4 COMBINED AT	C116	341.	12.17	35.	9.	4.	.23
+	ROUTED TO	BASIN5	152.	12.47	35.	9.	4.	.23
+	ROUTED TO	R116	150.	12.53	35.	9.	4.	.23
+	HYDROGRAPH AT	453	62.	12.10	7.	2.	1.	.06
+	2 COMBINED AT	C117	169.	12.50	41.	11.	5.	.29
+	2 COMBINED AT	C118	852.	12.10	99.	28.	14.	.92
+	ROUTED TO	R118	842.	12.10	99.	28.	14.	.92
+	DIVERSION TO	BASIN6	243.	12.10	10.	2.	1.	.92
+	HYDROGRAPH AT	DIV7	599.	12.10	89.	25.	13.	.92
+	HYDROGRAPH AT	RTDIV7	243.	12.10	10.	2.	1.	.92
+	ROUTED TO	RFDIV7	1.	11.97	1.	1.	1.	.92
+	2 COMBINED AT	CDIV7	600.	12.10	90.	26.	13.	.92
+	HYDROGRAPH AT	454	157.	12.17	21.	6.	3.	.18
+	2 COMBINED AT	C119	748.	12.13	110.	32.	16.	1.10
+	ROUTED TO	R454	722.	12.20	110.	32.	16.	1.10
+	HYDROGRAPH AT	415	412.	12.17	55.	16.	7.	.45
+	HYDROGRAPH AT	RT385	195.	12.23	22.	6.	3.	.65
+	ROUTED TO	RR385	177.	12.40	22.	6.	3.	.65
+	3 COMBINED AT	415C	1193.	12.20	184.	53.	26.	1.71
+	ROUTED TO	R415	1179.	12.27	184.	53.	26.	1.71
+	HYDROGRAPH AT	455	1346.	12.13	142.	43.	21.	1.11
+	DIVERSION TO	BS455	1346.	12.13	137.	37.	18.	1.11
+	HYDROGRAPH AT	D455	55.	12.77	16.	6.	3.	1.11

+	HYDROGRAPH AT	RT455	1346.	12.13	137.	37.	18.	1.11
+	ROUTED TO	SR455	25.	10.47	25.	25.	18.	1.11
+	2 COMBINED AT	C455	80.	12.77	41.	31.	21.	1.11
+	3 COMBINED AT	455C	6756.	12.33	1358.	531.	324.	13.69
+	ROUTED TO	SR440	807.	13.83	792.	531.	323.	13.69
+	ROUTED TO	RR455	807.	14.17	792.	531.	321.	13.69
+	HYDROGRAPH AT	456	468.	12.07	35.	10.	5.	.26
+	DIVERSION TO	BASIN1	184.	12.07	8.	2.	1.	.26
+	HYDROGRAPH AT	DIV1	284.	12.07	27.	8.	4.	.26
+	DIVERSION TO	WA30	58.	12.07	10.	3.	2.	.26
+	HYDROGRAPH AT	DIV2	226.	12.07	18.	4.	2.	.26
+	ROUTED TO	R456	213.	12.13	18.	4.	2.	.26
+	HYDROGRAPH AT	457	264.	12.07	20.	5.	3.	.19
+	2 COMBINED AT	C101	462.	12.10	38.	10.	5.	.45
+	DIVERSION TO	BASIN2	165.	12.10	7.	2.	1.	.45
+	HYDROGRAPH AT	DIV3	297.	12.10	30.	8.	4.	.45
+	HYDROGRAPH AT	RTDIV3	165.	12.10	7.	2.	1.	.45
+	ROUTED TO	RFDIV3	2.	11.90	2.	2.	1.	.45
+	2 COMBINED AT	CDIV3	299.	12.10	32.	9.	5.	.45
+	ROUTED TO	R101	297.	12.10	32.	9.	5.	.45
+	HYDROGRAPH AT	458	356.	12.03	25.	7.	3.	.19
+	2 COMBINED AT	C103	635.	12.07	56.	16.	8.	.64
+	ROUTED TO	R103	630.	12.07	56.	16.	8.	.64
+	HYDROGRAPH AT	RT30	58.	12.07	10.	3.	2.	.26
+	ROUTED TO	R30	57.	12.10	10.	3.	2.	.26
+	HYDROGRAPH AT	RTB1	184.	12.07	8.	2.	1.	.26
+	ROUTED TO	B1	37.	12.23	8.	2.	1.	.26
+	ROUTED TO	RB1	37.	12.30	8.	2.	1.	.26
+	2 COMBINED AT	CDIV	86.	12.20	17.	5.	3.	.12
+	HYDROGRAPH AT	459	44.	12.03	3.	1.	0.	.03
+	2 COMBINED AT	C52	113.	12.10	20.	6.	3.	.15
+	ROUTED TO	R52	112.	12.17	20.	6.	3.	.15
+	HYDROGRAPH AT	460	214.	12.07	19.	6.	3.	.14
+	2 COMBINED AT	C102	313.	12.07	39.	12.	6.	.29

+	ROUTED TO	BASIN3	71.	12.63	39.	12.	6.	.29
+	ROUTED TO	R3	71.	12.77	39.	12.	6.	.29
+	HYDROGRAPH AT	461	161.	12.10	17.	5.	2.	.12
+	2 COMBINED AT	C104	213.	12.10	55.	17.	8.	.41
+	2 COMBINED AT	C106	835.	12.07	110.	32.	16.	1.05
+	ROUTED TO	R106	797.	12.13	110.	32.	16.	1.05
+	HYDROGRAPH AT	462	538.	12.07	40.	11.	5.	.30
+	2 COMBINED AT	C56	1254.	12.10	149.	42.	21.	1.35
+	HYDROGRAPH AT	480	1050.	12.10	96.	29.	14.	.73
+	DIVERSION TO	BS480	455.	11.90	27.	8.	4.	.73
+	HYDROGRAPH AT	D480	1050.	12.10	78.	21.	10.	.73
+	HYDROGRAPH AT	RT480	455.	11.90	27.	8.	4.	.73
+	ROUTED TO	SR480	6.	3.90	6.	6.	4.	.73
+	2 COMBINED AT	C480	1056.	12.10	84.	27.	14.	.73
+	3 COMBINED AT	480C	2511.	12.10	969.	613.	365.	2.09
+	ROUTED TO	RR480	2348.	12.13	967.	613.	365.	2.09
+	HYDROGRAPH AT	500	1073.	12.27	122.	33.	16.	.93
+	2 COMBINED AT	500C	3238.	12.20	1077.	641.	379.	3.02

*** NORMAL END OF HEC-1 ***

SPOOK HILL ADMP



HEC-1 Existing Condition 100-Year, 24-Hour Storm. Model update based on improved channel along Culver street extending from Spook Hill FRS upstream along Culver street then turning North and ending at McDowell road near Ravens Roost. This will sub-divide existing Sub-Basins 380, 400, and 420 creating additional Sub-Basins 378, 398, 405, and 410.

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1****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*             JUN   1998               *
*           VERSION 4.1                *
*                                      *
*  RUN DATE   12JUN00  TIME  09:55:58  *
*                                      *
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*                                      *
*    U.S. ARMY CORPS OF ENGINEERS      *
*    HYDROLOGIC ENGINEERING CENTER     *
*          609 SECOND STREET           *
*       DAVIS, CALIFORNIA 95616        *
*           (916) 756-1104             *
*                                      *
****************************************
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X     X  XXXXXXX   XXXXX           X
X     X  X        X     X         XX
X     X  X        X                X
XXXXXXX  XXXX     X        XXXXX   X
X     X  X        X                X
X     X  X        X     X          X
X     X  XXXXXXX   XXXXX          XXX
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THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

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1                                   HEC-1 INPUT                                                    PAGE  1

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  1           ID   EXISTING LAND USE CALCULATIONS WERE BASED ON 1 YR. FROM 11/5/99
  2           ID   FOR LAS SENDAS       AND LANDISCOR JAN.1999 AERIAL PHOTOGRAPHS
  3           ID
  4           ID   ALL DAMS WERE ANALYZED WITH NO STORAGE BELOW PRINCIPLE SPILLWAY ELEVATIONS
  5           ID
  6           ID   A CONSERVATIVE ESTIMATE WAS USED FOR THE LOCATION OF THE CENTROID FOR
  7           ID   PRECIPITATION VALUES
  8           ID
  9           ID   ALL CHANNEL ROUTING INFORMATION WAS OBTAINED FROM MCFCD SPOOK HILL   SIGNAL
 10           ID   BUTTE        AND BULLDOG FLOODWAY PLANS
 11           ID
 12           ID
 13           ID   MODEL UPDATE BASED ON IMPROVED CHANNEL ALONG CULVER STREET.
 14           ID   TURNING NORTH AND ENDING AT MCDOWELL ROAD NEAR RAVENS ROOST  THIS CREATES
 15           ID   NEW SUB-BASINS:  378, 398, 405 AND 410;  FROM SUB-BASINS 380, 400, AND 420.
 16           ID   ANALYSIS PERFORMED BY WOOD/PATEL; MW;  ON 05/25/2000;  FILE: S24CE16.DAT
 17           ID
 18           ID   DDM MCUHP1 SPOOK HILL AMDP - EXISTING CONDITIONS MODEL - 100YR, 24HR STORM
              *DIAGRAM
 19           IT       2                    1500
 20           IO       3
 21           IN      15
 22           JD    3.81    0.01
 23           PC    .000    .002    .005    .008    .011    .014    .017    .020    .023    .026
 24           PC    .029    .032    .035    .038    .041    .044    .048    .052    .056    .060
 25           PC    .064    .068    .072    .076    .080    .085    .090    .095    .100    .105
 26           PC    .110    .115    .120    .126    .133    .140    .147    .155    .163    .172
 27           PC    .181    .191    .203    .218    .236    .257    .283    .387    .663    .707
 28           PC    .735    .758    .776    .791    .804    .815    .825    .834    .842    .849
 29           PC    .856    .863    .869    .875    .881    .887    .893    .898    .903    .908
 30           PC    .913    .918    .922    .926    .930    .934    .938    .942    .946    .950
 31           PC    .953    .956    .959    .962    .965    .968    .971    .974    .977    .980
 32           PC    .983    .986    .989    .992    .995    .998   1.000
 33           JD    3.58   10.00
 34           JD    3.43   30.00
 35           JD    3.28   60.00
 36           JD    3.22   90.00
 37           JD    3.18  120.00
 38           JD    3.14  150.00
 39           JD    3.05  300.00
 40           JD    2.97  500.00
              * DDM   ***** Updated *****

 41           KK      10
 42           KM   SUB-BASIN 10
 43           KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 44           KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
 45           KM     L = 2.00  Kb = .044  Adj. Slope =  165.0
 46           BA    .702
 47           LG    .350    .320   7.600    .090  15.000
 48           UC    .421    .302
 49           UA       0       3       5       8      12      20      43      75      90      96
 50           UA     100
              * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                                    PAGE  2

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 51           KK     R10
 52           KM   ROUTING OF FLOW FROM SUB-BASIN 10 TO R12
 53           RS       4    FLOW      -1
 54           RC    .045     .03    .045    8700    .021
 55           RX       0       1       2      17      27      42      43      44
 56           RY       5       5       5       0       0       5       5       5
              * DDM   ***** Preserved *****

 57           KK     R12
 58           KM   ROUTING OF FLOW FROM R12 TO SUB-BASIN 20
 59           RS       6    FLOW      -1
 60           RC    .045     .03    .045    4500     .01
 61           RX       0       1      30    37.5    57.5      65      94      95
 62           RY       3     2.5     2.5       0       0     2.5     2.5       3
              * DDM   ***** Updated *****
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 63          KK      20
 64          KM   SUB-BASIN 20
 65          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 66          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
 67          KM     L = 2.50  Kb = .041  Adj. Slope =   88.0
 68          BA   1.120
 69          LG    .350    .390   5.800    .190   1.000
 70          UC    .658    .454
 71          UA       0       3       5       8      12      20      43      75      90      96
 72          UA     100
             * DDM   ***** Preserved *****

 73          KK     C20
 74          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 10 AND 20
 75          HC       2
             * DDM   ***** Updated *****

 76          KK      40
 77          KM   SUB-BASIN 40
 78          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 79          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
 80          KM     L = 3.08  Kb = .036  Adj. Slope =  189.0
 81          BA   2.233
 82          LG    .340    .340   4.900    .280   5.000
 83          UC    .496    .264
 84          UA       0       3       5       8      12      20      43      75      90      96
 85          UA     100
             * DDM   ***** Updated *****

 86          KK      60
 87          KM   SUB-BASIN 60
 88          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 89          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .990
 90          KM     L = 4.19  Kb = .038  Adj. Slope =  209.6
 91          BA   1.746
 92          LG    .330    .350   5.800    .190   9.000
 93          UC    .596    .477
 94          UA       0       3       5       8      12      20      43      75      90      96
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 95          UA     100
             * DDM   ***** Preserved *****

 96          KK     60C
 97          KM   HYDROGRAPH COMBINATION FOR APACHE JUNCTION FRS
             *      1       2
 98          HC       3
             * DDM   ***** Preserved *****

 99          KK    SR60
100          KM   APACHE JUNCTION FRS AS-BUILT PLANS 12/19/88
101          KM   OUTLET PIPE=30"RCP; L=136.6'; INLET INV.=1783.5; OUTLET INV.=1783
102          KM   EMERGENCY SPILLWAY ELEV.=1799.77'; PRINCIPLE SPILLWAY ELEV.=1793.5'
103          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 100 ACRE-FEET
104          RS       1    STOR       0
105          SV       0       1     100     200     300     400
106          SQ       0      71      81      87    91.5      94
107          SE    83.5    93.5      96    97.7      99   99.77
             * DDM   ***** Preserved *****

108          KK     R60
109          KM        ROUTE FLOW THROUGH BULLDOG FLOODWAY FROM APACHE JUNCTION FRS
110          RS       1    FLOW      -1
111          RC    .016    .016    .016    2850    .012
112          RX       0       1       2     2.1     5.6     5.7       6       7
113          RY     3.5     3.5     3.5       0       0     3.5     3.5     3.5
             * DDM   ***** Preserved *****

114          KK    RR60
115          KM   ROUTE FLOW FROM BULLDOG FLOODWAY TO SUB-BASIN 80
116          RS       4    FLOW      -1
117          RC    .016    .016    .016    3500    .005
118          RX       0       1       2     2.1     7.1     7.2       8       9
119          RY     3.5     3.5     3.5       0       0     3.5     3.5     3.5
             * DDM   ***** Updated *****

120          KK      80
121          KM   SUB-BASIN 80
122          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
123          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .991
124          KM     L = 2.69  Kb = .039  Adj. Slope =  229.8
125          BA   1.475
126          LG    .330    .330   5.600    .210   4.000
127          UC    .433    .259
128          UA       0       3       5       8      12      20      43      75      90      96
129          UA     100
             * DDM   ***** Preserved *****

130          KK     80C
131          KM   HYDROGRAPH COMBINATION FOR FLOW FROM APACHE JUNCTION FRS & SUB-BASIN 80
132          HC       2   1.475
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

133          KK     R80
134          KM   ROUTE FLOW FROM SUB-BASIN 80 TO SUB-BASIN 100
135          RS       1    FLOW      -1
136          RC    .025    .016    .025    1200    .003
137          RX       0       2       6     6.1    41.1    41.2    56.2    58.2
138          RY     5.5     4.5     4.5       0       0     4.5     4.5     5.5
             * DDM   ***** Updated *****

139          KK     100
140          KM   SUB-BASIN 100
141          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
142          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
143          KM     L = 1.94  Kb = .046  Adj. Slope =  108.0
144          BA    .484
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145          LG    .320    .290   5.100    .260   3.000
146          UC    .533    .473
147          UA       0       5      16      30      65      77      84      90      94      97
148          UA     100
             * DDM   ***** Preserved *****

149          KK    100C
150          KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 80 & 100
151          HC       2
             * DDM   ***** Preserved *****

152          KK    R100
153          KM   ROUTE FLOW FROM SUB-BASIN 100 TO SUB-BASIN 120
154          RS       1    FLOW      -1
155          RC    .016    .016    .016     940    .005
156          RX       0       1       2     2.1    52.1    52.2      53      54
157          RY     4.5     4.5     4.5       0       0     4.5     4.5     4.5
             * DDM   ***** Updated *****

158          KK     120
159          KM   SUB-BASIN 120
160          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
161          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
162          KM     L = 3.07  Kb = .037  Adj. Slope =  239.0
163          BA   2.202
164          LG    .330    .280   6.800    .130  11.000
165          UC    .429    .226
166          UA       0       3       5       8      12      20      43      75      90      96
167          UA     100
             * DDM   ***** Preserved *****

168          KK    120C
169          KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 100 & 120
170          HC       2
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

171          KK    R120
172          KM   ROUTE FLOW FROM SUB-BASIN 120 TO SIGNAL BUTTE FRS
173          RS       1    FLOW      -1
174          RC    .025    .016    .025    2100    .005
175          RX       0       6      10    10.1    60.1    60.2    74.2    80.2
176          RY       8       5       5       0       0       5       5       8
             * DDM   ***** Updated *****

177          KK     140
178          KM   SUB-BASIN 140
179          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
180          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
181          KM     L = 1.61  Kb = .044  Adj. Slope =  149.0
182          BA    .598
183          LG    .310    .280   4.200    .440   5.000
184          UC    .421    .278
185          UA       0       5      16      30      65      77      84      90      94      97
186          UA     100
             * DDM   ***** Updated *****

187          KK     150
188          KM   SUB-BASIN 150
189          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
190          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
191          KM     L = 1.50  Kb = .047  Adj. Slope =  315.0
192          BA    .408
193          LG    .350    .360   5.100    .260   7.000
194          UC   1.579   1.417
195          UA       0       3       5       8      12      20      43      75      90      96
196          UA     100
             * DDM   ***** Preserved *****

197          KK    R150
198          KM   ROUTING OF FLOW FROM SUB-BASIN 150 TO R152
199          RS       3    FLOW      -1
200          RC    .045     .04    .045    3100    .032
201          RX       0       1       2      23      33      54      55      56
202          RY       7       7       7       0       0       7       7       7
             * DDM   ***** Preserved *****

203          KK    R152
204          KM   ROUTING OF FLOW FROM R152 TO SUB-BASIN 160
205          RS       6    FLOW      -1
206          RC    .045     .03    .045    5900    .019
207          RX       0       1       2       8      33      39      40      41
208          RY       2       2       2       0       0       2       2       2
             * DDM   ***** Updated *****

209          KK     160
210          KM   SUB-BASIN 160
211          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
212          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
213          KM     L = 2.10  Kb = .047  Adj. Slope =  129.0
214          BA    .369
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

215          LG    .340    .330   4.150    .440   1.000
216          UC    .587    .655
217          UA       0       3       5       8      12      20      43      75      90      96
218          UA     100
             * DDM   ***** Updated *****

219          KK     180
220          KM   SUB-BASIN 180
221          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
222          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
223          KM     L = 2.42  Kb = .041  Adj. Slope =  140.0
224          BA   1.000
225          LG    .350    .350   4.150    .430    .000
226          UC    .571    .403
227          UA       0       3       5       8      12      20      43      75      90      96
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228          UA     100
             * DDM   ***** Preserved *****

229          KK    180C
230          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
231          HC       5
             * DDM   ***** Updated *****

232          KK     210
233          KM   SUB-BASIN 210
234          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
235          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
236          KM     L = 1.84  Kb = .045  Adj. Slope =  315.0
237          BA    .583
238          LG    .350    .350   7.000    .120   5.000
239          UC    .321    .232
240          UA       0       3       5       8      12      20      43      75      90      96
241          UA     100
             * DDM   ***** Preserved *****

242          KK    R210
243          KM   ROUTING OF FLOW FROM SUB-BASIN 210 TO SUB-BASIN 220
244          RS       2    FLOW      -1
245          RC    .045     .03    .045    5100    .022
246          RX       0       1       2      14      34      46      47      48
247          RY       4       4       4       0       0       4       4       4
             * DDM   ***** Updated *****

248          KK     240
249          KM   SUB-BASIN 240
250          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
251          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .992
252          KM     L = 3.50  Kb = .039  Adj. Slope =  298.6
253          BA   1.398
254          LG    .350    .370   5.200    .240   2.000
255          UC    .471    .361
256          UA       0       3       5       8      12      20      43      75      90      96
257          UA     100
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

258          KK    240C
259          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
260          HC       2
             * DDM   ***** Preserved *****

261          KK   SR240
262          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
263          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
264          RS       1    STOR       0
265          SA    1.38    14.2    36.5
266          SE     1.7       5      11
267          SS       5      42       3     1.5
             * DDM   ***** Updated *****

268          KK     220
269          KM   SUB-BASIN 220
270          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
271          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
272          KM     L = 1.92  Kb = .043  Adj. Slope =  315.0
273          BA    .725
274          LG    .350    .350   7.000    .120   4.000
275          UC    .317    .209
276          UA       0       3       5       8      12      20      43      75      90      96
277          UA     100
             * DDM   ***** Preserved *****

278          KK    220C
279          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
280          HC       2
             * DDM   ***** Preserved *****

281          KK   SR220
282          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
283          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
284          RS       1    STOR       0
285          SA     .78     4.1    13.7
286          SE       1       3      10
287          SS       3      65       3     1.5
             * DDM   ***** Updated *****

288          KK     190
289          KM   SUB-BASIN 190
290          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
291          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
292          KM     L = 1.91  Kb = .042  Adj. Slope =  315.0
293          BA    .918
294          LG    .350    .390   5.800    .190   8.000
295          UC    .321    .185
296          UA       0       3       5       8      12      20      43      75      90      96
297          UA     100
             * DDM   ***** Preserved *****
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1 HEC-1 INPUT PAGE 8

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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

298          KK    R190
299          KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
300          RS       2    FLOW      -1
301          RC    .045     .03    .045    4740     .03
302          RX       0       1       2      17      37      52      53      54
303          RY       5       5       5       0       0       5       5       5
             * DDM   ***** Preserved *****

304          KK    R192
305          KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
306          RS       2    FLOW      -1
307          RC    .045    .035    .045    2200    .018
308          RX       0       1      50      59      79      88     137     138
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309          RY     3.5       3       3       0       0       3       3     3.5
             * DDM   ***** Updated *****

310          KK     200
311          KM   SUB-BASIN 200
312          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
313          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
314          KM     L = 1.58  Kb = .045  Adj. Slope =  305.6
315          BA    .535
316          LG    .350    .390   5.700    .200  10.000
317          UC    .300    .200
318          UA       0       3       5       8      12      20      43      75      90      96
319          UA     100
             * DDM   ***** Preserved *****

320          KK    200C
321          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 220 & 200
322          HC       3
             * DDM   ***** Preserved *****

323          KK   SR200
324          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
325          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
326          RS       1    STOR       0
327          SA    2.56     3.1     9.4
328          SE       0       3      10
329          SS       3     112       3     1.5
             * DDM   ***** Preserved *****

330          KK   200SR
331          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
332          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
333          RS       1    STOR       0
334          SA       8     9.2     9.2
335          SE       0       7      10
336          SS       7     251       3     1.5
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                                    PAGE  9

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

337          KK    C180
338          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
             *      1       2
339          HC       2
             * DDM   ***** Preserved *****

340          KK   SR180
341          KM   SIGNAL BUTTE FRS DATED 1/28/85
342          KM   OUTLET PIPE=36"RCP; L= 147';  INLET INV.=1690; OUTLET INV.=1687
343          KM   EMERGENCY SPILLWAY ELEV.=1712.4; PRINCIPLE SPILLWAY ELEV.=1701
344          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 250 ACRE-FEET
345          RS       1    STOR       0
346          SV       0       1     250     500     750    1060
347          SQ       0   106.5   125.5   137.5     146     160
348          SE      90     101   104.5     107     109   112.4
             * DDM   ***** Preserved *****

349          KK    R180
350          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
351          KM   ROUTE FLOW FROM SIGNAL BUTTE FRS TO SUB-BASIN 260
352          RS       3    FLOW      -1
353          RC    .035    .025    .035    1500    .003
354          RX       0       1       2    22.6    38.6    59.2      60      61
355          RY     9.3     9.3     9.3       0       0     9.3     9.3     9.3
             * DDM   ***** Updated *****

356          KK     260
357          KM   SUB-BASIN 260
358          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
359          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
360          KM     L =  .81  Kb = .049  Adj. Slope =   68.0
361          BA    .267
362          LG    .300    .170   6.800    .160  15.000
363          UC    .363    .215
364          UA       0       5      16      30      65      77      84      90      94      97
365          UA     100
             * DDM   ***** Preserved *****

366          KK    260C
367          KM   HYDROGRAPH COMBINATION FOR OUTFLOW OF SIGNAL BUTTE FRS & SUB-BASIN 260
368          HC       2    .267
             * DDM   ***** Preserved *****

369          KK    R260
370          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
371          KM   ROUTE FLOW FROM SUB-BASIN 260 TO SUB-BASIN 280
372          RS       3    FLOW      -1
373          RC    .035    .025    .035    2300    .003
374          RX       0       1       2    23.4    43.4    64.8      65      66
375          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Updated *****
1                                    HEC-1 INPUT                                                    PAGE 10

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

376          KK     280
377          KM   SUB-BASIN 280
378          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
379          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
380          KM     L =  .77  Kb = .049  Adj. Slope =   84.0
381          BA    .304
382          LG    .300    .250   5.300    .290  15.000
383          UC    .333    .175
384          UA       0       5      16      30      65      77      84      90      94      97
385          UA     100
             * DDM   ***** Preserved *****

386          KK    280C
387          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 260 & SUB-BASIN 280
388          HC       2
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          * DDM   ***** Preserved *****

389       KK    R280
390       KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
391       KM   ROUTE FLOW FROM SUB-BASIN 280 TO SUB-BASIN 300
392       RS       2    FLOW      -1
393       RC    .035    .025    .035    2500    .003
394       RX       0       1       2    23.4    43.4    64.8      65      66
395       RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
          * DDM   ***** Updated *****

396       KK     300
397       KM   SUB-BASIN 300
398       KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
399       KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
400       KM     L = 2.28  Kb = .041  Adj. Slope =  127.0
401       BA    .988
402       LG    .340    .320   4.500    .370   7.000
403       UC    .538    .362
404       UA       0       5      16      30      65      77      84      90      94      97
405       UA     100
          * DDM   ***** Preserved *****

406       KK    300C
407       KM   HYDROGRAPH COMBINATION OF SUB-BASIN 280 & 300
408       HC       2
          * DDM   ***** Preserved *****

409       KK    R300
410       KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
411       KM   ROUTE FLOW FROM SUB-BASIN 300 TO START OF FLOODWAY CONCRETE CHANNEL
412       RS       2    FLOW      -1
413       RC    .035    .025    .035    2200    .003
414       RX       0       1       2    23.4    55.4    76.8      77      78
415       RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
          * DDM   ***** Preserved *****
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

416       KK   RR300
417       KM   CHANNEL GEOMETRY FOR SPOOK HILL FRS OBTAINED FROM AS-BUILTS PLANS.
418       KM   CONTINUE TO ROUTE FLOW WITHIN CONCRETE CHANNEL TO SPOOK HILL FRS
419       RS       2    FLOW      -1
420       RC    .016    .016    .016    6050   .0146
421       RX       0       1       2     2.1    16.1    16.2      17      18
422       RY     7.5     7.5     7.5       0       0     7.5     7.5     7.5
          *        1       2
          * DDM   ***** Updated *****

423       KK     350
424       KM   SUB-BASIN 350
425       KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
426       KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
427       KM     L = 2.22  Kb = .042  Adj. Slope =  315.0
428       BA    .970
429       LG    .350    .350   4.550    .340   4.000
430       UC    .367    .234
431       UA       0       3       5       8      12      20      43      75      90      96
432       UA     100
          * DDM   ***** Preserved *****

433       KK    D350
434       KM   DIVERT FLOW FROM SUB-BASIN 350. FOR MODELING PURPOSES THE SPLIT FLOW WILL
435       KM   BE ROUTED BETWEEN SUB-BASINS 355 & 310. THE MAIN FLOW WILL ROUTED TO 310
436       DT   SF350
437       DI       0   10000
438       DQ       0    6000
          * DDM   ***** Preserved *****

439       KK    350R
440       KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING
441       KM   ROUTING OF MAIN FLOW FROM DIVERSION OF SUB-BASIN 350 TO SUB-BASIN 310
442       RS       7    FLOW      -1
443       RC    .045    .035    .045    5150    .025
444       RX       0       1      40      46      56      62     102     103
445       RY       3       2       2       0       0       2       2       3
          * DDM   ***** Updated *****

446       KK     310
447       KM   SUB-BASIN 310
448       KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
449       KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
450       KM     L = 2.70  Kb = .045  Adj. Slope =  283.5
451       BA    .555
452       LG    .350    .350   3.910    .480    .000
453       UC    .483    .511
454       UA       0       3       5       8      12      20      43      75      90      96
455       UA     100
          * DDM   ***** Preserved *****
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

456       KK    C310
457       KM   HYDROGRAPH COMBINATION OF SUB-BASINS 350 & 310
458       HC       2    .943
          * DDM   ***** Preserved *****

459       KK    R310
460       KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
461       KM   ROUTING OF FLOW FROM SUB-BASIN 310 TO 320
462       RS      11    FLOW      -1
463       RC    .045    .035    .045   10050    .022
464       RX       0       1      40      46      56      62     102     103
465       RY       3       2       2       0       0       2       2       3
          * DDM   ***** Updated *****

466       KK     320
467       KM   SUB-BASIN 320
468       KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
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469          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
470          KM     L = 2.20  Kb = .042  Adj. Slope =  132.0
471          BA    .972
472          LG    .310    .300   4.550    .360  14.000
473          UC    .508    .333
474          UA       0       5      16      30      65      77      84      90      94      97
475          UA     100
             * DDM   ***** Preserved *****

476          KK    D320
477          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
478          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
479          KM   SIERRA HEIGHTS        FALCON RIDGE    & MARBLE CREEK
480          KM        MAXIMUM VOLUME DIVERSION = 12.27acre-feet
             *      1
481          DT   BS320   12.27
482          DI       0   10000
483          DQ       0   10000
             * DDM   ***** Preserved *****

484          KK   RT320
485          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
486          DR   BS320
             * DDM   ***** Preserved *****

487          KK   SR320
488          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
489          KM   12.27 ACRE-FEETx43560/36x3600=4.1cfs
             *      1
490          RS       1    STOR       0
491          SV       0     .01    12.3
492          SQ       0     4.2     4.2
             * DDM   ***** Preserved *****
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1 HEC-1 INPUT PAGE 13

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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

493          KK    C320
494          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
495          HC       4
             * DDM   ***** Updated *****

496          KK     340
497          KM   SUB-BASIN 340
498          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
499          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .991
500          KM     L = 2.40  Kb = .042  Adj. Slope =  160.0
501          BA   1.449
502          LG    .280    .280   4.150    .520  21.000
503          UC    .512    .287
504          UA       0       5      16      30      65      77      84      90      94      97
505          UA     100
             * DDM   ***** Preserved *****

506          KK    D340
507          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
508          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
509          KM   GRANDVIEW ESTATES    BOULDER MOUNTAIN & 33% OF MESA HIGHLANDS
510          KM        MAXIMUM VOLUME DIVERSION = 56.0 acre-feet
             *      1
511          DT   BS340      56
512          DI       0   10000
513          DQ       0   10000
             * DDM   ***** Preserved *****

514          KK   RT340
515          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
516          DR   BS340
             * DDM   ***** Preserved *****

517          KK   SR340
518          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
519          KM    56.0 ACRE-FEETx43560/36x3600=18.8cfs
             *      1
520          RS       1    STOR       0
521          SV       0     .01      56
522          SQ       0    18.9    18.9
             * DDM   ***** Preserved *****

523          KK    C340
524          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
525          HC       3
             * DDM   ***** Preserved *****

526          KK   RT350
527          KM   RETRIEVE SPLIT FLOW FROM DIVERSION OF SUB-BASIN 350
528          DR   SF350
             * DDM   ***** Preserved *****
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1 HEC-1 INPUT PAGE 14

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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

529          KK   RR350
530          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
531          KM   ROUTING OF FLOW FROM SPLIT OF SUB-BASIN 350 TO 355
532          RS       7    FLOW      -1
533          RC    .045    .035    .045    6050    .025
534          RX       0       1      40      46      56      62     102     103
535          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

536          KK     355
537          KM   SUB-BASIN 355
538          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
539          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
540          KM     L = 3.00  Kb = .044  Adj. Slope =  284.0
541          BA    .659
542          LG    .340    .340   4.450    .370   4.000
543          UC    .488    .509
544          UA       0       3       5       8      12      20      43      75      90      96
545          UA     100
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            * DDM   ***** Preserved *****

546         KK    C355
547         KM   HYDROGRAPH COMBINATION OF SUB-BASIN 355 AND THE SPLIT FLOW FROM SUB-BASIN 350
548         HC       2    1.24
            * DDM   ***** Preserved *****

549         KK    R355
550         KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
551         KM   ROUTING OF FLOW FROM SUB-BASIN 355 TO SUB-BASIN 360
552         RS       9    FLOW      -1
553         RC    .045    .035    .045   10100    .026
554         RX       0       1      40      46      56      62     102     103
555         RY       3       2       2       0       0       2       2       3
            * DDM   ***** Updated *****

556         KK     360
557         KM   SUB-BASIN 360
558         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
559         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
560         KM     L = 2.10  Kb = .048  Adj. Slope =  124.0
561         BA    .670
562         LG    .260    .270   4.100    .560  20.000
563         UC    .587    .466
564         UA       0       5      16      30      65      77      84      90      94      97
565         UA     100
            * DDM   ***** Preserved *****

566         KK    D360
567         KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
568         KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
569         KM        MAXIMUM VOLUME DIVERSION = 28.6 acre-feet
            *      1
570         DT   BS360    28.6
571         DI       0   10000
1                                   HEC-1 INPUT                                          PAGE 15

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

572         DQ       0   10000
            * DDM   ***** Preserved *****

573         KK   RT360
574         KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
575         DR   BS360
            * DDM   ***** Preserved *****

576         KK   SR360
577         KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
578         KM    28.6 ACRE-FEETx43560/36x3600=9.6cfs
579         RS       1    STOR       0
580         SV       0     .01    28.6
581         SQ       0     9.6     9.6
            * DDM   ***** Preserved *****

582         KK    360C
583         KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
584         HC       4
            * DDM   ***** Updated *****

585         KK     380
586         KM   SUB-BASIN 380
587         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
588         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .995
589         KM     L = 1.90  Kb = .050  Adj. Slope =  126.0
590         BA    .835
591         LG    .300    .330   4.150    .490   5.000
592         UC    .583    .377
593         UA       0       5      16      30      65      77      84      90      94      97
594         UA     100
            * DDM   ***** Preserved *****

595         KK    D380
596         KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
597         KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
598         KM        MAXIMUM VOLUME DIVERSION = 28.6 acre-feet
            *      1
599         DT   BS380    28.6
600         DI       0   10000
601         DQ       0   10000
            * DDM   ***** Preserved *****

602         KK   RT380
603         KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
604         DR   BS380
            * DDM   ***** Preserved *****

605         KK   SR380
606         KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
607         KM    28.6 ACRE-FEETx43560/36x3600=9.6cfs
608         RS       1    STOR       0
609         SV       0     .01    28.6
610         SQ       0     9.6     9.6
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 16

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

611         KK    380C
612         KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
613         HC       3
            * DDM   ***** Updated *****

614         KK     400
615         KM   SUB-BASIN 400
616         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
617         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
618         KM     L = 1.32  Kb = .047  Adj. Slope =  106.0
619         BA    .572
620         LG    .320    .310   4.100    .490   6.000
621         UC    .454    .265
622         UA       0       5      16      30      65      77      84      90      94      97
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623          UA     100
             * DDM   ***** Preserved *****

624          KK    D400
625          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
626          KM   DETENTION/RETENTION BASIN LOCATED WITHIN SAGUARO VISTA SUBDIVISION
627          KM        MAXIMUM VOLUME DIVERSION = 5.6 ACRE-FEET
             *      1
628          DT   BS400      5.6
629          DI       0   10000
630          DQ       0   10000
             * DDM   ***** Preserved *****

631          KK   RT400
632          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
633          DR   BS400
             * DDM   ***** Preserved *****

634          KK   SR400
635          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
636          KM     5.6 ACRE-FEETx43560/36x3600 = 2 cfs
637          RS       1    STOR       0
638          SV       0     .01     5.6
639          SQ       0       2       2
             * DDM   ***** Preserved *****

640          KK    C400
641          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
642          HC       3
             * DDM   ***** Updated *****

643          KK     370
644          KM   SUB-BASIN 370
645          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
646          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
647          KM     L = 2.90  Kb = .044  Adj. Slope =  294.6
648          BA    .667
649          LG    .340    .320   4.650    .330   9.000
650          UC    .454    .455
651          UA       0       3       5       8      12      20      43      75      90      96
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

652          UA     100
             * DDM   ***** Updated *****

653          KK     395
654          KM   SUB-BASIN 395
655          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
656          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
657          KM     L = 1.60  Kb = .051  Adj. Slope =  215.8
658          BA    .198
659          LG    .330    .320   4.900    .300  10.000
660          UC    .383    .468
661          UA       0       3       5       8      12      20      43      75      90      96
662          UA     100
             * DDM   ***** Preserved *****

663          KK    370C
664          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
665          HC       2
             * DDM   ***** Preserved *****

666          KK    R370
667          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
668          KM   ROUTING OF FLOW FROM SUB-BASINS 370 AND 395 TO SUB-BASIN 380.
669          RS       3    FLOW      -1
670          RC    .045    .035    .045    2961    .027
671          RX       0       1      40      46      56      62     102     103
672          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Inserted *****

673          KK     378
674          KM   SUB-BASIN 378
675          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
676          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
677          KM     L =  .91  Kb = .053  Adj. Slope =  123.0
678          BA    .148
679          LG    .300    .250   4.250    .510  15.000
680          UC    .350    .318
681          UA       0       5      16      30      65      77      84      90      94      97
682          UA     100

683          KK    378C
684          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
685          HC       2

686          KK    D378
687          KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN
             *      1
688          DT   BS378
689          DI       0     100    5000
690          DQ       0       0    4900
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

691          KK   RT378
692          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
693          DR   BS378
             * DDM   ***** Preserved *****

694          KK   SR378
695          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
696          KM      39 ACRE-FEETx43560/36x3600 = 13 cfs
697          RS       1    STOR       0
698          SV       0     .01      39
699          SQ       0      13      13
             * DDM   ***** Preserved *****
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700          KK    C378
701          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
702          HC       2

703          KK    R378
704          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
705          KM   ROUTING OF FLOW FROM SUB-BASIN 370, 378, & 395 TO SUB-BASIN 398.
706          RS       5    FLOW      -1
707          RC    .045    .035    .045    2961    .027
708          RX       0       1       2      11      31      40      41      42
709          RY       4       3       3       0       0       3       3       4
             * DDM   ***** Updated *****

710          KK     390
711          KM   SUB-BASIN 390
712          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
713          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
714          KM     L =  .70  Kb = .050  Adj. Slope =  299.4
715          BA    .244
716          LG    .300    .250   4.700    .380  18.000
717          UC    .204    .107
718          UA       0       5      16      30      65      77      84      90      94      97
719          UA     100
             * DDM   ***** Preserved *****

720          KK    D390
721          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
722          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THUNDER MOUNTAIN ESTATES
723          KM        MAXIMUM VOLUME DIVERSION  = 3.5 acre-feet
             *      1
724          DT   BS390     3.5
725          DI       0   10000
726          DQ       0   10000
             * DDM   ***** Preserved *****

727          KK   RT390
728          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
729          DR   BS390
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

730          KK   SR390
731          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
732          KM     3.5 ACRE-FEETx43560/36x3600=1.2cfs
733          RS       1    STOR       0
734          SV       0     .01     3.5
735          SQ       0     1.2     1.2
             * DDM   ***** Preserved *****

736          KK    390C
737          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
738          HC       2
             * DDM   ***** Preserved *****

739          KK   RR390
740          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
741          KM   FROM SUB-BASIN 390 TO SUB-BASIN 398.
742          RS       3    FLOW      -1
743          RC    .045    .045    .045    3770    .016
744          RX       0       1       2      11      41      50      51      52
745          RY       4       3       3       0       0       3       3       4
             * DDM   ***** Inserted *****

746          KK     398
747          KM   SUB-BASIN 398
748          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
749          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
750          KM     L =  .83  Kb = .056  Adj. Slope =  111.0
751          BA    .084
752          LG    .300    .250   4.350    .480  15.000
753          UC    .354    .413
754          UA       0       5      16      30      65      77      84      90      94      97
755          UA     100

756          KK    398C
757          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 390 AND SUB-BASIN 398
758          HC       3

759          KK    R398
760          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
761          KM   FROM SUB-BASIN 398 TO SUB-BASIN 405
762          RS       4    FLOW      -1
763          RC    .045    .045    .045    3770    .016
764          RX       0       1       2      11      41      50      51      52
765          RY       4       3       3       0       0       3       3       4
             * DDM   ***** Updated *****

766          KK     385
767          KM   SUB-BASIN 385
768          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
769          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
770          KM     L = 2.30  Kb = .044  Adj. Slope =  303.0
771          BA    .647
772          LG    .350    .370   5.600    .210  13.000
773          UC    .375    .311
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

774          UA       0       3       5       8      12      20      43      75      90      96
775          UA     100
             * DDM   ***** Preserved *****

776          KK    D385
777          KM   DIVERT FLOW INTO SUB-BASINS 415 & 420
778          DT   SF385
779          DI       0   10000
780          DQ       0    4000
             * DDM   ***** Preserved *****
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781          KK    385R
782          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
783          KM   ROUTING OF FLOW DIVERSION FROM SUB-BASIN 385 TO SUB-BASIN 405
784          RS       8    FLOW      -1
785          RC    .045    .035    .045    5700    .024
786          RX       0       1      40      46      56      62     102     103
787          RY       3       2       2       0       0       2       2       3

788          KK    R385
789          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
790          KM   ROUTING OF FLOW DIVERSION FROM 385R TO SUB-BASIN 405
791          RS       4    FLOW      -1
792          RC    .045    .035    .045    2800    .017
793          RX       0       1      40      46      56      62     102     103
794          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Inserted *****

795          KK     405
796          KM   SUB-BASIN 405
797          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
798          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
799          KM     L = 1.65  Kb = .046  Adj. Slope =  116.0
800          BA    .437
801          LG    .300    .250   4.350    .480  15.000
802          UC    .479    .391
803          UA       0       5      16      30      65      77      84      90      94      97
804          UA     100

805          KK    405C
806          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 385, 398, AND 405
807          HC       3

808          KK    405R
809          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
810          KM   ROUTING OF FLOW FROM 405C TO SUB-BASIN 410
811          RS       1    FLOW      -1
812          RC    .045    .035    .045    1287    .008
813          RX       0       1       2      14      44      56      57      58
814          RY       5       4       4       0       0       4       4       5
             * DDM   ***** Inserted *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

815          KK     410
816          KM   SUB-BASIN 410
817          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
818          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
819          KM     L =  .76  Kb = .056  Adj. Slope =   92.0
820          BA    .089
821          LG    .300    .250   4.150    .530  15.000
822          UC    .367    .387
823          UA       0       5      16      30      65      77      84      90      94      97
824          UA     100

825          KK    410C
826          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 385, 398, AND 405
827          HC       2

828          KK    410R
829          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
830          KM   ROUTING OF FLOW FROM SUB-BASIN 410 TO SUB-BASIN 420
831          RS       1    FLOW      -1
832          RC    .045    .035    .045    1524    .019
833          RX       0       1       2      11      41      50      51      52
834          RY       4       3       3       0       0       3       3       4
             * DDM   ***** Updated *****

835          KK     420
836          KM   SUB-BASIN 420
837          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
838          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
839          KM     L = 1.37  Kb = .048  Adj. Slope =  109.0
840          BA    .308
841          LG    .330    .300   3.880    .540   7.000
842          UC    .471    .404
843          UA       0       5      16      30      65      77      84      90      94      97
844          UA     100
             * DDM   ***** Preserved *****

845          KK    D420
846          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
847          KM   DETENTION/RETENTION BASINS LOCATED WITHIN GRAY FOX SUBDIVISION
848          KM        MAXIMUM VOLUME DIVERSION = 8.65 acre-feet
             *      1
849          DT   BS420    8.65
850          DI       0   10000
851          DQ       0   10000
             * DDM   ***** Preserved *****

852          KK   RT420
853          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
854          DR   BS420
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

855          KK   SR420
856          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
857          KM   38.55 ACRE-FEETx43560/36x3600=13cfs
858          RS       1    STOR       0
859          SV       0     .01   38.55
860          SQ       0      13      13
             * DDM   ***** Preserved *****

861          KK    420C
862          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
863          HC       4   10.87
             * DDM   ***** Updated *****
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864          KK     440
865          KM   SUB-BASIN 440
866          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
867          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
868          KM     L =  .40  Kb = .039  Adj. Slope =  315.0
869          BA    .080
870          LG    .190    .380   6.400    .140  13.000
871          UC    .129    .077
872          UA       0       3       5       8      12      20      43      75      90      96
873          UA     100
             * DDM   ***** Preserved *****

874          KK     R70
875          KM   ROUTE FLOW FROM SUB-BASIN 440 TO C108
876          RS       1    FLOW      -1
877          RC     .05    .035     .05    2250     .08
878          RX    1000    1025    1050    1070    1075    1095    1120    1145
879          RY      30    22.9    15.7      10      10    15.7    22.9      30
             * DDM   ***** Updated *****

880          KK     441
881          KM   SUB-BASIN 441
882          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
883          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
884          KM     L =  .28  Kb = .069  Adj. Slope =  315.0
885          BA    .010
886          LG    .300    .250   5.600    .220   5.000
887          UC    .150    .225
888          UA       0       5      16      30      65      77      84      90      94      97
889          UA     100
             * DDM   ***** Preserved *****

890          KK    C108
891          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 440 & 441
892          HC       2
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 23

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


893          KK    DIV4
894          KM        SPLIT FLOW WITH TWO 42 INCH PIPES TO WEST AND SOUTH
             *      1
895          DT   SPLIT
896          DI       0      14      40      82     120     154     180
897          DQ       0       7      20      41      60      77      90
             * DDM   ***** Preserved *****

898          KK    R108
899          KM        ROUTE FLOW FROM SUB-BASIN C108 TO C67
900          RS       2    FLOW      -1
901          RC     .05    .035     .05    3200      .1
902          RX    1000    1025    1050    1070    1075    1095    1120    1145
903          RY      30    22.9    15.7      10      10    15.7    22.9      30
             * DDM   ***** Updated *****

904          KK     442
905          KM   SUB-BASIN 442
906          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
907          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
908          KM     L =  .83  Kb = .055  Adj. Slope =  274.2
909          BA    .100
910          LG    .300    .270   3.290    .770   5.000
911          UC    .258    .264
912          UA       0       5      16      30      65      77      84      90      94      97
913          UA     100
             * DDM   ***** Preserved *****

914          KK     C67
915          KM   COMBINE FLOW FROM SUB-BASIN 442 & DIV4
916          HC       2
             * DDM   ***** Preserved *****

917          KK    DIV6
918          KM        OFFLINE BASIN WITH 25 FOOT WEIR SET AT 2.5 FEET ABOVE BOTTOM OF CHANNEL
919          KM        FLOW CONTINUES BEYOND BASIN THROUGH 2-30" PIPES
             *      1
920          DT  BASIN4
921          DI       0      10      32      44    79.9   132.5     198   272.9   356.8
922          DQ       0       0       0       0    23.9    67.5     124   190.9   266.8
             * DDM   ***** Preserved *****

923          KK  RTDIV6
924          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
925          DR  BASIN4
             * DDM   ***** Preserved *****

926          KK  RFDIV6
927          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
928          KM     3.3 ACRE-FEETx43560/36x3600=1.1cfs
             *      1
929          RS       1    STOR       0
930          SV       0     .01     3.3
931          SQ       0     1.1     1.1
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 24

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


932          KK   CDIV6
933          KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
934          HC       2
             * DDM   ***** Updated *****

935          KK     443
936          KM   SUB-BASIN 443
937          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
938          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
939          KM     L =  .71  Kb = .050  Adj. Slope =  315.0
940          BA    .080
941          LG    .250    .190   8.000    .080  10.000
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 942          UC    .196    .194
 943          UA       0       5      16      30      65      77      84      90      94      97
 944          UA     100
              * DDM   ***** Preserved *****

 945          KK   DIV66
 946          KM        DIVERT FLOW INTO 3 NATURAL WASHES WITH ONE 24" PIPE IN EACH WASH.
 947          KM        EACH PIPE CAPACITY BASED ON 4 FEET OF HEAD
 948          DT   WSH66
 949          DI       0      78     100     200
 950          DQ       0      78      78      78
              * DDM   ***** Preserved *****

 951          KK    R113
 952          KM        ROUTE FLOW FROM C113 TO C114
 953          RS       1    FLOW      -1
 954          RC    .019    .019    .019    1300    .029
 955          RX    1000    1004    1008    1012    1018    1022    1026    1030
 956          RY      17   15.33   12.67      10      10   12.67   15.33      17
              * DDM   ***** Preserved *****

 957          KK    C114
 958          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 67 AND C113
 959          HC       2
              * DDM   ***** Updated *****

 960          KK     444
 961          KM   SUB-BASIN 444
 962          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 963          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
 964          KM     L =  .33  Kb = .034  Adj. Slope =  315.0
 965          BA    .040
 966          LG    .130    .350   4.450    .320   1.000
 967          UC    .112    .084
 968          UA       0       3       5       8      12      20      43      75      90      96
 969          UA     100
              * DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 970          KK     R58
 971          KM   ROUTE FLOW FROM SUB-BASIN 444 TO C107
 972          RS       1    FLOW      -1
 973          RC     .05    .035     .05    2370   .0516
 974          RX    1000    1010    1020    1050    1055    1085    1095    1105
 975          RY      19      18      17      10      10      17      18      19
              * DDM   ***** Updated *****

 976          KK     445
 977          KM   SUB-BASIN 445
 978          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 979          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
 980          KM     L =  .82  Kb = .036  Adj. Slope =  315.0
 981          BA    .190
 982          LG    .170    .320   3.470    .590   3.000
 983          UC    .192    .130
 984          UA       0       5      16      30      65      77      84      90      94      97
 985          UA     100
              * DDM   ***** Preserved *****

 986          KK    C107
 987          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 444 & 445
 988          HC       2
              * DDM   ***** Preserved *****

 989          KK    R107
 990          KM        ROUTE FLOW FROM C107 TO C109
 991          RS       1    FLOW      -1
 992          RC     .05    .035     .05     700   .0516
 993          RX    1000    1010    1020    1050    1055    1085    1095    1105
 994          RY      19      18      17      10      10      17      18      19
              * DDM   ***** Preserved *****

 995          KK    RTB2
 996          KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
              *      1
 997          DR   SPLIT
              * DDM   ***** Preserved *****

 998          KK  RSPLIT
 999          KM        ROUTE FLOW FROM SPLIT TO C109
1000          RS       1    FLOW      -1
1001          RC     .05    .035     .05     800     .05
1002          RX    1000    1025    1050    1070    1075    1095    1120    1145
1003          RY      30    22.9    15.7      10      10    15.7    22.9      30
              * DDM   ***** Updated *****

1004          KK     446
1005          KM   SUB-BASIN 446
1006          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1007          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1008          KM     L =  .46  Kb = .061  Adj. Slope =  303.9
1009          BA    .040
1010          LG    .270    .250   4.500    .400  19.000
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1011          UC    .183    .189
1012          UA       0       5      16      30      65      77      84      90      94      97
1013          UA     100
              * DDM   ***** Preserved *****

1014          KK    C109
1015          KM        COMBINE HYDROGRAPHS FROM COMBINES C107 AND C108
1016          HC       3
              * DDM   ***** Preserved *****

1017          KK    DIV5
1018          KM        DIVERT FLOW INTO WASHES TOWARDS WEST
1019          KM        DIVERSION THROUGH 36" PIPE WITH 3 FEET OF HEAD
```

```
*      1
DT  WSH404
DI       0     40.7     71.2    121.6      190      276    379.4    500.6
DQ       0       35       35       35       35       35       35       35
* DDM   ***** Preserved *****

KK    R109
KM        ROUTE FLOW FROM C109 TO C110
RS       1    FLOW      -1
RC    .019     .019     .019     3080     .05
RX    1000     1005     1010     1015    1025     1030     1035     1040
RY   13.75     12.5    11.25       10      10    11.25     12.5    13.75
* DDM   ***** Updated *****

KK     447
KM   SUB-BASIN 447
KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
KM     L =  .49  Kb = .056  Adj. Slope =  221.0
BA    .090
LG    .250     .270    3.350     .870   30.000
UC    .208     .145
UA       0        5       16       30       65       77       84       90       94       97
UA     100
* DDM   ***** Preserved *****

KK   RT404
KM        RETRIEVE DIVERTED FLOW FOR WASH 109
DR  WSH404
* DDM   ***** Preserved *****

KK    R404
KM        ROUTE FLOW FROM C110 TO C110
RS       5    FLOW      -1
RC    .019     .019     .019     3540     .03
RX    1000     1012     1016     1020    1025     1029     1033     1045
RY      15       12       11       10      10       11       12       15
* DDM   ***** Preserved *****
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

KK    C110
KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 447 AND R404
HC       3
* DDM   ***** Preserved *****

KK    R110
KM        ROUTE FLOW FROM C110 TO C115
RS       1    FLOW      -1
RC    .019     .019     .019      580   .0291
RX    1000     1012     1016     1020    1035     1039     1043     1055
RY      15       12       11       10      10       11       12       15
* DDM   ***** Preserved *****

KK    C115
KM        COMBINE HYDROGRAPHS FROM C114 AND C110
HC       2
* DDM   ***** Preserved *****

KK    R115
KM        ROUTE FLOW FROM C115 TO C119
RS       1    FLOW      -1
RC    .019     .019     .019     2125    .029
RC    .019     .019     .019      580   .0291
RX    1000     1012     1016     1020    1035     1039     1043     1055
RY      15       12       11       10      10       11       12       15
* DDM   ***** Updated *****

KK     448
KM   SUB-BASIN 448
KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
KM     L =  .36  Kb = .042  Adj. Slope =  315.0
BA    .045
LG    .170     .310    4.200     .390   11.000
UC    .133     .102
UA       0        5       16       30       65       77       84       90       94       97
UA     100
* DDM   ***** Updated *****

KK     449
KM   SUB-BASIN 449
KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
KM     L =  .40  Kb = .054  Adj. Slope =  315.0
BA    .050
LG    .260     .280    3.500     .640    6.000
UC    .167     .134
UA       0        5       16       30       65       77       84       90       94       97
UA     100
* DDM   ***** Preserved *****
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

KK   C6364
KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 448 & 449
HC       2
* DDM   ***** Preserved *****

KK   R6364
KM   ROUTE FLOW FROM C116 AND SUB-BASINS 448 AND 449
RS       4    FLOW      -1
RC     .05     .035      .05     4375   .0333
RX    1000     1027     1053     1080    1090     1117     1143     1170
RY      15    13.33    11.67       10      10    11.67    13.33       15
* DDM   ***** Updated *****

KK     450
KM   SUB-BASIN 450
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1098        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1099        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1100        KM     L =  .85  Kb = .057  Adj. Slope =  210.5
1101        BA    .070
1102        LG    .340    .350   3.630    .570   4.000
1103        UC    .296    .383
1104        UA      0       3       5       8      12      20      43      75      90      96
1105        UA     100
            * DDM   ***** Updated *****

1106        KK     451
1107        KM   SUB-BASIN 451
1108        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1109        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1110        KM     L =  .57  Kb = .063  Adj. Slope =  175.0
1111        BA    .025
1112        LG    .340    .340   3.290    .750   3.000
1113        UC    .271    .453
1114        UA      0       3       5       8      12      20      43      75      90      96
1115        UA     100
            * DDM   ***** Preserved *****

1116        KK    RT66
1117        KM        RETRIEVE DIVERTED FLOW FROM SUB-BASIN 66
1118        DR   WSH66
            * DDM   ***** Updated *****

1119        KK     452
1120        KM   SUB-BASIN 452
1121        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1122        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1123        KM     L =  .43  Kb = .055  Adj. Slope =  315.0
1124        BA    .040
1125        LG    .260    .280   3.700    .550   9.000
1126        UC    .171    .166
1127        UA      0       5      16      30      65      77      84      90      94      97
1128        UA     100
            * DDM   ***** Preserved *****
                                        HEC-1 INPUT                                          PAGE 29
1
LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1129        KK   C6465
1130        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 443 AND 452
1131        HC       2
            * DDM   ***** Preserved *****

1132        KK   R6566
1133        KM        ROUTE FLOW FROM DIVERSIONS 65 AND 66 TO C116
1134        RS       2    FLOW      -1
1135        RC     .05    .035     .05    2435   .0282
1136        RX    1000    1045    1090    1150    1160    1220    1265    1310
1137        RY      25      23      20      10      10      20      23      25
            * DDM   ***** Preserved *****

1138        KK    C116
1139        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 450 & 451 AND R6364 & R6465
1140        HC       4
            * DDM   ***** Preserved *****

1141        KK  BASIN5
1142        KM        RESERVOIR WITHIN PARCEL 31      2-48 INCH PIPES AT OUTFALL
1143        KM        BASIN 5 FEET DEEP
1144        RS       1    ELEV       0
1145        SV       0     4.5     9.9
1146        SQ       0      69     190
1147        SE       0     2.5       5
            * DDM   ***** Preserved *****

1148        KK    R116
1149        KM   ROUTE FLOW FROM C116 TO C117
1150        RS       2    FLOW      -1
1151        RC     .05    .035     .05    1300   .0333
1152        RX    1000    1100    1200    1300    1320    1420    1520    1620
1153        RY      13      12      11      10      10      11      12      13
            * DDM   ***** Updated *****

1154        KK     453
1155        KM   SUB-BASIN 453
1156        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1157        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1158        KM     L =  .58  Kb = .058  Adj. Slope =  138.0
1159        BA    .060
1160        LG    .290    .300   3.290    .820  18.000
1161        UC    .275    .284
1162        UA      0       5      16      30      65      77      84      90      94      97
1163        UA     100
            * DDM   ***** Preserved *****

1164        KK    C117
1165        KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 453 AND R116
1166        HC       2
            * DDM   ***** Preserved *****
                                        HEC-1 INPUT                                          PAGE 30
1
LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1167        KK    C118
1168        KM   COMBINE HYDROGRAPHS FROM R115 AND C117
1169        HC       2
            * DDM   ***** Preserved *****

1170        KK    R118
1171        KM        ROUTE FLOW FROM C118 TO  DIV7
1172        RS       1    FLOW      -1
1173        RC    .019    .019    .019    1500    .024
1174        RX    1000    1012    1016    1020    1035    1039    1043    1055
1175        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Preserved *****

1176        KK    DIV7
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1177        KM        OFFLINE BASIN AT NORTH MOUNTAIN RIDGE   FLOWS ENTER BASIN OVER
1178        KM        30' WEIR SET AT 5.3' ABOVE THE CHANNEL BOTTOM
            *      1
1179        DT  BASIN6
1180        DI       0     363     487     563     645     844
1181        DQ       0       3      47      83     125     244
            * DDM   ***** Preserved *****

1182        KK  RTDIV7
1183        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1184        DR  BASIN6
            * DDM   ***** Preserved *****

1185        KK  RFDIV7
1186        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1187        KM     3.6 ACRE-FEETx43560/36x3600=1.2cfs
1188        RS       1    STOR       0
1189        SV       0     .01     3.6
1190        SQ       0     1.2     1.2
            * DDM   ***** Preserved *****

1191        KK   CDIV7
1192        KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1193        HC       2
            * DDM   ***** Updated *****

1194        KK     454
1195        KM   SUB-BASIN 454
1196        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1197        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1198        KM     L = 1.23  Kb = .051  Adj. Slope =  163.0
1199        BA    .180
1200        LG    .300    .310   3.780    .560  14.000
1201        UC    .379    .395
1202        UA       0       5      16      30      65      77      84      90      94      97
1203        UA     100
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 31

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1204        KK    C119
1205        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 454 AND C119
            *      1       2
1206        HC       2
            * DDM   ***** Preserved *****

1207        KK    R454
1208        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1209        KM   ROUTE FLOW FROM C119 TO 415C
1210        RS       2    FLOW      -1
1211        RC    .045    .035    .045    2200    .009
1212        RX       0      .5       1      33      42      67    67.5      68
1213        RY       5       4       4       0       0       6       6       6
            * DDM   ***** Updated *****

1214        KK     415
1215        KM   SUB-BASIN 415
1216        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1217        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
1218        KM     L = 2.10  Kb = .046  Adj. Slope =  266.0
1219        BA    .448
1220        LG    .310    .270   4.250    .480  15.000
1221        UC    .404    .387
1222        UA       0       5      16      30      65      77      84      90      94      97
1223        UA     100
            * DDM   ***** Preserved *****

1224        KK   RT385
1225        KM   RETRIEVE FLOW FROM DIVERSION OF SUB-BASIN 385 INTO SUB-BASIN 415
1226        DR   SF385
            * DDM   ***** Preserved *****

1227        KK   RR385
1228        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1229        KM   ROUTING OF SPLIT FLOW FROM SUB-BASIN 385 TO SUB-BASIN 415
1230        RS       5    FLOW      -1
1231        RC    .045     .04    .045    5878    .024
1232        RX       0       1      40      46      56      62     102     103
1233        RY       3       2       2       0       0       2       2       3
            * DDM   ***** Preserved *****

1234        KK    415C
1235        KM   HYDROGRAPH COMBINATION OF SUB-BASINS 415, R454 & SPLIT FLOW FROM 385
1236        HC       3    1.71
            * DDM   ***** Preserved *****

1237        KK    R415
1238        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1239        KM   ROUTING OF FLOW FROM 415C TO 455C
1240        RS       2    FLOW      -1
1241        RC    .045     .03    .045    4100    .024
1242        RX       0      .5       1       8      16      23    23.5      24
1243        RY       8       8       8       0       0       8       8       8
            * DDM   ***** Updated *****
1                                   HEC-1 INPUT                                          PAGE 32

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1244        KK     455
1245        KM   SUB-BASIN 455
1246        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1247        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
1248        KM     L = 1.70  Kb = .041  Adj. Slope =  146.0
1249        BA   1.111
1250        LG    .270    .280   3.700    .640  24.000
1251        UC    .421    .204
1252        UA       0       5      16      30      65      77      84      90      94      97
1253        UA     100
            * DDM   ***** Preserved *****
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1254        KK    D455
1255        KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1256        KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1257        KM   FOR BASIN #: 30      34      43      47&58
1258        KM        MAXIMUM VOLUME DIVERSION = 74.1 acre-feet
            *      1
1259        DT   BS455    74.1
1260        DI       0   10000
1261        DQ       0   10000
            * DDM   ***** Preserved *****

1262        KK   RT455
1263        KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1264        DR   BS455
            * DDM   ***** Preserved *****

1265        KK   SR455
1266        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1267        KM    74.1 ACRE-FEETx43560/36x3600=25cfs
1268        RS       1    STOR       0
1269        SV       0     .01    74.1
1270        SQ       0      25      25
            * DDM   ***** Preserved *****

1271        KK    C455
1272        KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 455 AND DIVERTED BASIN STORAGE OF 455
1273        HC       2
            * DDM   ***** Preserved *****

1274        KK    455C
1275        KM  HYDROGRAPH COMBINATION OF 420C, R415 AND C455
            *      1       2
1276        HC       3
            * DDM   ***** Preserved *****

1277        KK   SR440
1278        KM   SPOOK HILL FRS PLANS DATED 6/15/77
1279        KM   OUTLET PIPE=7'x7.5'RCBC; L=70 INLET INV.=1566; OUTLET INV.=1566
1280        KM   EMERGENCY SPILLWAY ELEV.=1582; PRINCIPLE SPILLWAY ELEV.=1577.5
1281        KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 200 ACRE-FEET
1282        RS       1    STOR       0
1283        SV       0      10     100     300     500     680
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1284        SQ       0     640     720     780     825     860
1285        SE      66    77.5      79    80.2    81.2      82
            * DDM   ***** Preserved *****

1286        KK   RR455
1287        KM   ROUTE FLOW FROM SPOOK HILL FRS TO SUB-BASIN 462
1288        RS       9    FLOW      -1
1289        RC    .035    .025    .035    9200    .002
1290        RX       0       1       2      28      58      84      85      86
1291        RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
            * DDM   ***** Updated *****

1292        KK     456
1293        KM   SUB-BASIN 456
1294        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1295        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1296        KM     L =  .94  Kb = .045  Adj. Slope =  315.0
1297        BA    .260
1298        LG    .300    .380   5.600    .200  12.000
1299        UC    .217    .139
1300        UA       0       5      16      30      65      77      84      90      94      97
1301        UA     100
            * DDM   ***** Preserved *****

1302        KK    DIV1
1303        KM        DIVERT FLOW INTO OFFLINE DETENTION BASIN
1304        KM        WEIR FOR BASIN SET AT 4 FEET ABOVE CHANNEL BOTTOM
            *      1
1305        DT  BASIN1
1306        DI       0    11.1   127.9   234.4   577.7   789.9  1025.5  1280.9  1555.7
1307        DQ       0       0       0    47.7     248   381.8   533.6   701.5     884
            * DDM   ***** Preserved *****

1308        KK    DIV2
1309        KM        SPLIT OUT FLOW FOR WASHES THAT FLOW TO THE SOUTH FROM
1310        KM        WASHES THAT DRAIN TO THE WES, SOUTHERN WASHES FED BY 30" & 24" PIPE
1311        DT    WA30
1312        DI       0    11.1   127.9   189.6   329.7     408   491.9   579.4   671.7
1313        DQ       0    11.1    38.4    48.2      63    69.5      76      81      86
            * DDM   ***** Preserved *****

1314        KK    R456
1315        KM        ROUTE FLOW FROM SUB-BASIN 51 TO C101
1316        RS       2    FLOW      -1
1317        RC     .05    .035     .05    3800    .044
1318        RX    1000    1010    1020    1036    1041    1057    1067    1077
1319        RY   14.88   14.44      14      10      10      14   14.44   14.88
            * DDM   ***** Updated *****

1320        KK     457
1321        KM   SUB-BASIN 457
1322        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1323        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1324        KM     L = 1.01  Kb = .045  Adj. Slope =  308.8
1325        BA    .190
```



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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1326        LG    .270    .330   3.950    .460   6.000
1327        UC    .237    .195
1328        UA       0       5      16      30      65      77      84      90      94      97
1329        UA     100
            * DDM   ***** Preserved *****

1330        KK    C101
1331        KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 50 AND 51
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1332          HC       2
              * DDM   ***** Preserved *****

1333          KK    DIV3
1334          KM        RESERVOIR AT THE EDGE OF THE PROPERTY   FLOW FROM CHANNEL
1335          KM        DIVERTED  INTO OFFLINE BASIN A 25' WEIR SET AT ELEVATION 1808 FT
              *      1
1336          DT  BASIN2
1337          DI       0      36      70     110     180   313.5     402   500.9
1338          DQ       0       0       0       0       0    67.5     124   190.9
              * DDM   ***** Preserved *****

1339          KK  RTDIV3
1340          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1341          DR  BASIN2
              * DDM   ***** Preserved *****

1342          KK  RFDIV3
1343          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1344          KM     5.0 ACRE-FEETx43560/36x3600=1.7cfs
1345          RS       1    STOR       0
1346          SV       0     .01       5
1347          SQ       0     1.7     1.7
              * DDM   ***** Preserved *****

1348          KK   CDIV3
1349          KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1350          HC       2
              * DDM   ***** Preserved *****

1351          KK    R101
1352          KM        ROUTE FLOW FROM SUBBASIN C101 TO C103
1353          RS       1    FLOW      -1
1354          RC     .05    .035     .05    1450     .05
1355          RX    1000    1010    1020    1036    1041    1057    1067    1077
1356          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Updated *****

1357          KK     458
1358          KM   SUB-BASIN 458
1359          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1360          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1361          KM     L =  .76  Kb = .048  Adj. Slope =  299.0
1362          BA    .190
1363          LG    .290    .330   5.800    .190   6.000
1364          UC    .204    .131
1365          UA       0       5      16      30      65      77      84      90      94      97
```



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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1366          UA     100
              * DDM   ***** Preserved *****

1367          KK    C103
1368          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 55 AND C101
1369          HC       2
              * DDM   ***** Preserved *****

1370          KK    R103
1371          KM        ROUTE FLOW FROM SUBBASIN C103 TO C106
1372          RS       1    FLOW      -1
1373          RC     .05    .035     .05     900     .03
1374          RX    1000    1010    1020    1030    1050    1060    1070    1080
1375          RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
              * DDM   ***** Preserved *****

1376          KK    RT30
1377          KM        RETRIEVE DIVERTED FLOW FOR WASH BELOW 30 INCH PIPE
1378          DR    WA30
              * DDM   ***** Preserved *****

1379          KK     R30
1380          KM        ROUTE FLOW FROM WASH DIVERSION TO COMBINE C52
1381          RS       1    FLOW      -1
1382          RC     .05    .035     .05    1630     .05
1383          RX    1000    1010    1020    1036    1041    1057    1067    1077
1384          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Preserved *****

1385          KK    RTB1
1386          KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
              *      1       2
1387          DR  BASIN1
              * DDM   ***** Preserved *****

1388          KK      B1
1389          KM        ROUTE FLOW THROUGH OFFLINE DETENTION BASIN
1390          KM        FLOW OUTLETS THROUGH A 30 INCH OUTLET PIPE
              *      1       2
1391          RS       1    ELEV       0
1392          SV              .7     1.4     2.3     2.7     3.2
1393          SQ       0       5      16      28    32.5      37
1394          SE       0       1       2       3     3.5       4
              * DDM   ***** Preserved *****

1395          KK     RB1
1396          KM        ROUTE FLOW FROM BASIN DIVERSION TO COMBINE C52
1397          RS       2    FLOW      -1
1398          RC     .05    .035     .05    1720     .05
1399          RX    1000    1010    1020    1036    1041    1057    1067    1077
1400          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1401          KK    CDIV
1402          KM        COMBINE FLOWS FROM WA30 AND BASIN 1
1403          HC       2     .12
              * DDM   ***** Updated *****
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1404        KK     459
1405        KM   SUB-BASIN 459
1406        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1407        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1408        KM     L =  .35  Kb = .052  Adj. Slope =  251.6
1409        BA    .030
1410        LG    .220    .300   3.330    .710   8.000
1411        UC    .162    .157
1412        UA       0       5      16      30      65      77      84      90      94      97
1413        UA     100
            * DDM   ***** Preserved *****

1414        KK     C52
1415        KM        COMBINE FLOWS FROM SUB-BASIN 52 WA30 AND BASIN 1
1416        HC       2
            * DDM   ***** Preserved *****

1417        KK     R52
1418        KM        ROUTE FLOW FROM SUBBASIN 52 TO C102
1419        RS       2    FLOW      -1
1420        RC     .05    .035     .05    2000     .05
1421        RX    1000    1010    1020    1036    1041    1057    1067    1077
1422        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Updated *****

1423        KK     460
1424        KM   SUB-BASIN 460
1425        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1426        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1427        KM     L =  .62  Kb = .058  Adj. Slope =  194.0
1428        BA    .140
1429        LG    .250    .260   3.740    .690  27.000
1430        UC    .242    .160
1431        UA       0       5      16      30      65      77      84      90      94      97
1432        UA     100
            * DDM   ***** Preserved *****

1433        KK    C102
1434        KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 52 AND 53
1435        HC       2
            * DDM   ***** Preserved *****

1436        KK  BASIN3
1437        KM        RESERVOIR AT CLUBHOUSE LOCATION 1-30 INCH PIPE AT OUTFALL
1438        KM        BOTTOM OF BASIN AT 6 FEET ABOVE 1795 ELEVATION
1439        RS       1    ELEV       0
1440        SA       0       0       0       0     .34    1.59    1.81    1.96    2.13     2.3
            *      0       0       0       0    1.14    3.25    5.52    9.23
1441        SQ       0      22      45    47.4      48      51      57      62      67      73
                                          HEC-1 INPUT                                          PAGE 37
1
LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1442        SE    1795  1797.5    1800  1800.4  1800.5    1801    1802    1803    1804  1805.5
            * DDM   ***** Preserved *****

1443        KK      R3
1444        KM        ROUTE FLOW FROM C102 to C106
1445        RS       4    FLOW      -1
1446        RC     .05     .03     .05    2750   .0375
1447        RX    1000    1010    1020    1052    1086    1118    1128    1138
1448        RY    19.2    18.4      18      10      10      18    18.4    19.2
            * DDM   ***** Updated *****

1449        KK     461
1450        KM   SUB-BASIN 461
1451        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1452        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1453        KM     L =  .83  Kb = .052  Adj. Slope =  181.0
1454        BA    .120
1455        LG    .270    .250   4.250    .450  21.000
1456        UC    .271    .250
1457        UA       0       5      16      30      65      77      84      90      94      97
1458        UA     100
            * DDM   ***** Preserved *****

1459        KK    C104
1460        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 54 AND R102
1461        HC       2
            * DDM   ***** Preserved *****

1462        KK    C106
1463        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN C103 AND C104
1464        HC       2
            * DDM   ***** Preserved *****

1465        KK    R106
1466        KM        ROUTE FLOW FROM C106 TO C49
1467        RS       2    FLOW      -1
1468        RC     .05    .035     .05    3950    .033
1469        RX    1000    1010    1020    1030    1050    1060    1070    1080
1470        RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
            * DDM   ***** Updated *****

1471        KK     462
1472        KM   SUB-BASIN 462
1473        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1474        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1475        KM     L =  .97  Kb = .045  Adj. Slope =  297.7
1476        BA    .301
1477        LG    .300    .330   5.300    .240  12.000
1478        UC    .225    .137
1479        UA       0       5      16      30      65      77      84      90      94      97
1480        UA     100
            * DDM   ***** Preserved *****
                                          HEC-1 INPUT                                          PAGE 38

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1481        KK     C56
1482        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 56 AND C106
            *      1       2
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1483        HC       2
            * DDM   ***** Updated *****

1484        KK     480
1485        KM   SUB-BASIN 480
1486        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1487        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
1488        KM     L = 1.21  Kb = .042  Adj. Slope =  165.0
1489        BA    .731
1490        LG    .270    .270   3.580    .730  27.000
1491        UC    .325    .148
1492        UA       0       5      16      30      65      77      84      90      94      97
1493        UA     100
            * DDM   ***** Preserved *****

1494        KK    D480
1495        KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1496        KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1497        KM   FOR BASIN #: 18 & 26
1498        KM        MAXIMUM VOLUME DIVERSION = 16.5 acre-feet
            *      1
1499        DT   BS480    16.5
1500        DI       0   10000
1501        DQ       0   10000
            * DDM   ***** Preserved *****

1502        KK   RT480
1503        KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1504        DR   BS480
            * DDM   ***** Preserved *****

1505        KK   SR480
1506        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1507        KM    16.5 ACRE-FEETx43560/36x3600=5.5cfs
1508        RS       1    STOR       0
1509        SV       0     .01    16.5
1510        SQ       0     5.6     5.6
            * DDM   ***** Preserved *****

1511        KK    C480
1512        KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1513        HC       2
            * DDM   ***** Preserved *****

1514        KK    480C
1515        KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1516        HC       3    2.09
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1517        KK   RR480
1518        KM   ROUTE FLOW FROM SUB-BASIN 480 TO SUB-BASIN 500
1519        RS       1    FLOW      -1
1520        RC    .025    .025    .025    6500     .05
1521        RX       0       1       2      28      58      84      85      86
1522        RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
            * DDM   ***** Updated *****

1523        KK     500
1524        KM   SUB-BASIN 500
1525        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1526        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
1527        KM     L = 2.77  Kb = .042  Adj. Slope =  286.8
1528        BA    .930
1529        LG    .350    .400   6.000    .170   9.000
1530        UC    .421    .333
1531        UA       0       3       5       8      12      20      43      75      90      96
1532        UA     100
            * DDM   ***** Preserved *****

1533        KK    500C
1534        KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1535        HC       2    3.02
1536        ZZ
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SCHEMATIC DIAGRAM OF STREAM NETWORK

```
INPUT
 LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

  NO.      (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

  41         10
              V
              V
  51        R10
              V
              V
  57        R12
              .
              .
  63          .          20
              .           .
              .           .
  73        C20............
              .
              .
  76          .          40
              .           .
              .           .
  86          .           .          60
              .           .           .
              .           .           .
  96        60C........................
              V
              V
  99       SR60
              V
              V
 108        R60
              V
              V
 114       RR60
              .
              .
 120          .          80
              .           .
              .           .
 130        80C............
              V
              V
 133        R80
              .
              .
 139          .         100
              .           .
              .           .
 149       100C............
              V
              V
 152       R100
              .
              .
 158          .         120
              .           .
              .           .
 168       120C............
              V
              V
 171       R120
              .
              .
 177          .         140
              .           .
              .           .
 187          .           .         150
              .           .           V
              .           .           V
 197          .           .        R150
              .           .           V
              .           .           V
 203          .           .        R152
              .           .           .
              .           .           .
 209          .           .           .         160
              .           .           .           .
              .           .           .           .
 219          .           .           .           .         180
              .           .           .           .           .
              .           .           .           .           .
 229       180C..............................................
              .
              .
 232          .         210
              .           V
              .           V
 242          .        R210
              .           .
              .           .
 248          .           .         240
              .           .           .
              .           .           .
 258          .        240C............
              .           V
              .           V
 261          .       SR240
              .           .
              .           .
 268          .           .         220
              .           .           .
              .           .           .
 278          .        220C............
              .           V
              .           V
 281          .       SR220
              .           .
              .           .
 288          .           .         190
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                .          .          V
                .          .          V
298             .          .       R190
                .          .          V
                .          .          V
304             .          .       R192
                .          .          .
                .          .          .
310             .          .          .        200
                .          .          .          .
                .          .          .          .
320             .       200C.......................
                .          V
                .          V
323             .      SR200
                .          V
                .          V
330             .      200SR
                .          .
                .          .
337          C180............
                V
                V
340         SR180
                V
                V
349          R180
                .
                .
356             .        260
                .          .
                .          .
366          260C............
                V
                V
369          R260
                .
                .
376             .        280
                .          .
                .          .
386          280C............
                V
                V
389          R280
                .
                .
396             .        300
                .          .
                .          .
406          300C............
                V
                V
409          R300
                V
                V
416         RR300
                .
                .
423             .        350
                .          .
                .          .
436             .          .-------->   SF350
433             .       D350
                .          V
                .          V
439             .       350R
                .          .
                .          .
446             .          .        310
                .          .          .
                .          .          .
456             .       C310............
                .          V
                .          V
459             .       R310
                .          .
                .          .
466             .          .        320
                .          .          .
                .          .          .
481             .          .          .-------->   BS320
476             .          .       D320
                .          .          .
                .          .          .
486             .          .          .          .<--------   BS320
484             .          .          .       RT320
                .          .          .          V
                .          .          .          V
487             .          .          .       SR320
                .          .          .          .
                .          .          .          .
493          C320.................................
                .
                .
496             .        340
                .          .
                .          .
511             .          .-------->   BS340
506             .       D340
                .          .
                .          .
516             .          .          .<--------   BS340
514             .          .       RT340
                .          .          V
                .          .          V
517             .          .       SR340
                .          .          .
                .          .          .
523          C340........................
                .
                .
528             .          .<--------   SF350
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526          .      RT350
             .          V
             .          V
529          .      RR350
             .          .
             .          .
536          .          .        355
             .          .          .
             .          .          .
546          .      C355............
             .          V
             .          V
549          .      R355
             .          .
             .          .
556          .          .        360
             .          .          .
             .          .          .
570          .          .          .-------->   BS360
566          .          .      D360
             .          .          .
             .          .          .
575          .          .          .          .<--------   BS360
573          .          .          .      RT360
             .          .          .          V
             .          .          .          V
576          .          .          .      SR360
             .          .          .          .
             .          .          .          .
582       360C...................................
             .
             .
585          .      380
             .          .
             .          .
599          .          .-------->   BS380
595          .      D380
             .          .
             .          .
604          .          .          .<--------   BS380
602          .          .      RT380
             .          .          V
             .          .          V
605          .          .      SR380
             .          .          .
             .          .          .
611       380C........................
             .
             .
614          .      400
             .          .
             .          .
628          .          .-------->   BS400
624          .      D400
             .          .
             .          .
633          .          .          .<--------   BS400
631          .          .      RT400
             .          .          V
             .          .          V
634          .          .      SR400
             .          .          .
             .          .          .
640       C400........................
             .
             .
643          .      370
             .          .
             .          .
653          .          .        395
             .          .          .
             .          .          .
663          .      370C............
             .          V
             .          V
666          .      R370
             .          .
             .          .
673          .          .        378
             .          .          .
             .          .          .
683          .      378C............
             .          .
             .          .
688          .          .-------->   BS378
686          .      D378
             .          .
             .          .
693          .          .          .<--------   BS378
691          .          .      RT378
             .          .          V
             .          .          V
694          .          .      SR378
             .          .          .
             .          .          .
700          .      C378............
             .          V
             .          V
703          .      R378
             .          .
             .          .
710          .          .        390
             .          .          .
             .          .          .
724          .          .          .-------->   BS390
720          .          .      D390
             .          .          .
             .          .          .
729          .          .          .          .<--------   BS390
727          .          .          .      RT390
             .          .          .          V
             .          .          .          V
730          .          .          .      SR390
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736                 390C............
                      V
                      V
739                RR390
                      .
                      .
746                   .        398
                      .          .
                      .          .
756          398C........................
                V
                V
759          R398
                .
                .
766                385
                   .
                   .
778                   .-------->   SF385
776                D385
                      V
                      V
781                385R
                      V
                      V
788                R385
                      .
                      .
795                   .        405
                      .          .
                      .          .
805          405C........................
                V
                V
808          405R
                .
                .
815                410
                   .
                   .
825          410C............
                V
                V
828          410R
                .
                .
835                420
                   .
                   .
849                   .-------->   BS420
845                D420
                      .
                      .
854                   .          .<-------   BS420
852                   .      RT420
                      .          V
                      .          V
855                   .      SR420
                      .          .
                      .          .
861     420C....................................
                .
864          440
                V
                V
874          R70
                .
                .
880                441
                   .
                   .
890          C108............
                .
                .
895             .-------->   SPLIT
893          DIV4
                V
                V
898          R108
                .
                .
904                442
                   .
                   .
914          C67............
                .
                .
920             .-------->  BASIN4
917          DIV6
                .
                .
925                   .<-------  BASIN4
923                RTDIV6
                      V
                      V
926                RFDIV6
                      .
                      .
932         CDIV6............
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                .
935                443
                   .
                   .
948                   .-------->   WSH66
945                DIV66
                      V
                      V
951                R113
                      .
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957          C114............
                 .
960              .        444
                 .         V
                 .         V
970              .        R58
                 .
                 .
976              .              445
                 .                .
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986              .       C107............
                 .         V
                 .         V
989              .       R107
                 .
                 .
997              .                .<-------   SPLIT
995              .          RTB2
                 .            V
                 .            V
998              .        RSPLIT
                 .
                 .
1004             .                .        446
                 .                .          .
                 .                .          .
1014             .       C109........................
                 .
                 .
1020             .-------> WSH404
1017             .       DIV5
                 .         V
                 .         V
1023             .       R109
                 .
                 .
1029             .              447
                 .                .
                 .                .
1041             .                .          .<-------  WSH404
1039             .                .       RT404
                 .                .          V
                 .                .          V
1042             .                .       R404
                 .                .          .
                 .                .          .
1048             .       C110........................
                 .         V
                 .         V
1051             .       R110
                 .
                 .
1057         C115............
                 V
                 V
1060         R115
                 .
                 .
1067             .        448
                 .
                 .
1077             .              449
                 .                .
                 .                .
1087             .      C6364............
                 .         V
                 .         V
1090             .      R6364
                 .
                 .
1096             .              450
                 .                .
                 .                .
1106             .                .        451
                 .                .          .
                 .                .          .
1118             .                .          .          .<-------   WSH66
1116             .                .          .       RT66
                 .                .          .          .
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1119             .                .          .          .         452
                 .                .          .          .           .
                 .                .          .          .           .
1129             .                .          .      C6465............
                 .                .          .          V
                 .                .          .          V
1132             .                .          .      R6566
                 .                .          .          .
                 .                .          .          .
1138             .       C116.................................
                 .         V
                 .         V
1141             .     BASIN5
                 .         V
                 .         V
1148             .       R116
                 .
                 .
1154             .              453
                 .                .
                 .                .
1164             .       C117............
                 .
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1167         C118............
                 V
                 V
1170         R118
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1179          .          .-------> BASIN6
1176          .       DIV7
              .          .
              .          .
1184          .          .          .<-------  BASIN6
1182          .          .     RTDIV7
              .          .          V
              .          .          V
1185          .          .     RFDIV7
              .          .          .
              .          .          .
1191          .       CDIV7............
              .          .
              .          .
1194          .          .        454
              .          .          .
              .          .          .
1204          .       C119............
              .          V
              .          V
1207          .       R454
              .          .
              .          .
1214          .          .        415
              .          .          .
              .          .          .
1226          .          .          .          .<-------   SF385
1224          .          .          .      RT385
              .          .          .          V
              .          .          .          V
1227          .          .          .      RR385
              .          .          .          .
              .          .          .          .
1234          .       415C........................
              .          V
              .          V
1237          .       R415
              .          .
              .          .
1244          .          .        455
              .          .          .
              .          .          .
1259          .          .          .------->   BS455
1254          .          .       D455
              .          .          .
              .          .          .
1264          .          .          .          .<-------   BS455
1262          .          .          .      RT455
              .          .          .          V
              .          .          .          V
1265          .          .          .      SR455
              .          .          .          .
              .          .          .          .
1271          .          .       C455............
              .          .          .
              .          .          .
1274       455C........................
              V
              V
1277       SR440
              V
              V
1286       RR455
              .
              .
1292          .        456
              .          .
              .          .
1305          .          .-------> BASIN1
1302          .       DIV1
              .          .
              .          .
1311          .          .------->    WA30
1308          .       DIV2
              .          V
              .          V
1314          .       R456
              .          .
              .          .
1320          .          .        457
              .          .          .
              .          .          .
1330          .       C101............
              .          .
              .          .
1336          .          .-------> BASIN2
1333          .       DIV3
              .          .
              .          .
1341          .          .          .<-------  BASIN2
1339          .          .     RTDIV3
              .          .          V
              .          .          V
1342          .          .     RFDIV3
              .          .          .
              .          .          .
1348          .       CDIV3............
              .          V
              .          V
1351          .       R101
              .          .
              .          .
1357          .          .        458
              .          .          .
              .          .          .
1367          .       C103............
              .          V
              .          V
1370          .       R103
              .          .
              .          .
1378          .          .          .<-------    WA30
1376          .          .       RT30
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                 .          .          V
                 .          .          V
1379             .          .        R30
                 .          .          .
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1387             .          .          .          .<-------  BASIN1
1385             .          .          .       RTB1
                 .          .          .          V
                 .          .          .          V
1388             .          .          .         B1
                 .          .          .          V
                 .          .          .          V
1395             .          .          .        RB1
                 .          .          .          .
                 .          .          .          .
1401             .          .       CDIV............
                 .          .          .
                 .          .          .
1404             .          .          .        459
                 .          .          .          .
                 .          .          .          .
1414             .          .        C52............
                 .          .          V
                 .          .          V
1417             .          .        R52
                 .          .          .
                 .          .          .
1423             .          .          .        460
                 .          .          .          .
                 .          .          .          .
1433             .          .       C102............
                 .          .          V
                 .          .          V
1436             .          .     BASIN3
                 .          .          V
                 .          .          V
1443             .          .         R3
                 .          .          .
                 .          .          .
1449             .          .          .        461
                 .          .          .          .
                 .          .          .          .
1459             .          .       C104............
                 .          .          .
                 .          .          .
1462             .       C106............
                 .          V
                 .          V
1465             .       R106
                 .          .
                 .          .
1471             .          .        462
                 .          .          .
                 .          .          .
1481             .        C56............
                 .          .
                 .          .
1484             .          .        480
                 .          .          .
                 .          .          .
1499             .          .          .-------->  BS480
1494             .          .       D480
                 .          .          .
                 .          .          .
1504             .          .          .          .<-------  BS480
1502             .          .          .      RT480
                 .          .          .          V
                 .          .          .          V
1505             .          .          .      SR480
                 .          .          .          .
                 .          .          .          .
1511             .          .       C480............
                 .          .          .
                 .          .          .
1514         480C........................
                V
                V
1517        RR480
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                .
1523            .        500
                .          .
                .          .
1533         500C............
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(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT	10	951.	12.27	114.	31.	15.	.70		
+	ROUTED TO	R10	882.	12.40	114.	31.	15.	.70		
+	ROUTED TO	R12	833.	12.60	114.	31.	15.	.70		
+	HYDROGRAPH AT	20	959.	12.43	128.	32.	16.	1.12		
+	2 COMBINED AT	C20	1663.	12.53	240.	63.	30.	1.82		
+	HYDROGRAPH AT	40	2582.	12.30	252.	66.	32.	2.23		
+	HYDROGRAPH AT	60	1553.	12.40	228.	61.	29.	1.75		
+	3 COMBINED AT	60C	5274.	12.37	708.	188.	90.	5.80		
+	ROUTED TO	SR60	92.	14.40	92.	89.	70.	5.80		
+	ROUTED TO	R60	92.	14.40	92.	89.	70.	5.80		
+	ROUTED TO	RR60	92.	14.53	92.	89.	70.	5.80		
+	HYDROGRAPH AT	80	1868.	12.27	179.	46.	22.	1.48		
+	2 COMBINED AT	80C	1942.	12.27	266.	134.	92.	1.48		
+	ROUTED TO	R80	1919.	12.27	266.	134.	92.	1.48		
+	HYDROGRAPH AT	100	404.	12.20	58.	15.	7.	.48		
+	2 COMBINED AT	100C	2300.	12.27	321.	148.	99.	1.96		
+	ROUTED TO	R100	2292.	12.30	321.	148.	99.	1.96		
+	HYDROGRAPH AT	120	3232.	12.27	326.	88.	42.	2.20		
+	2 COMBINED AT	120C	5469.	12.27	636.	229.	141.	4.16		
+	ROUTED TO	R120	5397.	12.30	636.	229.	140.	4.16		
+	HYDROGRAPH AT	140	632.	12.13	64.	17.	8.	.60		
+	HYDROGRAPH AT	150	135.	13.20	47.	13.	6.	.41		
+	ROUTED TO	R150	134.	13.30	47.	13.	6.	.41		
+	ROUTED TO	R152	133.	13.50	47.	13.	6.	.41		
+	HYDROGRAPH AT	160	217.	12.40	35.	9.	4.	.37		
+	HYDROGRAPH AT	180	785.	12.37	90.	23.	11.	1.00		
+	5 COMBINED AT	180C	6707.	12.30	857.	286.	168.	6.54		
+	HYDROGRAPH AT	210	870.	12.20	80.	21.	10.	.58		
+	ROUTED TO	R210	815.	12.27	80.	21.	10.	.58		
+	HYDROGRAPH AT	240	1405.	12.30	155.	39.	19.	1.40		
+	2 COMBINED AT	240C	2185.	12.30	233.	60.	29.	1.98		
+	ROUTED TO	SR240	634.	12.77	186.	49.	23.	1.98		
+	HYDROGRAPH AT	220	1126.	12.17	98.	25.	12.	.73		
+	2 COMBINED AT	220C	1138.	12.20	279.	73.	35.	2.71		
+	ROUTED TO	SR220	914.	12.43	272.	71.	34.	2.71		

+ HYDROGRAPH AT	190	1403.	12.17	116.	31.	15.	.92
+ ROUTED TO	R190	1348.	12.23	116.	31.	15.	.92
ROUTED TO	R192	1267.	12.30	116.	31.	15.	.92
+ HYDROGRAPH AT	200	806.	12.17	69.	19.	9.	.54
+ 3 COMBINED AT	200C	2624.	12.27	447.	119.	57.	4.16
+ ROUTED TO	SR200	2493.	12.37	442.	115.	55.	4.16
+ ROUTED TO	200SR	1725.	12.60	320.	85.	41.	4.16
+ 2 COMBINED AT	C180	6707.	12.30	1170.	369.	208.	10.69
+ ROUTED TO	SR180	138.	18.53	138.	137.	111.	10.69
+ ROUTED TO	R180	138.	18.50	138.	137.	110.	10.69
+ HYDROGRAPH AT	260	418.	12.10	43.	12.	6.	.27
+ 2 COMBINED AT	260C	527.	12.10	175.	148.	117.	.27
+ ROUTED TO	R260	514.	12.20	175.	148.	117.	.27
+ HYDROGRAPH AT	280	478.	12.10	42.	12.	6.	.30
+ 2 COMBINED AT	280C	945.	12.13	214.	158.	122.	.57
+ ROUTED TO	R280	909.	12.20	214.	158.	122.	.57
+ HYDROGRAPH AT	300	875.	12.20	109.	29.	14.	.99
+ 2 COMBINED AT	300C	1769.	12.20	319.	185.	135.	1.56
ROUTED TO	R300	1732.	12.27	319.	185.	135.	1.56
+ ROUTED TO	RR300	1699.	12.33	319.	184.	134.	1.56
+ HYDROGRAPH AT	350	1192.	12.20	103.	27.	13.	.97
+ DIVERSION TO	SF350	715.	12.20	62.	16.	8.	.97
+ HYDROGRAPH AT	D350	477.	12.20	41.	11.	5.	.97
+ ROUTED TO	350R	414.	12.43	41.	11.	5.	.97
+ HYDROGRAPH AT	310	376.	12.33	49.	12.	6.	.56
+ 2 COMBINED AT	C310	749.	12.40	89.	23.	11.	.94
+ ROUTED TO	R310	679.	12.77	89.	23.	11.	.94
+ HYDROGRAPH AT	320	965.	12.20	123.	34.	17.	.97
+ DIVERSION TO	BS320	377.	11.97	21.	6.	3.	.97
+ HYDROGRAPH AT	D320	965.	12.20	109.	28.	14.	.97
+ HYDROGRAPH AT	RT320	377.	11.97	21.	6.	3.	.97
+ ROUTED TO	SR320	4.	4.13	4.	4.	3.	.97
+ 4 COMBINED AT	C320	2601.	12.33	514.	238.	161.	3.47
+ HYDROGRAPH AT	340	1471.	12.17	186.	55.	26.	1.45
DIVERSION TO	BS340	1471.	12.17	104.	28.	14.	1.45
+ HYDROGRAPH AT	D340	1199.	12.33	97.	27.	13.	1.45
+ HYDROGRAPH AT	RT340	1471.	12.17	104.	28.	14.	1.45
+ ROUTED TO	SR340	19.	9.00	19.	19.	14.	1.45

+	3 COMBINED AT	C340	3786.	12.33	624.	282.	186.	4.92
+	HYDROGRAPH AT	RT350	715.	12.20	62.	16.	8.	.97
+	ROUTED TO	RR350	630.	12.43	62.	16.	8.	.97
+	HYDROGRAPH AT	355	500.	12.33	69.	18.	9.	.66
+	2 COMBINED AT	C355	1080.	12.40	130.	34.	16.	1.24
+	ROUTED TO	R355	971.	12.70	130.	34.	16.	1.24
+	HYDROGRAPH AT	360	504.	12.23	84.	25.	12.	.67
+	DIVERSION TO	BS360	504.	12.23	53.	14.	7.	.67
+	HYDROGRAPH AT	D360	306.	12.63	38.	11.	5.	.67
+	HYDROGRAPH AT	RT360	504.	12.23	53.	14.	7.	.67
+	ROUTED TO	SR360	10.	9.83	10.	10.	7.	.67
+	4 COMBINED AT	360C	4013.	12.33	791.	332.	213.	6.83
+	HYDROGRAPH AT	380	637.	12.23	81.	21.	10.	.83
+	DIVERSION TO	BS380	637.	12.23	56.	14.	7.	.83
+	HYDROGRAPH AT	D380	314.	12.63	27.	7.	3.	.83
+	HYDROGRAPH AT	RT380	637.	12.23	56.	14.	7.	.83
+	ROUTED TO	SR380	10.	11.63	10.	10.	7.	.83
+	3 COMBINED AT	380C	4016.	12.33	822.	348.	223.	7.67
+	HYDROGRAPH AT	400	579.	12.17	58.	15.	7.	.57
+	DIVERSION TO	BS400	289.	12.00	10.	3.	1.	.57
+	HYDROGRAPH AT	D400	579.	12.17	49.	13.	6.	.57
+	HYDROGRAPH AT	RT400	289.	12.00	10.	3.	1.	.57
+	ROUTED TO	SR400	2.	8.73	2.	2.	1.	.57
+	3 COMBINED AT	C400	4417.	12.33	869.	361.	230.	8.24
+	HYDROGRAPH AT	370	588.	12.30	79.	21.	10.	.67
+	HYDROGRAPH AT	395	182.	12.23	25.	7.	3.	.20
+	2 COMBINED AT	370C	758.	12.30	103.	28.	13.	.87
+	ROUTED TO	R370	728.	12.40	103.	28.	13.	.87
+	HYDROGRAPH AT	378	158.	12.13	18.	5.	2.	.15
+	2 COMBINED AT	378C	819.	12.37	120.	33.	16.	1.01
+	DIVERSION TO	BS378	719.	12.37	79.	20.	9.	1.01
+	HYDROGRAPH AT	D378	100.	11.90	42.	13.	6.	1.01
+	HYDROGRAPH AT	RT378	719.	12.37	79.	20.	9.	1.01
+	ROUTED TO	SR378	13.	11.93	13.	13.	9.	1.01
+	2 COMBINED AT	C378	113.	11.93	53.	24.	16.	1.01
+	ROUTED TO	R378	113.	12.17	53.	24.	16.	1.01
+	HYDROGRAPH AT	390	463.	12.03	33.	10.	5.	.24
+	DIVERSION TO	BS390	95.	11.73	6.	2.	1.	.24

+	HYDROGRAPH AT	D390	463.	12.03	30.	8.	4.	.24
+	HYDROGRAPH AT	RT390	95.	11.73	6.	2.	1.	.24
	ROUTED TO	SR390	1.	.90	1.	1.	1.	.24
+	2 COMBINED AT	390C	464.	12.03	31.	9.	5.	.24
+	ROUTED TO	RR390	399.	12.13	31.	9.	5.	.24
+	HYDROGRAPH AT	398	79.	12.13	11.	3.	1.	.08
+	3 COMBINED AT	398C	578.	12.13	92.	35.	22.	1.34
+	ROUTED TO	R398	541.	12.27	92.	35.	22.	1.34
+	HYDROGRAPH AT	385	782.	12.23	87.	24.	12.	.65
+	DIVERSION TO	SF385	313.	12.23	35.	10.	5.	.65
+	HYDROGRAPH AT	D385	469.	12.23	52.	14.	7.	.65
+	ROUTED TO	385R	411.	12.50	52.	14.	7.	.65
+	ROUTED TO	R385	389.	12.63	52.	14.	7.	.65
+	HYDROGRAPH AT	405	390.	12.20	54.	15.	7.	.44
+	3 COMBINED AT	405C	1100.	12.27	194.	63.	35.	2.43
+	ROUTED TO	405R	1077.	12.30	194.	63.	35.	2.43
+	HYDROGRAPH AT	410	84.	12.13	11.	3.	2.	.09
+	2 COMBINED AT	410C	1142.	12.30	204.	65.	37.	2.51
	ROUTED TO	410R	1129.	12.33	204.	65.	37.	2.51
+	HYDROGRAPH AT	420	242.	12.20	31.	8.	4.	.31
+	DIVERSION TO	BS420	242.	12.20	17.	4.	2.	.31
+	HYDROGRAPH AT	D420	172.	12.43	15.	4.	2.	.31
+	HYDROGRAPH AT	RT420	242.	12.20	17.	4.	2.	.31
+	ROUTED TO	SR420	13.	11.80	13.	4.	2.	.31
+	4 COMBINED AT	420C	5415.	12.33	1087.	430.	269.	10.87
+	HYDROGRAPH AT	440	180.	12.03	12.	3.	2.	.08
+	ROUTED TO	R70	176.	12.07	12.	3.	2.	.08
+	HYDROGRAPH AT	441	16.	12.03	1.	0.	0.	.01
+	2 COMBINED AT	C108	191.	12.07	14.	4.	2.	.09
+	DIVERSION TO	SPLIT	96.	12.07	7.	2.	1.	.09
+	HYDROGRAPH AT	DIV4	96.	12.07	7.	2.	1.	.09
+	ROUTED TO	R108	88.	12.13	7.	2.	1.	.09
+	HYDROGRAPH AT	442	102.	12.10	9.	2.	1.	.10
+	2 COMBINED AT	C67	187.	12.10	15.	4.	2.	.19
	DIVERSION TO	BASIN4	115.	12.10	6.	1.	1.	.19
+	HYDROGRAPH AT	DIV6	72.	12.10	10.	3.	1.	.19
+	HYDROGRAPH AT	RTDIV6	115.	12.10	6.	1.	1.	.19
+	ROUTED TO	RFDIV6	1.	11.90	1.	1.	1.	.19

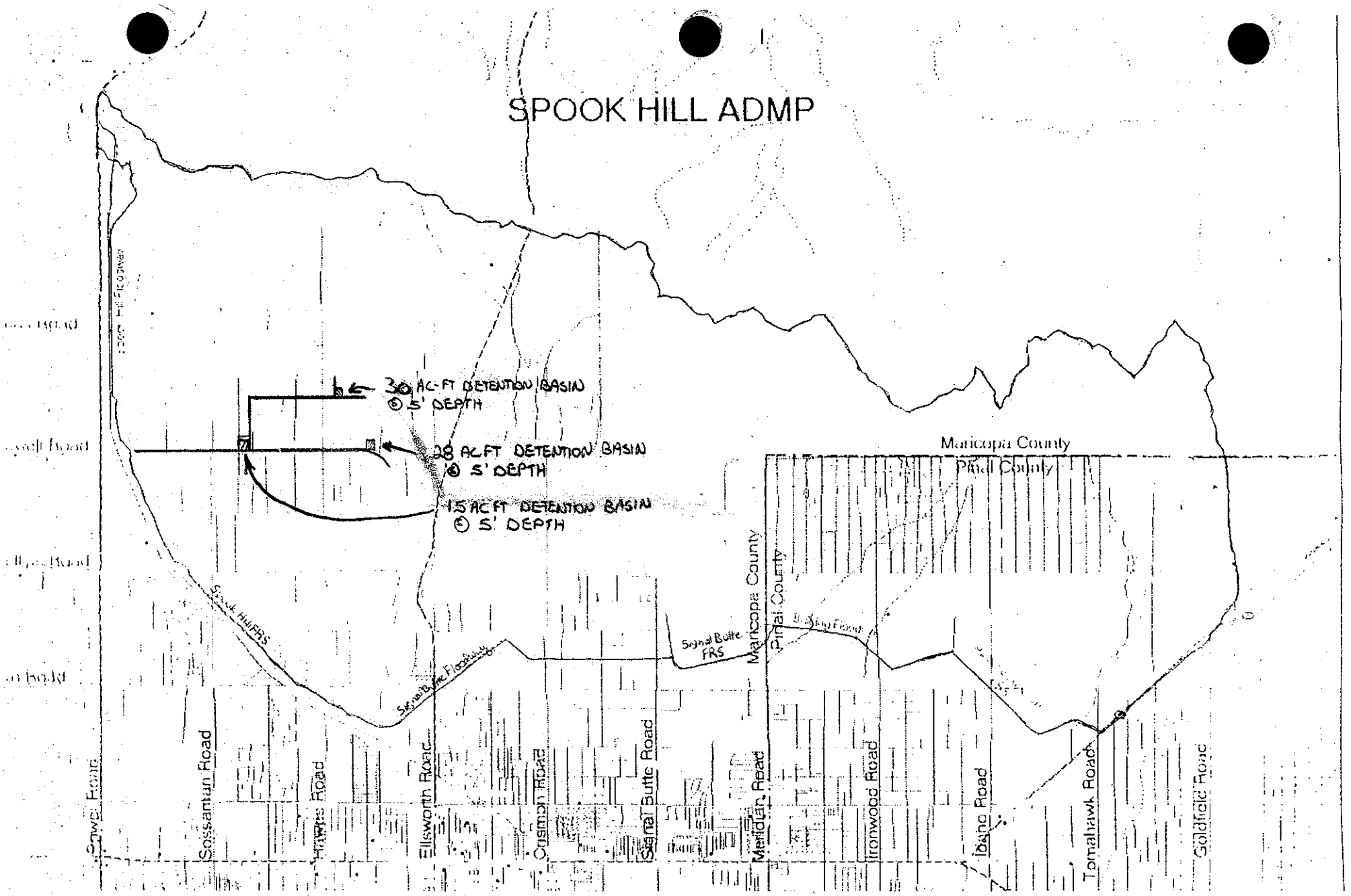
+	2 COMBINED AT	CDIV6	74.	12.10	10.	4.	2.	.19
+	HYDROGRAPH AT	443	148.	12.07	14.	4.	2.	.08
	DIVERSION TO	WSH66	78.	11.90	12.	3.	2.	.08
+	HYDROGRAPH AT	DIV66	70.	12.07	3.	1.	0.	.08
+	ROUTED TO	R113	69.	12.07	3.	1.	0.	.08
+	2 COMBINED AT	C114	140.	12.07	13.	4.	2.	.27
+	HYDROGRAPH AT	444	82.	12.03	5.	1.	1.	.04
+	ROUTED TO	R58	75.	12.07	5.	1.	1.	.04
+	HYDROGRAPH AT	445	296.	12.03	18.	5.	2.	.19
+	2 COMBINED AT	C107	365.	12.03	22.	6.	3.	.23
+	ROUTED TO	R107	365.	12.07	22.	6.	3.	.23
+	HYDROGRAPH AT	RTB2	96.	12.07	7.	2.	1.	.09
+	ROUTED TO	RSPLIT	95.	12.07	7.	2.	1.	.09
+	HYDROGRAPH AT	446	65.	12.03	6.	2.	1.	.04
+	3 COMBINED AT	C109	520.	12.07	35.	9.	4.	.27
+	DIVERSION TO	WSH404	35.	11.73	8.	2.	1.	.27
+	HYDROGRAPH AT	DIV5	485.	12.07	27.	7.	3.	.27
+	ROUTED TO	R109	469.	12.10	27.	7.	3.	.27
	HYDROGRAPH AT	447	138.	12.07	12.	4.	2.	.09
+	HYDROGRAPH AT	RT404	35.	11.73	8.	2.	1.	.27
+	ROUTED TO	R404	35.	11.90	8.	2.	1.	.27
+	3 COMBINED AT	C110	635.	12.07	46.	13.	6.	.36
+	ROUTED TO	R110	632.	12.10	46.	13.	6.	.36
+	2 COMBINED AT	C115	764.	12.10	59.	17.	8.	.63
+	ROUTED TO	R115	767.	12.10	59.	17.	8.	.63
+	HYDROGRAPH AT	448	88.	12.03	6.	2.	1.	.05
+	HYDROGRAPH AT	449	80.	12.03	5.	1.	1.	.05
+	2 COMBINED AT	C6364	166.	12.03	11.	3.	1.	.09
+	ROUTED TO	R6364	137.	12.17	11.	3.	1.	.09
+	HYDROGRAPH AT	450	61.	12.20	6.	2.	1.	.07
+	HYDROGRAPH AT	451	18.	12.17	2.	1.	0.	.03
+	HYDROGRAPH AT	RT66	78.	11.90	12.	3.	2.	.08
+	HYDROGRAPH AT	452	62.	12.03	4.	1.	1.	.04
+	2 COMBINED AT	C6465	140.	12.03	16.	4.	2.	.04
	ROUTED TO	R6566	135.	12.10	16.	4.	2.	.04
+	4 COMBINED AT	C116	341.	12.17	35.	9.	4.	.23
+	ROUTED TO	BASIN5	152.	12.47	35.	9.	4.	.23
+	ROUTED TO	R116	150.	12.53	35.	9.	4.	.23

HYDROGRAPH AT	453	62.	12.10	7.	2.	1.	.06
2 COMBINED AT	C117	169.	12.50	41.	11.	5.	.29
2 COMBINED AT	C118	852.	12.10	99.	28.	14.	.92
ROUTED TO	R118	842.	12.10	99.	28.	14.	.92
DIVERSION TO	BASIN6	243.	12.10	10.	2.	1.	.92
HYDROGRAPH AT	DIV7	599.	12.10	89.	25.	13.	.92
HYDROGRAPH AT	RTDIV7	243.	12.10	10.	2.	1.	.92
ROUTED TO	RFDIV7	1.	11.97	1.	1.	1.	.92
2 COMBINED AT	CDIV7	600.	12.10	90.	26.	13.	.92
HYDROGRAPH AT	454	157.	12.17	21.	6.	3.	.18
2 COMBINED AT	C119	748.	12.13	110.	32.	16.	1.10
ROUTED TO	R454	722.	12.20	110.	32.	16.	1.10
HYDROGRAPH AT	415	412.	12.17	55.	16.	7.	.45
HYDROGRAPH AT	RT385	313.	12.23	35.	10.	5.	.65
ROUTED TO	RR385	259.	12.53	35.	10.	5.	.65
3 COMBINED AT	415C	1265.	12.23	196.	56.	28.	1.71
ROUTED TO	R415	1251.	12.27	196.	56.	28.	1.71
HYDROGRAPH AT	455	1346.	12.13	142.	43.	21.	1.11
DIVERSION TO	BS455	1346.	12.13	137.	37.	18.	1.11
HYDROGRAPH AT	D455	55.	12.77	16.	6.	3.	1.11
HYDROGRAPH AT	RT455	1346.	12.13	137.	37.	18.	1.11
ROUTED TO	SR455	25.	10.47	25.	25.	18.	1.11
2 COMBINED AT	C455	80.	12.77	41.	31.	21.	1.11
3 COMBINED AT	455C	6477.	12.37	1287.	505.	313.	13.69
ROUTED TO	SR440	801.	13.80	785.	505.	312.	13.69
ROUTED TO	RR455	801.	14.13	785.	505.	310.	13.69
HYDROGRAPH AT	456	468.	12.07	35.	10.	5.	.26
DIVERSION TO	BASIN1	184.	12.07	8.	2.	1.	.26
HYDROGRAPH AT	DIV1	284.	12.07	27.	8.	4.	.26
DIVERSION TO	WA30	58.	12.07	10.	3.	2.	.26
HYDROGRAPH AT	DIV2	226.	12.07	18.	4.	2.	.26
ROUTED TO	R456	213.	12.13	18.	4.	2.	.26
HYDROGRAPH AT	457	264.	12.07	20.	5.	3.	.19
2 COMBINED AT	C101	462.	12.10	38.	10.	5.	.45
DIVERSION TO	BASIN2	165.	12.10	7.	2.	1.	.45
HYDROGRAPH AT	DIV3	297.	12.10	30.	8.	4.	.45
HYDROGRAPH AT	RTDIV3	165.	12.10	7.	2.	1.	.45
ROUTED TO	RFDIV3	2.	11.90	2.	2.	1.	.45

+	2 COMBINED AT	CDIV3	299.	12.10	32.	9.	5.	.45
+	ROUTED TO	R101	297.	12.10	32.	9.	5.	.45
	HYDROGRAPH AT	458	356.	12.03	25.	7.	3.	.19
+	2 COMBINED AT	C103	635.	12.07	56.	16.	8.	.64
+	ROUTED TO	R103	630.	12.07	56.	16.	8.	.64
+	HYDROGRAPH AT	RT30	58.	12.07	10.	3.	2.	.26
+	ROUTED TO	R30	57.	12.10	10.	3.	2.	.26
+	HYDROGRAPH AT	RTB1	184.	12.07	8.	2.	1.	.26
+	ROUTED TO	B1	37.	12.23	8.	2.	1.	.26
+	ROUTED TO	RB1	37.	12.30	8.	2.	1.	.26
+	2 COMBINED AT	CDIV	86.	12.20	17.	5.	3.	.12
+	HYDROGRAPH AT	459	44.	12.03	3.	1.	0.	.03
+	2 COMBINED AT	C52	113.	12.10	20.	6.	3.	.15
+	ROUTED TO	R52	112.	12.17	20.	6.	3.	.15
+	HYDROGRAPH AT	460	214.	12.07	19.	6.	3.	.14
+	2 COMBINED AT	C102	313.	12.07	39.	12.	6.	.29
+	ROUTED TO	BASIN3	71.	12.63	39.	12.	6.	.29
+	ROUTED TO	R3	71.	12.77	39.	12.	6.	.29
	HYDROGRAPH AT	461	161.	12.10	17.	5.	2.	.12
+	2 COMBINED AT	C104	213.	12.10	55.	17.	8.	.41
+	2 COMBINED AT	C106	835.	12.07	110.	32.	16.	1.05
+	ROUTED TO	R106	797.	12.13	110.	32.	16.	1.05
+	HYDROGRAPH AT	462	538.	12.07	40.	11.	5.	.30
+	2 COMBINED AT	C56	1254.	12.10	149.	42.	21.	1.35
+	HYDROGRAPH AT	480	1050.	12.10	96.	29.	14.	.73
+	DIVERSION TO	BS480	455.	11.90	27.	8.	4.	.73
+	HYDROGRAPH AT	D480	1050.	12.10	78.	21.	10.	.73
+	HYDROGRAPH AT	RT480	455.	11.90	27.	8.	4.	.73
+	ROUTED TO	SR480	6.	3.90	6.	6.	4.	.73
+	2 COMBINED AT	C480	1056.	12.10	84.	27.	14.	.73
+	3 COMBINED AT	480C	2519.	12.10	964.	588.	354.	2.09
+	ROUTED TO	RR480	2357.	12.17	962.	588.	354.	2.09
+	HYDROGRAPH AT	500	1073.	12.27	122.	33.	16.	.93
+	2 COMBINED AT	500C	3248.	12.20	1073.	615.	368.	3.02

** NORMAL END OF HEC-1 ***

SPOOK HILL ADMP



MODEL UPDATE BASED ON PROVIDING IMPROVED NATURAL CHANNELS ALONG OAK STREET BETWEEN SOSSAMAN & THUNDER MTN., ALONG MCDOWELL BETWEEN POWER & ELLSWORTH, ALONG HAWES A SHORT DISTANCE NORTH OF OAK STREET, AND ALONG SOSSAMAN BETWEEN MCDOWELL AND OAK STREET. THESE CHANNELS WILL GENERATE NEW SUB-BASINS 410, 411, AND 413 FROM SUB-BASINS 415 AND 420. DETENTION BASINS WILL BE ADDED TO SUB-BASINS 370 & 395, 385 & 411, AND 455.

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1****************************************
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 *                                      *                                                    *
 *                                      *                                                    *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *                                                    *    U.S. ARMY CORPS OF ENGINEERS
 *                                      *                                                    *
 *              JUN   1998              *                                                    *    HYDROLOGIC ENGINEERING CENTER
 *                                      *                                                    *
 *           VERSION 4.1                *                                                    *          609 SECOND STREET
 *                                      *                                                    *
 *                                      *                                                    *       DAVIS, CALIFORNIA 95616
 *                                      *                                                    *
 *  RUN DATE   12JUN00  TIME  10:06:17  *                                                    *           (916) 756-1104
 *                                      *                                                    *
 *                                      *                                                    *
 ****************************************
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X     X  XXXXXXX   XXXXX          X
X     X  X        X     X        XX
X     X  X        X               X
XXXXXXX  XXXX     X        XXXXX  X
X     X  X        X               X
X     X  X        X     X         X
X     X  XXXXXXX   XXXXX         XXX
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THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

1 HEC-1 INPUT PAGE 1

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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  1           ID   EXISTING LAND USE CALCULATIONS WERE BASED ON 1 YR. FROM 11/5/99
  2           ID   FOR LAS SENDAS       AND LANDISCOR JAN.1999 AERIAL PHOTOGPRAPHS
  3           ID
  4           ID   ALL DAMS WERE ANALYZED WITH NO STORAGE BELOW PRINCIPLE SPILLWAY ELEVATIONS
  5           ID
  6           ID   A CONSERVATIVE ESTIMATE WAS USED FOR THE LOCATION OF THE CENTROID FOR
  7           ID   PRECIPITATION VALUES
  8           ID
  9           ID   ALL CHANNEL ROUTING INFORMATION WAS OBTAINED FROM MCFCD SPOOK HILL   SIGNAL
 10           ID   BUTTE        AND BULLDOG FLOODWAY PLANS
 11           ID
 12           ID   MODEL UPDATE BASED ON PROVIDING IMPROVED NATURAL CHANNELS ALONG OAK STREET
 13           ID   BETWEEN SOSSAMAN & THUNDER MTN., ALONG MCDOWELL BETWEEN POWER & ELLSWORTH,
 14           ID   ALONG HAWES A SHORT DISTANCE NORTH OF OAK STREET, AND ALONG SOSSAMAN
 15           ID   BETWEEN MCDOWELL AND OAK STREET.  THESE CHANNELS WILL GENERATE NEW SUB-BASINS
 16           ID   410, 411, AND 413 FROM SUB-BASINS 415 AND 420. DETENTION BASINS WILL BE ADDED
 17           ID   TO SUB-BASINS 370 & 395, 385 & 411, AND 455.
 18           ID
 19           ID   ANALYSIS PERFORMED BY WOOD/PATEL; MW;  6/01/2000;      FILE: S24CE17.DAT
 20           ID
 21           ID   DDM MCUHP1 SPOOK HILL AMDP - EXISTING CONDITIONS MODEL - 100YR, 24HR STORM
              *DIAGRAM
 22           IT       2                    1500
 23           IO       3
 24           IN      15
 25           JD    3.81    0.01
 26           PC    .000    .002    .005    .008    .011    .014    .017    .020    .023    .026
 27           PC    .029    .032    .035    .038    .041    .044    .048    .052    .056    .060
 28           PC    .064    .068    .072    .076    .080    .085    .090    .095    .100    .105
 29           PC    .110    .115    .120    .126    .133    .140    .147    .155    .163    .172
 30           PC    .181    .191    .203    .218    .236    .257    .283    .387    .663    .707
 31           PC    .735    .758    .776    .791    .804    .815    .825    .834    .842    .849
 32           PC    .856    .863    .869    .875    .881    .887    .893    .898    .903    .908
 33           PC    .913    .918    .922    .926    .930    .934    .938    .942    .946    .950
 34           PC    .953    .956    .959    .962    .965    .968    .971    .974    .977    .980
 35           PC    .983    .986    .989    .992    .995    .998   1.000
 36           JD    3.58   10.00
 37           JD    3.43   30.00
 38           JD    3.28   60.00
 39           JD    3.22   90.00
 40           JD    3.18  120.00
 41           JD    3.14  150.00
 42           JD    3.05  300.00
 43           JD    2.97  500.00
              * DDM   ***** Updated *****

 44           KK      10
 45           KM   SUB-BASIN 10
 46           KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 47           KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
 48           KM     L = 2.00  Kb = .044  Adj. Slope =  165.0
 49           BA    .702
 50           LG    .350    .320   7.600    .090  15.000
 51           UC    .421    .302
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  52        UA       0       3       5       8      12      20      43      75      90      96
1                                     HEC-1 INPUT                                                    PAGE  2

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  53        UA     100
            * DDM   ***** Preserved *****

  54        KK     R10
  55        KM   ROUTING OF FLOW FROM SUB-BASIN 10 TO R12
  56        RS       4    FLOW      -1
  57        RC    .045     .03    .045    8700    .021
  58        RX       0       1       2      17      27      42      43      44
  59        RY       5       5       5       0       0       5       5       5
            * DDM   ***** Preserved *****

  60        KK     R12
  61        KM   ROUTING OF FLOW FROM R12 TO SUB-BASIN 20
  62        RS       6    FLOW      -1
  63        RC    .045     .03    .045    4500     .01
  64        RX       0       1      30    37.5    57.5      65      94      95
  65        RY       3     2.5     2.5       0       0     2.5     2.5       3
            * DDM   ***** Updated *****

  66        KK      20
  67        KM   SUB-BASIN 20
  68        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
  69        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
  70        KM     L = 2.50  Kb = .041  Adj. Slope =   88.0
  71        BA   1.120
  72        LG    .350    .390   5.800    .190   1.000
  73        UC    .658    .454
  74        UA       0       3       5       8      12      20      43      75      90      96
  75        UA     100
            * DDM   ***** Preserved *****

  76        KK     C20
  77        KM   HYDROGRAPH COMBINATION OF SUB-BASINS 10 AND 20
  78        HC       2
            * DDM   ***** Updated *****

  79        KK      40
  80        KM   SUB-BASIN 40
  81        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
  82        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
  83        KM     L = 3.08  Kb = .036  Adj. Slope =  189.0
  84        BA   2.233
  85        LG    .340    .340   4.900    .280   5.000
  86        UC    .496    .264
  87        UA       0       3       5       8      12      20      43      75      90      96
  88        UA     100
            * DDM   ***** Updated *****

  89        KK      60
  90        KM   SUB-BASIN 60
  91        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
  92        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .990
  93        KM     L = 4.19  Kb = .038  Adj. Slope =  209.6
  94        BA   1.746
  95        LG    .330    .350   5.800    .190   9.000
1                                     HEC-1 INPUT                                                    PAGE  3

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  96        UC    .596    .477
  97        UA       0       3       5       8      12      20      43      75      90      96
  98        UA     100
            * DDM   ***** Preserved *****

  99        KK     60C
 100        KM   HYDROGRAPH COMBINATION FOR APACHE JUNCTION FRS
            *      1       2
 101        HC       3
            * DDM   ***** Preserved *****

 102        KK    SR60
 103        KM   APACHE JUNCTION FRS AS-BUILT PLANS 12/19/88
 104        KM   OUTLET PIPE=30"RCP; L=136.6'; INLET INV.=1783.5; OUTLET INV.=1783
 105        KM   EMERGENCY SPILLWAY ELEV.=1799.77'; PRINCIPLE SPILLWAY ELEV.=1793.5'
 106        KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 100 ACRE-FEET
 107        RS       1    STOR       0
 108        SV       0       1     100     200     300     400
 109        SQ       0      71      81      87    91.5      94
 110        SE    83.5    93.5      96    97.7      99   99.77
            * DDM   ***** Preserved *****

 111        KK     R60
 112        KM        ROUTE FLOW THROUGH BULLDOG FLOODWAY FROM APACHE JUNCTION FRS
 113        RS       1    FLOW      -1
 114        RC    .016    .016    .016    2850    .012
 115        RX       0       1       2     2.1     5.6     5.7       6       7
 116        RY     3.5     3.5     3.5       0       0     3.5     3.5     3.5
            * DDM   ***** Preserved *****

 117        KK    RR60
 118        KM   ROUTE FLOW FROM BULLDOG FLOODWAY TO SUB-BASIN 80
 119        RS       4    FLOW      -1
 120        RC    .016    .016    .016    3500    .005
 121        RX       0       1       2     2.1     7.1     7.2       8       9
 122        RY     3.5     3.5     3.5       0       0     3.5     3.5     3.5
            * DDM   ***** Updated *****
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 123          KK      80
 124          KM   SUB-BASIN 80
 125          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 126          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .991
 127          KM     L = 2.69  Kb = .039  Adj. Slope =  229.8
 128          BA   1.475
 129          LG    .330    .330   5.600    .210   4.000
 130          UC    .433    .259
 131          UA       0       3       5       8      12      20      43      75      90      96
 132          UA     100
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE  4

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


 133          KK     80C
 134          KM   HYDROGRAPH COMBINATION FOR FLOW FROM APACHE JUNCTION FRS & SUB-BASIN 80
 135          HC       2   1.475
              * DDM   ***** Preserved *****

 136          KK     R80
 137          KM   ROUTE FLOW FROM SUB-BASIN 80 TO SUB-BASIN 100
 138          RS       1    FLOW      -1
 139          RC    .025    .016    .025    1200    .003
 140          RX       0       2       6     6.1    41.1    41.2    56.2    58.2
 141          RY     5.5     4.5     4.5       0       0     4.5     4.5     5.5
              * DDM   ***** Updated *****

 142          KK     100
 143          KM   SUB-BASIN 100
 144          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 145          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
 146          KM     L = 1.94  Kb = .046  Adj. Slope =  108.0
 147          BA    .484
 148          LG    .320    .290   5.100    .260   3.000
 149          UC    .533    .473
 150          UA       0       5      16      30      65      77      84      90      94      97
 151          UA     100
              * DDM   ***** Preserved *****

 152          KK    100C
 153          KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 80 & 100
 154          HC       2
              * DDM   ***** Preserved *****

 155          KK    R100
 156          KM   ROUTE FLOW FROM SUB-BASIN 100 TO SUB-BASIN 120
 157          RS       1    FLOW      -1
 158          RC    .016    .016    .016     940    .005
 159          RX       0       1       2     2.1    52.1    52.2      53      54
 160          RY     4.5     4.5     4.5       0       0     4.5     4.5     4.5
              * DDM   ***** Updated *****

 161          KK     120
 162          KM   SUB-BASIN 120
 163          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 164          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
 165          KM     L = 3.07  Kb = .037  Adj. Slope =  239.0
 166          BA   2.202
 167          LG    .330    .280   6.800    .130  11.000
 168          UC    .429    .226
 169          UA       0       3       5       8      12      20      43      75      90      96
 170          UA     100
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE  5

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


 171          KK    120C
 172          KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 100 & 120
 173          HC       2
              * DDM   ***** Preserved *****

 174          KK    R120
 175          KM   ROUTE FLOW FROM SUB-BASIN 120 TO SIGNAL BUTTE FRS
 176          RS       1    FLOW      -1
 177          RC    .025    .016    .025    2100    .005
 178          RX       0       6      10    10.1    60.1    60.2    74.2    80.2
 179          RY       8       5       5       0       0       5       5       8
              * DDM   ***** Updated *****

 180          KK     140
 181          KM   SUB-BASIN 140
 182          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 183          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
 184          KM     L = 1.61  Kb = .044  Adj. Slope =  149.0
 185          BA    .598
 186          LG    .310    .280   4.200    .440   5.000
 187          UC    .421    .278
 188          UA       0       5      16      30      65      77      84      90      94      97
 189          UA     100
              * DDM   ***** Updated *****

 190          KK     150
 191          KM   SUB-BASIN 150
 192          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 193          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
 194          KM     L = 1.50  Kb = .047  Adj. Slope =  315.0
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195          BA    .408
196          LG    .350    .360   5.100    .260   7.000
197          UC   1.579   1.417
198          UA       0       3       5       8      12      20      43      75      90      96
199          UA     100
             * DDM   ***** Preserved *****

200          KK    R150
201          KM   ROUTING OF FLOW FROM SUB-BASIN 150 TO R152
202          RS       3    FLOW      -1
203          RC    .045     .04    .045    3100    .032
204          RX       0       1       2      23      33      54      55      56
205          RY       7       7       7       0       0       7       7       7
             * DDM   ***** Preserved *****

206          KK    R152
207          KM   ROUTING OF FLOW FROM R152 TO SUB-BASIN 160
208          RS       6    FLOW      -1
209          RC    .045     .03    .045    5900    .019
210          RX       0       1       2       8      33      39      40      41
211          RY       2       2       2       0       0       2       2       2
             * DDM   ***** Updated *****
1                                          HEC-1 INPUT                                                    PAGE  6

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

212          KK     160
213          KM   SUB-BASIN 160
214          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
215          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
216          KM     L = 2.10  Kb = .047  Adj. Slope =  129.0
217          BA    .369
218          LG    .340    .330   4.150    .440   1.000
219          UC    .587    .655
220          UA       0       3       5       8      12      20      43      75      90      96
221          UA     100
             * DDM   ***** Updated *****

222          KK     180
223          KM   SUB-BASIN 180
224          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
225          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
226          KM     L = 2.42  Kb = .041  Adj. Slope =  140.0
227          BA   1.000
228          LG    .350    .350   4.150    .430    .000
229          UC    .571    .403
230          UA       0       3       5       8      12      20      43      75      90      96
231          UA     100
             * DDM   ***** Preserved *****

232          KK    180C
233          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
234          HC       5
             * DDM   ***** Updated *****

235          KK     210
236          KM   SUB-BASIN 210
237          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
238          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
239          KM     L = 1.84  Kb = .045  Adj. Slope =  315.0
240          BA    .583
241          LG    .350    .350   7.000    .120   5.000
242          UC    .321    .232
243          UA       0       3       5       8      12      20      43      75      90      96
244          UA     100
             * DDM   ***** Preserved *****

245          KK    R210
246          KM   ROUTING OF FLOW FROM SUB-BASIN 210 TO SUB-BASIN 220
247          RS       2    FLOW      -1
248          RC    .045     .03    .045    5100    .022
249          RX       0       1       2      14      34      46      47      48
250          RY       4       4       4       0       0       4       4       4
             * DDM   ***** Updated *****
1                                          HEC-1 INPUT                                                    PAGE  7

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

251          KK     240
252          KM   SUB-BASIN 240
253          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
254          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .992
255          KM     L = 3.50  Kb = .039  Adj. Slope =  298.6
256          BA   1.398
257          LG    .350    .370   5.200    .240   2.000
258          UC    .471    .361
259          UA       0       3       5       8      12      20      43      75      90      96
260          UA     100
             * DDM   ***** Preserved *****

261          KK    240C
262          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
263          HC       2
             * DDM   ***** Preserved *****

264          KK   SR240
265          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
266          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
267          RS       1    STOR       0
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268          SA    1.38    14.2    36.5
269          SE     1.7       5      11
270          SS       5      42       3     1.5
             * DDM   ***** Updated *****

271          KK     220
272          KM   SUB-BASIN 220
273          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
274          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
275          KM     L = 1.92  Kb = .043  Adj. Slope =  315.0
276          BA    .725
277          LG    .350    .350   7.000    .120   4.000
278          UC    .317    .209
279          UA       0       3       5       8      12      20      43      75      90      96
280          UA     100
             * DDM   ***** Preserved *****

281          KK    220C
282          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
283          HC       2
             * DDM   ***** Preserved *****

284          KK   SR220
285          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
286          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
287          RS       1    STOR       0
288          SA     .78     4.1    13.7
289          SE      1       3      10
290          SS       3      65       3     1.5
             * DDM   ***** Updated *****
1                                        HEC-1 INPUT                                                    PAGE  8
LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

291          KK     190
292          KM   SUB-BASIN 190
293          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
294          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
295          KM     L = 1.91  Kb = .042  Adj. Slope =  315.0
296          BA    .918
297          LG    .350    .390   5.800    .190   8.000
298          UC    .321    .185
299          UA       0       3       5       8      12      20      43      75      90      96
300          UA     100
             * DDM   ***** Preserved *****

301          KK    R190
302          KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
303          RS       2    FLOW      -1
304          RC    .045     .03    .045    4740     .03
305          RX       0       1       2      17      37      52      53      54
306          RY       5       5       5       0       0       5       5       5
             * DDM   ***** Preserved *****

307          KK    R192
308          KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
309          RS       2    FLOW      -1
310          RC    .045    .035    .045    2200    .018
311          RX       0       1      50      59      79      88     137     138
312          RY     3.5       3       3       0       0       3       3     3.5
             * DDM   ***** Updated *****

313          KK     200
314          KM   SUB-BASIN 200
315          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
316          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
317          KM     L = 1.58  Kb = .045  Adj. Slope =  305.6
318          BA    .535
319          LG    .350    .390   5.700    .200  10.000
320          UC    .300    .200
321          UA       0       3       5       8      12      20      43      75      90      96
322          UA     100
             * DDM   ***** Preserved *****

323          KK    200C
324          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 220 & 200
325          HC       3
             * DDM   ***** Preserved *****

326          KK   SR200
327          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
328          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
329          RS       1    STOR       0
330          SA    2.56     3.1     9.4
331          SE       0       3      10
332          SS       3     112       3     1.5
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                                    PAGE  9
LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

333          KK   200SR
334          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
335          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
336          RS       1    STOR       0
337          SA       8     9.2     9.2
338          SE       0       7      10
339          SS       7     251       3     1.5
             * DDM   ***** Preserved *****
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340          KK    C180
341          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
             *      1       2
342          HC       2
             * DDM   ***** Preserved *****

343          KK   SR180
344          KM   SIGNAL BUTTE FRS DATED 1/28/85
345          KM   OUTLET PIPE=36"RCP; L= 147';  INLET INV.=1690; OUTLET INV.=1687
346          KM   EMERGENCY SPILLWAY ELEV.=1712.4; PRINCIPLE SPILLWAY ELEV.=1701
347          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 250 ACRE-FEET
348          RS       1    STOR       0
349          SV       0       1     250     500     750    1060
350          SQ       0   106.5   125.5   137.5     146     160
351          SE      90     101   104.5     107     109   112.4
             * DDM   ***** Preserved *****

352          KK    R180
353          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
354          KM   ROUTE FLOW FROM SIGNAL BUTTE FRS TO SUB-BASIN 260
355          RS       3    FLOW      -1
356          RC    .035    .025    .035    1500    .003
357          RX       0       1       2    22.6    38.6    59.2      60      61
358          RY     9.3     9.3     9.3       0       0     9.3     9.3     9.3
             * DDM   ***** Updated *****

359          KK     260
360          KM   SUB-BASIN 260
361          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
362          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
363          KM     L =  .81  Kb = .049  Adj. Slope =   68.0
364          BA    .267
365          LG    .300    .170   6.800    .160  15.000
366          UC    .363    .215
367          UA       0       5      16      30      65      77      84      90      94      97
368          UA     100
             * DDM   ***** Preserved *****

369          KK    260C
370          KM   HYDROGRAPH COMBINATION FOR OUTFLOW OF SIGNAL BUTTE FRS & SUB-BASIN 260
371          HC       2    .267
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

372          KK    R260
373          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
374          KM   ROUTE FLOW FROM SUB-BASIN 260 TO SUB-BASIN 280
375          RS       3    FLOW      -1
376          RC    .035    .025    .035    2300    .003
377          RX       0       1       2    23.4    43.4    64.8      65      66
378          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Updated *****

379          KK     280
380          KM   SUB-BASIN 280
381          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
382          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
383          KM     L =  .77  Kb = .049  Adj. Slope =   84.0
384          BA    .304
385          LG    .300    .250   5.300    .290  15.000
386          UC    .333    .175
387          UA       0       5      16      30      65      77      84      90      94      97
388          UA     100
             * DDM   ***** Preserved *****

389          KK    280C
390          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 260 & SUB-BASIN 280
391          HC       2
             * DDM   ***** Preserved *****

392          KK    R280
393          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
394          KM   ROUTE FLOW FROM SUB-BASIN 280 TO SUB-BASIN 300
395          RS       2    FLOW      -1
396          RC    .035    .025    .035    2500    .003
397          RX       0       1       2    23.4    43.4    64.8      65      66
398          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Updated *****

399          KK     300
400          KM   SUB-BASIN 300
401          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
402          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
403          KM     L = 2.28  Kb = .041  Adj. Slope =  127.0
404          BA    .988
405          LG    .340    .320   4.500    .370   7.000
406          UC    .538    .362
407          UA       0       5      16      30      65      77      84      90      94      97
408          UA     100
             * DDM   ***** Preserved *****

409          KK    300C
410          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 280 & 300
411          HC       2
             * DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 412          KK    R300
 413          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
 414          KM   ROUTE FLOW FROM SUB-BASIN 300 TO START OF FLOODWAY CONCRETE CHANNEL
 415          RS       2    FLOW      -1
 416          RC    .035    .025    .035    2200    .003
 417          RX       0       1       2    23.4    55.4    76.8      77      78
 418          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
              * DDM   ***** Preserved *****

 419          KK   RR300
 420          KM   CHANNEL GEOMETRY FOR SPOOK HILL FRS OBTAINED FROM AS-BUILTS PLANS.
 421          KM   CONTINUE TO ROUTE FLOW WITHIN CONCRETE CHANNEL TO SPOOK HILL FRS
 422          RS       2    FLOW      -1
 423          RC    .016    .016    .016    6050   .0146
 424          RX       0       1       2     2.1    16.1    16.2      17      18
 425          RY     7.5     7.5     7.5       0       0     7.5     7.5     7.5
              *      1       2
              * DDM   ***** Updated *****

 426          KK     350
 427          KM   SUB-BASIN 350
 428          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 429          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
 430          KM     L = 2.22  Kb = .042  Adj. Slope =  315.0
 431          BA    .970
 432          LG    .350    .350   4.550    .340   4.000
 433          UC    .367    .234
 434          UA       0       3       5       8      12      20      43      75      90      96
 435          UA     100
              * DDM   ***** Preserved *****

 436          KK    D350
 437          KM   DIVERT FLOW FROM SUB-BASIN 350. FOR MODELING PURPOSES THE SPLIT FLOW WILL
 438          KM   BE ROUTED BETWEEN SUB-BASINS 355 & 310. THE MAIN FLOW WILL ROUTED TO 310
 439          DT   SF350
 440          DI       0   10000
 441          DQ       0    6000
              * DDM   ***** Preserved *****

 442          KK    350R
 443          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING
 444          KM   ROUTING OF MAIN FLOW FROM DIVERSION OF SUB-BASIN 350 TO SUB-BASIN 310
 445          RS       7    FLOW      -1
 446          RC    .045    .035    .045    5150    .025
 447          RX       0       1      40      46      56      62     102     103
 448          RY       3       2       2       0       0       2       2       3
              * DDM   ***** Updated *****

 449          KK     310
 450          KM   SUB-BASIN 310
 451          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 452          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
 453          KM     L = 2.70  Kb = .045  Adj. Slope =  283.5
 454          BA    .555
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 455          LG    .350    .350   3.910    .480    .000
 456          UC    .483    .511
 457          UA       0       3       5       8      12      20      43      75      90      96
 458          UA     100
              * DDM   ***** Preserved *****

 459          KK    C310
 460          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 350 & 310
 461          HC       2    .943
              * DDM   ***** Preserved *****

 462          KK    R310
 463          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
 464          KM   ROUTING OF FLOW FROM SUB-BASIN 310 TO 320
 465          RS      11    FLOW      -1
 466          RC    .045    .035    .045   10050    .022
 467          RX       0       1      40      46      56      62     102     103
 468          RY       3       2       2       0       0       2       2       3
              * DDM   ***** Updated *****

 469          KK     320
 470          KM   SUB-BASIN 320
 471          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 472          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
 473          KM     L = 2.20  Kb = .042  Adj. Slope =  132.0
 474          BA    .972
 475          LG    .310    .300   4.550    .360  14.000
 476          UC    .508    .333
 477          UA       0       5      16      30      65      77      84      90      94      97
 478          UA     100
              * DDM   ***** Preserved *****

 479          KK    D320
 480          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
 481          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
 482          KM   SIERRA HEIGHTS        FALCON RIDGE    & MARBLE CREEK
 483          KM        MAXIMUM VOLUME DIVERSION = 12.27acre-feet
              *      1
 484          DT   BS320   12.27
 485          DI       0   10000
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 486          DQ       0   10000
              * DDM   ***** Preserved *****

 487          KK   RT320
 488          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
 489          DR   BS320
              * DDM   ***** Preserved *****

 490          KK   SR320
 491          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
 492          KM   12.27 ACRE-FEETx43560/36x3600=4.1cfs
              *      1
 493          RS       1    STOR       0
 494          SV       0     .01    12.3
 495          SQ       0     4.2     4.2
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                                    PAGE 13

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 496          KK    C320
 497          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
 498          HC       4
              * DDM   ***** Updated *****

 499          KK     340
 500          KM   SUB-BASIN 340
 501          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 502          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .991
 503          KM     L = 2.40  Kb = .042  Adj. Slope =  160.0
 504          BA   1.449
 505          LG    .280    .280   4.150    .520  21.000
 506          UC    .512    .287
 507          UA       0       5      16      30      65      77      84      90      94      97
 508          UA     100
              * DDM   ***** Preserved *****

 509          KK    D340
 510          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
 511          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
 512          KM   GRANDVIEW ESTATES    BOULDER MOUNTAIN & 33% OF MESA HIGHLANDS
 513          KM        MAXIMUM VOLUME DIVERSION = 56.0 acre-feet
              *      1
 514          DT   BS340      56
 515          DI       0   10000
 516          DQ       0   10000
              * DDM   ***** Preserved *****

 517          KK   RT340
 518          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
 519          DR   BS340
              * DDM   ***** Preserved *****

 520          KK   SR340
 521          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
 522          KM    56.0 ACRE-FEETx43560/36x3600=18.8cfs
              *      1
 523          RS       1    STOR       0
 524          SV       0     .01      56
 525          SQ       0    18.9    18.9
              * DDM   ***** Preserved *****

 526          KK    C340
 527          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
 528          HC       3
              * DDM   ***** Preserved *****

 529          KK   RT350
 530          KM   RETRIEVE SPLIT FLOW FROM DIVERSION OF SUB-BASIN 350
 531          DR   SF350
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                                    PAGE 14

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 532          KK   RR350
 533          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
 534          KM   ROUTING OF FLOW FROM SPLIT OF SUB-BASIN 350 TO 355
 535          RS       7    FLOW      -1
 536          RC    .045    .035    .045    6050    .025
 537          RX       0       1      40      46      56      62     102     103
 538          RY       3       2       2       0       0       2       2       3
              * DDM   ***** Updated *****

 539          KK     355
 540          KM   SUB-BASIN 355
 541          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 542          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
 543          KM     L = 3.00  Kb = .044  Adj. Slope =  284.0
 544          BA    .659
 545          LG    .340    .340   4.450    .370   4.000
 546          UC    .488    .509
 547          UA       0       3       5       8      12      20      43      75      90      96
 548          UA     100
              * DDM   ***** Preserved *****

 549          KK    C355
 550          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 355 AND THE SPLIT FLOW FROM SUB-BASIN 350
 551          HC       2    1.24
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                * DDM   ***** Preserved *****

552             KK    R355
553             KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
554             KM   ROUTING OF FLOW FROM SUB-BASIN 355 TO SUB-BASIN 360
555             RS       9    FLOW      -1
556             RC    .045    .035    .045   10100    .026
557             RX       0       1      40      46      56      62     102     103
558             RY       3       2       2       0       0       2       2       3
                * DDM   ***** Updated *****

559             KK     360
560             KM   SUB-BASIN 360
561             KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
562             KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
563             KM     L = 2.10  Kb = .048  Adj. Slope =  124.0
564             BA    .670
565             LG    .260    .270   4.100    .560  20.000
566             UC    .587    .466
567             UA       0       5      16      30      65      77      84      90      94      97
568             UA     100
                * DDM   ***** Preserved *****

569             KK    D360
570             KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
571             KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
572             KM        MAXIMUM VOLUME DIVERSION = 28.6 acre-feet
                *      1
573             DT   BS360    28.6
574             DI       0   10000
1                                          HEC-1 INPUT                                                    PAGE 15

LINE            ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

575             DQ       0   10000
                * DDM   ***** Preserved *****

576             KK   RT360
577             KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
578             DR   BS360
                * DDM   ***** Preserved *****

579             KK   SR360
580             KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
581             KM    28.6 ACRE-FEETx43560/36x3600=9.6cfs
582             RS       1    STOR       0
583             SV       0     .01    28.6
584             SQ       0     9.6     9.6
                * DDM   ***** Preserved *****

585             KK    360C
586             KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
587             HC       4
                * DDM   ***** Updated *****

588             KK     380
589             KM   SUB-BASIN 380
590             KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
591             KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
592             KM     L = 2.20  Kb = .048  Adj. Slope =  114.0
593             BA    .972
594             LG    .300    .310   4.150    .500   7.000
595             UC    .658    .444
596             UA       0       5      16      30      65      77      84      90      94      97
597             UA     100
                * DDM   ***** Preserved *****

598             KK    D380
599             KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
600             KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
601             KM        MAXIMUM VOLUME DIVERSION = 28.6 acre-feet
                *      1
602             DT   BS380    28.6
603             DI       0   10000
604             DQ       0   10000
                * DDM   ***** Preserved *****

605             KK   RT380
606             KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
607             DR   BS380
                * DDM   ***** Preserved *****

608             KK   SR380
609             KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
610             KM    28.6 ACRE-FEETx43560/36x3600=9.6cfs
611             RS       1    STOR       0
612             SV       0     .01    28.6
613             SQ       0     9.6     9.6
                * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                                    PAGE 16

LINE            ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

614             KK    380C
615             KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
616             HC       3
                * DDM   ***** Updated *****

617             KK     400
618             KM   SUB-BASIN 400
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619          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
620          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
621          KM     L = 1.64  Kb = .046  Adj. Slope =  110.0
622          BA    .616
623          LG    .320    .320   3.130    .930   6.000
624          UC    .592    .405
625          UA       0       5      16      30      65      77      84      90      94      97
626          UA     100
             * DDM   ***** Preserved *****

627          KK    D400
628          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
629          KM   DETENTION/RETENTION BASIN LOCATED WITHIN SAGUARO VISTA SUBDIVISION
630          KM        MAXIMUM VOLUME DIVERSION = 5.6 ACRE-FEET
             *      1
631          DT   BS400     5.6
632          DI       0   10000
633          DQ       0   10000
             * DDM   ***** Preserved *****

634          KK   RT400
635          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
636          DR   BS400
             * DDM   ***** Preserved *****

637          KK   SR400
638          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
639          KM     5.6 ACRE-FEETx43560/36x3600 = 2 cfs
640          RS       1    STOR       0
641          SV       0     .01     5.6
642          SQ       0       2       2
             * DDM   ***** Preserved *****

643          KK    C400
644          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
645          HC       2
             * DDM   ***** Preserved *****

646          KK    400C
647          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
648          HC       2
             * DDM   ***** Updated *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

649          KK     420
650          KM   SUB-BASIN 420
651          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
652          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
653          KM     L = 1.69  Kb = .043  Adj. Slope =  101.0
654          BA    .588
655          LG    .290    .250   4.250    .510  20.000
656          UC    .492    .347
657          UA       0       5      16      30      65      77      84      90      94      97
658          UA     100
             * DDM   ***** Preserved *****

659          KK    D420
660          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
661          KM   DETENTION/RETENTION BASINS LOCATED WITHIN GRAY FOX SUBDIVISION
662          KM        MAXIMUM VOLUME DIVERSION = 8.65 acre-feet
             *      1
663          DT   BS420    8.65
664          DI       0   10000
665          DQ       0   10000
             * DDM   ***** Preserved *****

666          KK   RT420
667          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
668          DR   BS420
             * DDM   ***** Preserved *****

669          KK   SR420
670          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
671          KM   38.55 ACRE-FEETx43560/36x3600=13cfs
672          RS       1    STOR       0
673          SV       0     .01   38.55
674          SQ       0      13      13
             * DDM   ***** Preserved *****

675          KK    420C
676          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
677          HC       3
             * DDM   ***** Updated *****

678          KK     370
679          KM   SUB-BASIN 370
680          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
681          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
682          KM     L = 2.90  Kb = .044  Adj. Slope =  294.6
683          BA    .667
684          LG    .340    .320   4.650    .330   9.000
685          UC    .454    .455
686          UA       0       3       5       8      12      20      43      75      90      96
687          UA     100
             * DDM   ***** Updated *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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688          KK     395
689          KM   SUB-BASIN 395
690          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
691          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
692          KM     L = 1.60  Kb = .051  Adj. Slope =  215.8
693          BA    .198
694          LG    .330    .320   4.900    .300  10.000
695          UC    .383    .468
696          UA       0       3       5       8      12      20      43      75      90      96
697          UA     100
             *

698          KK   3739C
699          KM   HYDROGRAPH COMBINATION FROM SUB-BASINS 370 AND S95
700          HC       2
             * DDM   ***** Preserved *****

701          KK   D3739
702          KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN LOCATED WITHIN SUB-BASINS
703          KM   370 AND 395.
             *      1
704          DT  BS3739
705          DI       0     100    5000
706          DQ       0       0    4900
             * DDM   ***** Preserved *****

707          KK  RT3739
708          KM   RETRIEVE FLOW FROM DIVERSION
709          DR  BS3739
             * DDM   ***** Preserved *****

710          KK  SR3739
711          KM   RETRIEVE FLOW INTO OFFLINE BASIN AND BLEED OFF WITHIN 36 HOURS.
712          KM      28 ACRE-FEETx43560/36x3600 = 9 cfs
713          RS       1    STOR       0
714          SV       0     .01      28
715          SQ       0       9       9
             * DDM   ***** Preserved *****

716          KK   3739C
717          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
718          HC       2
             * DDM   ***** Preserved *****

719          KK    R395
720          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
721          KM   ROUTING OF FLOW FROM SUB-BASINS 370 AND 395 TO SUB-BASIN 390
722          RS       5    FLOW      -1
723          RC    .045    .035    .045    2600    .023
724          RX       0       1      40      46      56      62     102     103
725          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

726          KK     390
727          KM   SUB-BASIN 390
728          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
729          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
730          KM     L =  .70  Kb = .050  Adj. Slope =  299.4
731          BA    .244
732          LG    .300    .250   4.700    .380  18.000
733          UC    .204    .107
734          UA       0       5      16      30      65      77      84      90      94      97
735          UA     100
             * DDM   ***** Preserved *****

736          KK    D390
737          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
738          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THUNDER MOUNTAIN ESTATES
739          KM        MAXIMUM VOLUME DIVERSION  = 3.5 acre-feet
             *      1
740          DT   BS390     3.5
741          DI       0    5000
742          DQ       0    5000
             * DDM   ***** Preserved *****

743          KK   RT390
744          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
745          DR   BS390
             * DDM   ***** Preserved *****

746          KK   SR390
747          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
748          KM     3.5 ACRE-FEETx43560/36x3600=1.2cfs
749          RS       1    STOR       0
750          SV       0     .01     3.5
751          SQ       0     1.2     1.2
             * DDM   ***** Preserved *****

752          KK    390C
753          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
754          HC       3
             * DDM   ***** Preserved *****

755          KK   RR390
756          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
757          KM   FROM SUB-BASIN 390 TO SUB-BASIN 410.
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 758          RS       7    FLOW      -1
 759          RC    .045    .035    .045    5500    .020
 760          RX       0       1      40      46      56      62     102     103
 761          RY       3       2       2       0       0       2       2       3
              * DDM   ***** Updated *****
1                                          HEC-1 INPUT                                                          PAGE 20

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 762          KK     410
 763          KM   SUB-BASIN 410
 764          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 765          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
 766          KM     L = 1.00  Kb = .049  Adj. Slope =  150.0
 767          BA    .273
 768          LG    .300    .250   3.910    .590  15.000
 769          UC    .329    .226
 770          UA       0       5      16      30      65      77      84      90      94      97
 771          UA     100
              * DDM   ***** Preserved *****

 772          KK    410C
 773          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
 774          HC       2
              * DDM   ***** Updated *****

 775          KK     385
 776          KM   SUB-BASIN 385
 777          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 778          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
 779          KM     L = 2.30  Kb = .044  Adj. Slope =  303.0
 780          BA    .647
 781          LG    .350    .370   5.600    .210  13.000
 782          UC    .375    .311
 783          UA       0       3       5       8      12      20      43      75      90      96
 784          UA     100
              *

 785          KK     411
 786          KM   SUB-BASIN 411
 787          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 788          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
 789          KM     L =  .90  Kb = .051  Adj. Slope =  309.5
 790          BA    .202
 791          LG    .340    .350   5.100    .260   9.000
 792          UC    .233    .168
 793          UA       0       5      16      30      65      77      84      90      94      97
 794          UA     100
              *

 795          KK   3841C
 796          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 385 AND 411
 797          HC       2
              * DDM   ***** Preserved *****

 798          KK   D3841
 799          KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN LOCATED WITHIN SUB-BASINS
 800          KM   385 AND 411.
 801          DT  SF3841
 802          DI       0     150    5000
 803          DQ       0       0    4850
              * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                                          PAGE 21

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 804          KK  RT3841
 805          KM   RETRIEVE FLOW FROM DIVERSION OF SUB-BASINS 385 AND 411
 806          DR  SF3841
              * DDM   ***** Preserved *****

 807          KK  SR3841
 808          KM   RETRIEVE FLOW INTO OFFLINE BASIN AND BLEED OFF WITHIN 36 HOURS.
 809          KM      30 ACRE-FEETx43560/36x3600 = 10 CFS
 810          RS       1    STOR       0
 811          SV       0     .01      30
 812          SQ       0      10      10
              * DDM   ***** Preserved *****

 813          KK   3841C
 814          KM   HYDROGRAPH COMBINATION OF DET BASIN OUTFLOW AND DIVERTED 3841 FLOW
 815          HC       2
              * DDM   ***** Preserved *****

 816          KK    R411
 817          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
 818          KM   ROUTING OF SPLIT FLOW FROM SUB-BASIN 385 AND SUB-BASIN 411 TO SUB-BASIN 413
 819          RS      10    FLOW      -1
 820          RC    .045    .035    .045    5309    .024
 821          RX       0       1      40      46      56      62     102     103
 822          RY       3       2       2       0       0       2       2       3
              * DDM   ***** Updated *****

 823          KK     413
 824          KM   SUB-BASIN 413
 825          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 826          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
 827          KM     L =  .40  Kb = .058  Adj. Slope =  200.0
 828          BA    .064
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829          LG    .300    .250   4.150    .530  15.000
830          UC    .192    .136
831          UA      0       5      16      30      65      77      84      90      94      97
832          UA     100
             * DDM   ***** Preserved *****

833          KK    413C
834          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 385, 411, AND 413.
835          HC       2
             * DDM   ***** Preserved *****

836          KK    R413
837          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
838          KM   ROUTING OF FLOW FROM SUB-BASIN 413 TO RR413
839          RS       5    FLOW      -1
840          RC    .045    .035    .045    2900    .021
841          RX       0       1      40      46      56      62     102     103
842          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****
1                                          HEC-1 INPUT                                          PAGE 22

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

843          KK     440
844          KM   SUB-BASIN 440
845          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
846          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
847          KM     L =  .40  Kb = .039  Adj. Slope =  315.0
848          BA    .080
849          LG    .190    .380   6.400    .140  13.000
850          UC    .129    .077
851          UA      0       3       5       8      12      20      43      75      90      96
852          UA     100
             * DDM   ***** Preserved *****

853          KK     R70
854          KM   ROUTE FLOW FROM SUB-BASIN 440 TO C108
855          RS       1    FLOW      -1
856          RC     .05    .035     .05    2250     .08
857          RX    1000    1025    1050    1070    1075    1095    1120    1145
858          RY      30    22.9    15.7      10      10    15.7    22.9      30
             * DDM   ***** Updated *****

859          KK     441
860          KM   SUB-BASIN 441
861          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
862          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
863          KM     L =  .28  Kb = .069  Adj. Slope =  315.0
864          BA    .010
865          LG    .300    .250   5.600    .220   5.000
866          UC    .150    .225
867          UA      0       5      16      30      65      77      84      90      94      97
868          UA     100
             * DDM   ***** Preserved *****

869          KK    C108
870          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 440 & 441
871          HC       2
             * DDM   ***** Preserved *****

872          KK    DIV4
873          KM        SPLIT FLOW WITH TWO 42 INCH PIPES TO WEST AND SOUTH
             *      1
874          DT   SPLIT
875          DI       0      14      40      82     120     154     180
876          DQ       0       7      20      41      60      77      90
             * DDM   ***** Preserved *****

877          KK    R108
878          KM        ROUTE FLOW FROM SUB-BASIN C108 TO C67
879          RS       2    FLOW      -1
880          RC     .05    .035     .05    3200      .1
881          RX    1000    1025    1050    1070    1075    1095    1120    1145
882          RY      30    22.9    15.7      10      10    15.7    22.9      30
             * DDM   ***** Updated *****
1                                          HEC-1 INPUT                                          PAGE 23

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

883          KK     442
884          KM   SUB-BASIN 442
885          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
886          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
887          KM     L =  .83  Kb = .055  Adj. Slope =  274.2
888          BA    .100
889          LG    .300    .270   3.290    .770   5.000
890          UC    .258    .264
891          UA      0       5      16      30      65      77      84      90      94      97
892          UA     100
             * DDM   ***** Preserved *****

893          KK     C67
894          KM   COMBINE FLOW FROM SUB-BASIN 442 & DIV4
895          HC       2
             * DDM   ***** Preserved *****

896          KK    DIV6
897          KM        OFFLINE BASIN WITH 25 FOOT WEIR SET AT 2.5 FEET ABOVE BOTTOM OF CHANNEL
898          KM        FLOW CONTINUES BEYOND BASIN THROUGH 2-30" PIPES
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                 *      1
899              DT  BASIN4
900              DI       0      10      32      44    79.9   132.5     198   272.9   356.8
901              DQ       0       0       0       0    23.9    67.5     124   190.9   266.8
                 * DDM   ***** Preserved *****

902              KK  RTDIV6
903              KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
904              DR  BASIN4
                 * DDM   ***** Preserved *****

905              KK  RFDIV6
906              KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
907              KM     3.3 ACRE-FEETx43560/36x3600=1.1cfs
                 *      1
908              RS       1    STOR       0
909              SV       0     .01     3.3
910              SQ       0     1.1     1.1
                 * DDM   ***** Preserved *****

911              KK   CDIV6
912              KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
913              HC       2
                 * DDM   ***** Updated *****

914              KK     443
915              KM   SUB-BASIN 443
916              KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
917              KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
918              KM     L =  .71  Kb = .050  Adj. Slope =  315.0
919              BA    .080
920              LG    .250    .190   8.000    .080  10.000
921              UC    .196    .194
922              UA       0       5      16      30      65      77      84      90      94      97
1                                          HEC-1 INPUT                                          PAGE 24

LINE             ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

923              UA     100
                 * DDM   ***** Preserved *****

924              KK   DIV66
925              KM        DIVERT FLOW INTO 3 NATURAL WASHES WITH ONE 24" PIPE IN EACH WASH.
926              KM        EACH PIPE CAPACITY BASED ON 4 FEET OF HEAD
927              DT   WSH66
928              DI       0      78     100     200
929              DQ       0      78      78      78
                 * DDM   ***** Preserved *****

930              KK    R113
931              KM        ROUTE FLOW FROM C113 TO C114
932              RS       1    FLOW      -1
933              RC    .019    .019    .019    1300    .029
934              RX    1000    1004    1008    1012    1018    1022    1026    1030
935              RY      17   15.33   12.67      10      10   12.67   15.33      17
                 * DDM   ***** Preserved *****

936              KK    C114
937              KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 67 AND C113
938              HC       2
                 * DDM   ***** Updated *****

939              KK     444
940              KM   SUB-BASIN 444
941              KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
942              KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
943              KM     L =  .33  Kb = .034  Adj. Slope =  315.0
944              BA    .040
945              LG    .130    .350   4.450    .320   1.000
946              UC    .112    .084
947              UA       0       3       5       8      12      20      43      75      90      96
948              UA     100
                 * DDM   ***** Preserved *****

949              KK     R58
950              KM   ROUTE FLOW FROM SUB-BASIN 444 TO C107
951              RS       1    FLOW      -1
952              RC     .05    .035     .05    2370   .0516
953              RX    1000    1010    1020    1050    1055    1085    1095    1105
954              RY      19      18      17      10      10      17      18      19
                 * DDM   ***** Updated *****

955              KK     445
956              KM   SUB-BASIN 445
957              KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
958              KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
959              KM     L =  .82  Kb = .036  Adj. Slope =  315.0
960              BA    .190
961              LG    .170    .320   3.470    .590   3.000
962              UC    .192    .130
963              UA       0       5      16      30      65      77      84      90      94      97
964              UA     100
                 * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                          PAGE 25

LINE             ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

965              KK    C107
966              KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 444 & 445
967              HC       2
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                * DDM   ***** Preserved *****

968             KK    R107
969             KM        ROUTE FLOW FROM C107 TO C109
970             RS        1    FLOW      -1
971             RC      .05    .035     .05     700    .0516
972             RX     1000    1010    1020    1050    1055    1085    1095    1105
973             RY       19      18      17      10      10      17      18      19
                * DDM   ***** Preserved *****

974             KK    RTB2
975             KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
                *       1
976             DR   SPLIT
                * DDM   ***** Preserved *****

977             KK  RSPLIT
978             KM        ROUTE FLOW FROM SPLIT TO C109
979             RS        1    FLOW      -1
980             RC      .05    .035     .05     800     .05
981             RX     1000    1025    1050    1070    1075    1095    1120    1145
982             RY       30    22.9    15.7      10      10    15.7    22.9      30
                * DDM   ***** Updated *****

983             KK     446
984             KM   SUB-BASIN 446
985             KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
986             KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
987             KM     L =  .46  Kb = .061  Adj. Slope =  303.9
988             BA    .040
989             LG    .270    .250   4.500    .400  19.000
990             UC    .183    .189
991             UA       0       5      16      30      65      77      84      90      94      97
992             UA     100
                * DDM   ***** Preserved *****

993             KK    C109
994             KM        COMBINE HYDROGRAPHS FROM COMBINES C107 AND C108
995             HC        3
                * DDM   ***** Preserved *****

996             KK    DIV5
997             KM        DIVERT FLOW INTO WASHES TOWARDS WEST
998             KM        DIVERSION THROUGH 36" PIPE WITH 3 FEET OF HEAD
                *       1
999             DT  WSH404
1000            DI       0    40.7    71.2   121.6     190     276   379.4   500.6
1001            DQ       0      35      35      35      35      35      35      35
                * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                                    PAGE 26

LINE            ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1002            KK    R109
1003            KM        ROUTE FLOW FROM C109 TO C110
1004            RS        1    FLOW      -1
1005            RC     .019    .019    .019    3080     .05
1006            RX     1000    1005    1010    1015    1025    1030    1035    1040
1007            RY    13.75    12.5   11.25      10      10   11.25    12.5   13.75
                * DDM   ***** Updated *****

1008            KK     447
1009            KM   SUB-BASIN 447
1010            KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1011            KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1012            KM     L =  .49  Kb = .056  Adj. Slope =  221.0
1013            BA    .090
1014            LG    .250    .270   3.350    .870  30.000
1015            UC    .208    .145
1016            UA       0       5      16      30      65      77      84      90      94      97
1017            UA     100
                * DDM   ***** Preserved *****

1018            KK   RT404
1019            KM        RETRIEVE DIVERTED FLOW FOR WASH 109
1020            DR  WSH404
                * DDM   ***** Preserved *****

1021            KK    R404
1022            KM        ROUTE FLOW FROM C110 TO C110
1023            RS        5    FLOW      -1
1024            RC     .019    .019    .019    3540     .03
1025            RX     1000    1012    1016    1020    1025    1029    1033    1045
1026            RY       15      12      11      10      10      11      12      15
                * DDM   ***** Preserved *****

1027            KK    C110
1028            KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 447 AND R404
1029            HC        3
                * DDM   ***** Preserved *****

1030            KK    R110
1031            KM        ROUTE FLOW FROM C110 TO C115
1032            RS        1    FLOW      -1
1033            RC     .019    .019    .019     580   .0291
1034            RX     1000    1012    1016    1020    1035    1039    1043    1055
1035            RY       15      12      11      10      10      11      12      15
                * DDM   ***** Preserved *****

1036            KK    C115
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1037          KM        COMBINE HYDROGRAPHS FROM C114 AND C110
1038          HC       2
              * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                                    PAGE 27

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1039          KK    R115
1040          KM        ROUTE FLOW FROM C115 TO C119
1041          RS        1    FLOW      -1
1042          RC     .019    .019    .019    2125    .029
1043          RX     1000    1012    1016    1020    1035    1039    1043    1055
1044          RY       15      12      11      10      10      11      12      15
              * DDM   ***** Updated *****

1045          KK     448
1046          KM   SUB-BASIN 448
1047          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1048          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1049          KM     L =  .36  Kb = .042  Adj. Slope =  315.0
1050          BA    .045
1051          LG    .170    .310   4.200    .390  11.000
1052          UC    .133    .102
1053          UA       0       5      16      30      65      77      84      90      94      97
1054          UA     100
              * DDM   ***** Updated *****

1055          KK     449
1056          KM   SUB-BASIN 449
1057          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1058          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1059          KM     L =  .40  Kb = .054  Adj. Slope =  315.0
1060          BA    .050
1061          LG    .260    .280   3.500    .640   6.000
1062          UC    .167    .134
1063          UA       0       5      16      30      65      77      84      90      94      97
1064          UA     100
              * DDM   ***** Preserved *****

1065          KK   C6364
1066          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 448 & 449
1067          HC       2
              * DDM   ***** Preserved *****

1068          KK   R6364
1069          KM   ROUTE FLOW FROM C116 AND SUB-BASINS 448 AND 449
1070          RS       4    FLOW      -1
1071          RC     .05     .035     .05    4375   .0333
1072          RX    1000    1027    1053    1080    1090    1117    1143    1170
1073          RY      15   13.33   11.67      10      10   11.67   13.33      15
              * DDM   ***** Updated *****

1074          KK     450
1075          KM   SUB-BASIN 450
1076          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1077          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1078          KM     L =  .85  Kb = .057  Adj. Slope =  210.5
1079          BA    .070
1080          LG    .340    .350   3.630    .570   4.000
1081          UC    .296    .383
1082          UA       0       3       5       8      12      20      43      75      90      96
1                                          HEC-1 INPUT                                                    PAGE 28

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1083          UA     100
              * DDM   ***** Updated *****

1084          KK     451
1085          KM   SUB-BASIN 451
1086          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1087          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1088          KM     L =  .57  Kb = .063  Adj. Slope =  175.0
1089          BA    .025
1090          LG    .340    .340   3.290    .750   3.000
1091          UC    .271    .453
1092          UA       0       3       5       8      12      20      43      75      90      96
1093          UA     100
              * DDM   ***** Preserved *****

1094          KK    RT66
1095          KM        RETRIEVE DIVERTED FLOW FROM SUB-BASIN 66
1096          DR   WSH66
              * DDM   ***** Updated *****

1097          KK     452
1098          KM   SUB-BASIN 452
1099          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1100          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1101          KM     L =  .43  Kb = .055  Adj. Slope =  315.0
1102          BA    .040
1103          LG    .260    .280   3.700    .550   9.000
1104          UC    .171    .166
1105          UA       0       5      16      30      65      77      84      90      94      97
1106          UA     100
              * DDM   ***** Preserved *****

1107          KK   C6465
1108          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 443 AND 452
1109          HC       2
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                 * DDM   ***** Preserved *****

1110             KK   R6566
1111             KM        ROUTE FLOW FROM DIVERSIONS 65 AND 66 TO C116
1112             RS       2    FLOW      -1
1113             RC     .05    .035     .05    2435   .0282
1114             RX    1000    1045    1090    1150    1160    1220    1265    1310
1115             RY      25      23      20      10      10      20      23      25
                 * DDM   ***** Preserved *****

1116             KK    C116
1117             KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 450 & 451 AND R6364 & R6465
1118             HC       4
                 * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                                    PAGE 29

LINE             ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1119             KK  BASIN5
1120             KM        RESERVOIR WITHIN PARCEL 31      2-48 INCH PIPES AT OUTFALL
1121             KM        BASIN 5 FEET DEEP
1122             RS       1    ELEV       0
1123             SV       0     4.5     9.9
1124             SQ       0      69     190
1125             SE       0     2.5       5
                 * DDM   ***** Preserved *****

1126             KK    R116
1127             KM   ROUTE FLOW FROM C116 TO C117
1128             RS       2    FLOW      -1
1129             RC     .05    .035     .05    1300   .0333
1130             RX    1000    1100    1200    1300    1320    1420    1520    1620
1131             RY      13      12      11      10      10      11      12      13
                 * DDM   ***** Updated *****

1132             KK     453
1133             KM   SUB-BASIN 453
1134             KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1135             KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1136             KM     L =  .58  Kb = .058  Adj. Slope =  138.0
1137             BA    .060
1138             LG    .290    .300   3.290    .820  18.000
1139             UC    .275    .284
1140             UA       0       5      16      30      65      77      84      90      94      97
1141             UA     100
                 * DDM   ***** Preserved *****

1142             KK    C117
1143             KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 453 AND R116
1144             HC       2
                 * DDM   ***** Preserved *****

1145             KK    C118
1146             KM   COMBINE HYDROGRAPHS FROM R115 AND C117
1147             HC       2
                 * DDM   ***** Preserved *****

1148             KK    R118
1149             KM        ROUTE FLOW FROM C118 TO  DIV7
1150             RS       1    FLOW      -1
1151             RC    .019    .019    .019    1500    .024
1152             RX    1000    1012    1016    1020    1035    1039    1043    1055
1153             RY      15      12      11      10      10      11      12      15
                 * DDM   ***** Preserved *****

1154             KK    DIV7
1155             KM        OFFLINE BASIN AT NORTH MOUNTAIN RIDGE   FLOWS ENTER BASIN OVER
1156             KM        30' WEIR SET AT 5.3' ABOVE THE CHANNEL BOTTOM
                 *      1
1157             DT  BASIN6
1158             DI       0     363     487     563     645     844
1159             DQ       0       3      47      83     125     244
                 * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                                    PAGE 30

LINE             ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1160             KK  RTDIV7
1161             KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1162             DR  BASIN6
                 * DDM   ***** Preserved *****

1163             KK  RFDIV7
1164             KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1165             KM     3.6 ACRE-FEETx43560/36x3600=1.2cfs
1166             RS       1    STOR       0
1167             SV       0     .01     3.6
1168             SQ       0     1.2     1.2
                 * DDM   ***** Preserved *****

1169             KK   CDIV7
1170             KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1171             HC       2
                 * DDM   ***** Updated *****

1172             KK     454
1173             KM   SUB-BASIN 454
1174             KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1175             KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
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1176        KM     L = 1.23  Kb = .051  Adj. Slope =  163.0
1177        BA    .180
1178        LG    .300    .310   3.780    .560  14.000
1179        UC    .379    .395
1180        UA       0       5      16      30      65      77      84      90      94      97
1181        UA     100
            * DDM   ***** Preserved *****

1182        KK    C119
1183        KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 454 AND DIV7.
            *      1       2
1184        HC       2
            * DDM   ***** Preserved *****

1185        KK    C454
1186        KM   COMBINE HYDROGRAPHS FROM C119 AND R413
1187        HC       2
            * DDM   ***** Preserved *****

1188        KK    R454
1189        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1190        KM   ROUTING OF FLOW FROM LAS SENDAS AND R413 TO SUB-BASIN 415.
1191        RS       2    FLOW      -1
1192        RC    .045    .035    .045    2500    .012
1193        RX       0      .5       1      33      42      67    67.5      68
1194        RY       5       4       4       0       0       6       6       6
            * DDM   ***** Updated *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1195        KK     415
1196        KM   SUB-BASIN 415
1197        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1198        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1199        KM     L =  .80  Kb = .051  Adj. Slope =  188.0
1200        BA    .217
1201        LG    .300    .260   3.530    .770  15.000
1202        UC    .275    .176
1203        UA       0       5      16      30      65      77      84      90      94      97
1204        UA     100
            * DDM   ***** Preserved *****

1205        KK    415C
1206        KM   HYDROGRAPH COMBINATION OF R454, SUB-BASIN 415, R410.
1207        HC       3
            * DDM   ***** Preserved *****

1208        KK    D415
1209        KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN
1210        KM   MAXIMUM STORAGE VOLUME FOR DIVERSION = 15 AC-FT @ 5' DEPTH.
            *      1
1211        DT   BS415
1212        DI       0    1225    5000
1213        DQ       0       0    3775
            * DDM   ***** Preserved *****

1214        KK   RT415
1215        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1216        DR   BS415
            * DDM   ***** Preserved *****

1217        KK   SR415
1218        KM   RETRIEVE FLOW INTO OFFLINE BASIN AND BLEED OFF WITHIN 36 HOURS.
1219        KM      15 ACRE-FEETx43560/36x3600 = 5 cfs
1220        RS       1    STOR       0
1221        SV       0     .01      15
1222        SQ       0       5       5
            * DDM   ***** Preserved *****

1223        KK    C415
1224        KM   HYDROGRAPH COMBINATION OF 415 DIVERSION.
1225        HC       2
            * DDM   ***** Preserved *****

1226        KK    R415
1227        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1228        KM   ROUTING OF FLOW FROM 415C TO 455C
1229        RS       4    FLOW      -1
1230        RC    .045     .03    .045    4100    .024
1231        RX       0      .5       1       8      16      23    23.5      24
1232        RY       8       8       8       0       0       8       8       8
            * DDM   ***** Updated *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1233        KK     455
1234        KM   SUB-BASIN 455
1235        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1236        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
1237        KM     L = 1.70  Kb = .041  Adj. Slope =  146.0
1238        BA   1.111
1239        LG    .270    .280   3.700    .640  24.000
1240        UC    .421    .204
1241        UA       0       5      16      30      65      77      84      90      94      97
1242        UA     100
            * DDM   ***** Preserved *****
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1243        KK    D455
1244        KM         DIVERT FLOW INTO ONLINE  DETENTION BASIN
1245        KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1246        KM   FOR BASIN #: 30      34      43      47&58
1247        KM         MAXIMUM VOLUME DIVERSION = 74.1 acre-feet
            *      1
1248        DT   BS455    74.1
1249        DI       0   10000
1250        DQ       0   10000
            * DDM   ***** Preserved *****

1251        KK   RT455
1252        KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1253        DR   BS455
            * DDM   ***** Preserved *****

1254        KK   SR455
1255        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1256        KM    74.1 ACRE-FEETx43560/36x3600=25cfs
1257        RS       1    STOR       0
1258        SV       0     .01    74.1
1259        SQ       0      25      25
            * DDM   ***** Preserved *****

1260        KK    C455
1261        KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 455 AND DIVERTED BASIN STORAGE OF 455
1262        HC       2
            * DDM   ***** Preserved *****

1263        KK    455C
1264        KM  HYDROGRAPH COMBINATION OF 420C, R415 AND C455
            *      1       2
1265        HC       3
            * DDM   ***** Preserved *****

1266        KK   SR440
1267        KM   SPOOK HILL FRS PLANS DATED 6/15/77
1268        KM   OUTLET PIPE=7'x7.5'RCBC; L=70 INLET INV.=1566; OUTLET INV.=1566
1269        KM   EMERGENCY SPILLWAY ELEV.=1582; PRINCIPLE SPILLWAY ELEV.=1577.5
1270        KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 200 ACRE-FEET
1271        RS       1    STOR       0
1272        SV       0      10     100     300     500     680
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                                        HEC-1 INPUT

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1273        SQ       0     640     720     780     825     860
1274        SE      66    77.5      79    80.2    81.2      82
            * DDM   ***** Preserved *****

1275        KK   RR455
1276        KM   ROUTE FLOW FROM SPOOK HILL FRS TO SUB-BASIN 462
1277        RS      10    FLOW      -1
1278        RC    .035    .025    .035    9200    .002
1279        RX       0       1       2      28      58      84      85      86
1280        RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
            * DDM   ***** Updated *****

1281        KK     456
1282        KM   SUB-BASIN 456
1283        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1284        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1285        KM     L =  .94  Kb = .045  Adj. Slope =  315.0
1286        BA    .260
1287        LG    .300    .380   5.600    .200  12.000
1288        UC    .217    .139
1289        UA       0       5      16      30      65      77      84      90      94      97
1290        UA     100
            * DDM   ***** Preserved *****

1291        KK    DIV1
1292        KM         DIVERT FLOW INTO OFFLINE DETENTION BASIN
1293        KM         WEIR FOR BASIN SET AT 4 FEET ABOVE CHANNEL BOTTOM
            *      1
1294        DT  BASIN1
1295        DI       0    11.1   127.9   234.4   577.7   789.9  1025.5  1280.9  1555.7
1296        DQ       0       0       0    47.7     248   381.8   533.6   701.5     884
            * DDM   ***** Preserved *****

1297        KK    DIV2
1298        KM         SPLIT OUT FLOW FOR WASHES THAT FLOW TO THE SOUTH FROM
1299        KM         WASHES THAT DRAIN TO THE WES, SOUTHERN WASHES FED BY 30" & 24" PIPE
1300        DT    WA30
1301        DI       0    11.1   127.9   189.6   329.7     408   491.9   579.4   671.7
1302        DQ       0    11.1    38.4    48.2      63    69.5      76      81      86
            * DDM   ***** Preserved *****

1303        KK    R456
1304        KM         ROUTE FLOW FROM SUB-BASIN 51 TO C101
1305        RS       2    FLOW      -1
1306        RC     .05    .035     .05    3800    .044
1307        RX    1000    1010    1020    1036    1041    1057    1067    1077
1308        RY   14.88   14.44      14      10      10      14   14.44   14.88
            * DDM   ***** Updated *****

1309        KK     457
1310        KM   SUB-BASIN 457
1311        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1312        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1313        KM     L = 1.01  Kb = .045  Adj. Slope =  308.8
1314        BA    .190
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1315          LG    .270    .330   3.950    .460   6.000
1316          UC    .237    .195
1317          UA       0       5      16      30      65      77      84      90      94      97
1318          UA     100
              * DDM   ***** Preserved *****

1319          KK    C101
1320          KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 50 AND 51
1321          HC       2
              * DDM   ***** Preserved *****

1322          KK    DIV3
1323          KM        RESERVOIR AT THE EDGE OF THE PROPERTY   FLOW FROM CHANNEL
1324          KM        DIVERTED  INTO OFFLINE BASIN A 25' WEIR SET AT ELEVATION 1808 FT
              *      1
1325          DT  BASIN2
1326          DI       0      36      70     110     180   313.5     402   500.9
1327          DQ       0       0       0       0       0    67.5     124   190.9
              * DDM   ***** Preserved *****

1328          KK  RTDIV3
1329          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1330          DR  BASIN2
              * DDM   ***** Preserved *****

1331          KK  RFDIV3
1332          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1333          KM     5.0 ACRE-FEETx43560/36x3600=1.7cfs
1334          RS       1    STOR       0
1335          SV       0     .01       5
1336          SQ       0     1.7     1.7
              * DDM   ***** Preserved *****

1337          KK   CDIV3
1338          KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1339          HC       2
              * DDM   ***** Preserved *****

1340          KK    R101
1341          KM        ROUTE FLOW FROM SUBBASIN C101 TO C103
1342          RS       1    FLOW      -1
1343          RC     .05    .035     .05    1450     .05
1344          RX    1000    1010    1020    1036    1041    1057    1067    1077
1345          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Updated *****

1346          KK     458
1347          KM   SUB-BASIN 458
1348          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1349          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1350          KM     L =  .76  Kb = .048  Adj. Slope =  299.0
1351          BA    .190
1352          LG    .290    .330   5.800    .190   6.000
1353          UC    .204    .131
1354          UA       0       5      16      30      65      77      84      90      94      97
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1355          UA     100
              * DDM   ***** Preserved *****

1356          KK    C103
1357          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 55 AND C101
1358          HC       2
              * DDM   ***** Preserved *****

1359          KK    R103
1360          KM        ROUTE FLOW FROM SUBBASIN C103 TO C106
1361          RS       1    FLOW      -1
1362          RC     .05    .035     .05     900     .03
1363          RX    1000    1010    1020    1030    1050    1060    1070    1080
1364          RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
              * DDM   ***** Preserved *****

1365          KK    RT30
1366          KM        RETRIEVE DIVERTED FLOW FOR WASH BELOW 30 INCH PIPE
1367          DR    WA30
              * DDM   ***** Preserved *****

1368          KK     R30
1369          KM        ROUTE FLOW FROM WASH DIVERSION TO COMBINE C52
1370          RS       1    FLOW      -1
1371          RC     .05    .035     .05    1630     .05
1372          RX    1000    1010    1020    1036    1041    1057    1067    1077
1373          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Preserved *****

1374          KK    RTB1
1375          KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
              *      1       2
1376          DR  BASIN1
              * DDM   ***** Preserved *****

1377          KK      B1
1378          KM        ROUTE FLOW THROUGH OFFLINE DETENTION BASIN
1379          KM        FLOW OUTLETS THROUGH A 30 INCH OUTLET PIPE
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                 *      1       2
1380             RS       1    ELEV       0
1381             SV              .7     1.4     2.3     2.7     3.2
1382             SQ       0       5      16      28    32.5      37
1383             SE       0       1       2       3     3.5       4
                 * DDM   ***** Preserved *****

1384             KK     RB1
1385             KM        ROUTE FLOW FROM BASIN DIVERSION TO COMBINE C52
1386             RS       2    FLOW      -1
1387             RC     .05    .035     .05    1720     .05
1388             RX    1000    1010    1020    1036    1041    1057    1067    1077
1389             RY      15    14.5      14      10      10      14    14.5      15
                 * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                                    PAGE 36

LINE             ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1390             KK    CDIV
1391             KM        COMBINE FLOWS FROM WA30 AND BASIN 1
1392             HC       2     .12
                 * DDM   ***** Updated *****

1393             KK     459
1394             KM   SUB-BASIN 459
1395             KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1396             KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1397             KM     L =  .35  Kb = .052  Adj. Slope =  251.6
1398             BA    .030
1399             LG    .220    .300   3.330    .710   8.000
1400             UC    .162    .157
1401             UA       0       5      16      30      65      77      84      90      94      97
1402             UA     100
                 * DDM   ***** Preserved *****

1403             KK     C52
1404             KM        COMBINE FLOWS FROM SUB-BASIN 52 WA30 AND BASIN 1
1405             HC       2
                 * DDM   ***** Preserved *****

1406             KK     R52
1407             KM        ROUTE FLOW FROM SUBBASIN 52 TO C102
1408             RS       2    FLOW      -1
1409             RC     .05    .035     .05    2000     .05
1410             RX    1000    1010    1020    1036    1041    1057    1067    1077
1411             RY      15    14.5      14      10      10      14    14.5      15
                 * DDM   ***** Updated *****

1412             KK     460
1413             KM   SUB-BASIN 460
1414             KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1415             KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1416             KM     L =  .62  Kb = .058  Adj. Slope =  194.0
1417             BA    .140
1418             LG    .250    .260   3.740    .690  27.000
1419             UC    .242    .160
1420             UA       0       5      16      30      65      77      84      90      94      97
1421             UA     100
                 * DDM   ***** Preserved *****

1422             KK    C102
1423             KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 52 AND 53
1424             HC       2
                 * DDM   ***** Preserved *****

1425             KK  BASIN3
1426             KM        RESERVOIR AT CLUBHOUSE LOCATION 1-30 INCH PIPE AT OUTFALL
1427             KM        BOTTOM OF BASIN AT 6 FEET ABOVE 1795 ELEVATION
1428             RS       1    ELEV       0
1429             SA       0       0       0       0     .34    1.59    1.81    1.96    2.13     2.3
                 *      0       0       0       0    1.14    3.25    5.52    9.23
1430             SQ       0      22      45    47.4      48      51      57      62      67      73
1                                          HEC-1 INPUT                                                    PAGE 37

LINE             ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1431             SE    1795  1797.5    1800  1800.4  1800.5    1801    1802    1803    1804  1805.5
                 * DDM   ***** Preserved *****

1432             KK      R3
1433             KM        ROUTE FLOW FROM C102 to C106
1434             RS       4    FLOW      -1
1435             RC     .05     .03     .05    2750   .0375
1436             RX    1000    1010    1020    1052    1086    1118    1128    1138
1437             RY    19.2    18.4      18      10      10      18    18.4    19.2
                 * DDM   ***** Updated *****

1438             KK     461
1439             KM   SUB-BASIN 461
1440             KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1441             KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1442             KM     L =  .83  Kb = .052  Adj. Slope =  181.0
1443             BA    .120
1444             LG    .270    .250   4.250    .450  21.000
1445             UC    .271    .250
1446             UA       0       5      16      30      65      77      84      90      94      97
1447             UA     100
                 * DDM   ***** Preserved *****

1448             KK    C104
```

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1449          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 54 AND R102
1450          HC       2
              * DDM   ***** Preserved *****

1451          KK    C106
1452          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN C103 AND C104
1453          HC       2
              * DDM   ***** Preserved *****

1454          KK    R106
1455          KM        ROUTE FLOW FROM C106 TO C49
1456          RS       2    FLOW      -1
1457          RC     .05    .035     .05    3950    .033
1458          RX    1000    1010    1020    1030    1050    1060    1070    1080
1459          RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
              * DDM   ***** Updated *****

1460          KK     462
1461          KM   SUB-BASIN 462
1462          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1463          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1464          KM     L =  .97  Kb = .045  Adj. Slope =  297.7
1465          BA    .301
1466          LG    .300    .330   5.300    .240  12.000
1467          UC    .225    .137
1468          UA       0       5      16      30      65      77      84      90      94      97
1469          UA     100
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 38

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1470          KK     C56
1471          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 56 AND C106
              *      1       2
1472          HC       2
              * DDM   ***** Updated *****

1473          KK     480
1474          KM   SUB-BASIN 480
1475          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1476          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
1477          KM     L = 1.21  Kb = .042  Adj. Slope =  165.0
1478          BA    .731
1479          LG    .270    .270   3.580    .730  27.000
1480          UC    .325    .148
1481          UA       0       5      16      30      65      77      84      90      94      97
1482          UA     100
              * DDM   ***** Preserved *****

1483          KK    D480
1484          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1485          KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1486          KM   FOR BASIN #: 18 & 26
1487          KM        MAXIMUM VOLUME DIVERSION = 16.5 acre-feet
              *      1
1488          DT   BS480    16.5
1489          DI       0   10000
1490          DQ       0   10000
              * DDM   ***** Preserved *****

1491          KK   RT480
1492          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1493          DR   BS480
              * DDM   ***** Preserved *****

1494          KK   SR480
1495          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1496          KM    16.5 ACRE-FEETx43560/36x3600=5.5cfs
1497          RS       1    STOR       0
1498          SV       0     .01    16.5
1499          SQ       0     5.6     5.6
              * DDM   ***** Preserved *****

1500          KK    C480
1501          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1502          HC       2
              * DDM   ***** Preserved *****

1503          KK    480C
1504          KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1505          HC       3    2.09
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 39

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1506          KK   RR480
1507          KM   ROUTE FLOW FROM SUB-BASIN 480 TO SUB-BASIN 500
1508          RS       1    FLOW      -1
1509          RC    .025    .025    .025    6500     .05
1510          RX       0       1       2      28      58      84      85      86
1511          RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
              * DDM   ***** Updated *****

1512          KK     500
1513          KM   SUB-BASIN 500
1514          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1515          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
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1516    KM     L = 2.77  Kb = .042  Adj. Slope =  286.8
1517    BA    .930
1518    LG    .350     .400    6.000     .170    9.000
1519    UC    .421     .333
1520    UA       0        3        5        8       12       20       43       75       90       96
1521    UA     100
        * DDM   ***** Preserved *****

1522    KK    500C
1523    KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1524    HC       2     3.02
1525    ZZ
```

I

SCHEMATIC DIAGRAM OF STREAM NETWORK

```
INPUT
 LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

 NO.       (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

  44          10
               V
               V
  54         R10
               V
               V
  60         R12
               .
               .
  66           .          20
               .           .
               .           .
  76        C20............
               .
               .
  79           .          40
               .           .
               .           .
  89           .           .          60
               .           .           .
               .           .           .
  99        60C.......................
               V
               V
 102       SR60
               V
               V
 111        R60
               V
               V
 117       RR60
               .
               .
 123           .          80
               .           .
               .           .
 133        80C............
               V
               V
 136        R80
               .
               .
 142           .         100
               .           .
               .           .
 152       100C............
               V
               V
 155       R100
               .
               .
 161           .         120
               .           .
               .           .
 171       120C............
               V
               V
 174       R120
               .
               .
 180           .         140
               .           .
               .           .
 190           .           .        150
               .           .          V
               .           .          V
 200           .           .       R150
               .           .          V
               .           .          V
 206           .           .       R152
               .           .          .
               .           .          .
 212           .           .          .        160
               .           .          .          .
               .           .          .          .
 222           .           .          .          .         180
               .           .          .          .           .
               .           .          .          .           .
 232       180C...............................................
               .
               .
 235           .         210
               .           V
               .           V
 245           .        R210
               .           .
               .           .
 251           .           .        240
               .           .          .
               .           .          .
 261           .        240C............
               .           V
               .           V
 264           .       SR240
```

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                .           .
                .           .
271             .           .        220
                .           .          .
                .           .          .
281             .       220C............
                .          V
                .          V
284             .      SR220
                .           .
                .           .
291             .           .        190
                .           .          V
                .           .          V
301             .           .       R190
                .           .          V
                .           .          V
307             .           .       R192
                .           .          .
                .           .          .
313             .           .          .        200
                .           .          .          .
                .           .          .          .
323             .       200C......................
                .          V
                .          V
326             .      SR200
                .          V
                .          V
333             .      200SR
                .           .
                .           .
340          C180............
                V
                V
343         SR180
                V
                V
352          R180
                .
                .
359             .        260
                .           .
                .           .
369          260C............
                V
                V
372          R260
                .
                .
379             .        280
                .           .
                .           .
389          280C............
                V
                V
392          R280
                .
                .
399             .        300
                .           .
                .           .
409          300C............
                V
                V
412          R300
                V
                V
419         RR300
                .
                .
426             .        350
                .           .
                .           .
439             .           .-------->   SF350
436             .      D350
                .          V
                .          V
442             .      350R
                .           .
                .           .
449             .           .        310
                .           .          .
                .           .          .
459             .      C310............
                .          V
                .          V
462             .      R310
                .           .
                .           .
469             .           .        320
                .           .          .
                .           .          .
484             .           .          .-------->   BS320
479             .           .       D320
                .           .          .
                .           .          .
489             .           .          .          .<--------   BS320
487             .           .          .       RT320
                .           .          .          V
                .           .          .          V
```

```
490                                          SR320
496        C320.....................................

499                340
514                          .-------> BS340
509                D340
519                                     .<-------  BS340
517                                RT340
                                       V
                                       V
520                                SR340
526        C340.......................

531                          .<-------  SF350
529                RT350
                       V
                       V
532                RR350

539                                355

549                C355............
                       V
                       V
552                R355

559                                360

573                                     .-------> BS360
569                                D360

578                                                  .<-------  BS360
576                                           RT360
                                                 V
                                                 V
579                                           SR360

585        360C.....................................

588                380

602                          .-------> BS380
598                D380

607                                     .<-------  BS380
605                                RT380
                                       V
                                       V
608                                SR380

614        380C........................

617                400

631                          .-------> BS400
627                D400

636                                     .<-------  BS400
634                                RT400
                                       V
                                       V
637                                SR400

643                C400............

646        400C............

649                420

663                          .-------> BS420
659                D420

668                                     .<-------  BS420
```

```
666                          RT420
                                V
                                V
669                          SR420
                                .
                                .
675        420C.......................
                .
                .
678                370
                    .
                    .
688                    .        395
                    .           .
                    .           .
698                3739C............
                    .
                    .
704                 .-------> BS3739
701                D3739
                    .
                    .
709                 .           .<-------  BS3739
707                 .      RT3739
                    .           V
                    .           V
710                 .      SR3739
                    .           .
                    .           .
716                3739C............
                    V
                    V
719                R395
                    .
                    .
726                    .        390
                    .           .
                    .           .
740                 .           .-------->   BS390
736                 .        D390
                    .           .
                    .           .
745                 .           .           .<-------   BS390
743                 .           .      RT390
                    .           .           V
                    .           .           V
746                 .           .      SR390
                    .           .           .
                    .           .           .
752                390C.......................
                    V
                    V
755               RR390
                    .
                    .
762                    .        410
                    .           .
                    .           .
772                410C............
                    .
                    .
775                    .        385
                    .           .
                    .           .
785                 .           .        411
                    .           .          .
                    .           .          .
795                 .      3841C............
                    .           .
                    .           .
801                 .           .-------->  SF3841
798                 .      D3841
                    .           .
                    .           .
806                 .           .           .<-------  SF3841
804                 .           .      RT3841
                    .           .           V
                    .           .           V
807                 .           .      SR3841
                    .           .           .
                    .           .           .
813                 .      3841C............
                    .           V
                    .           V
816                 .       R411
                    .           .
                    .           .
823                 .           .        413
                    .           .          .
                    .           .          .
833                 .       413C............
                    .           V
                    .           V
836                 .       R413
                    .           .
                    .           .
843                 .           .        440
                    .           .          V
                    .           .          V
853                 .           .       R70
                    .           .          .
```

```
859                 441
                     .
869          C108............
                     .
874                  .-------> SPLIT
872          DIV4
                V
                V
877          R108
                     .
883                 442
                     .
893          C67............
                     .
899                  .-------> BASIN4
896          DIV6
                     .
904                  .<-------  BASIN4
902                RTDIV6
                     V
                     V
905                RFDIV6
                     .
911          CDIV6............
                     .
914                 443
                     .
927                  .-------> WSH66
924                DIV66
                     V
                     V
930                R113
                     .
936          C114............
                     .
939                 444
                     V
                     V
949                R58
                     .
955                  .        445
                     .         .
965                C107............
                     V
                     V
968                R107
                     .
976                  .<-------  SPLIT
974                RTB2
                     V
                     V
977                RSPLIT
                     .
983                  .        446
                     .         .
993                C109........................
                     .
999                  .-------> WSH404
996                DIV5
                     V
                     V
1002               R109
                     .
1008                 .        447
                     .         .
1020                 .         .<-------  WSH404
1018                 .       RT404
                     .         V
                     .         V
1021                 .       R404
                     .         .
1027               C110........................
                     V
                     V
1030               R110
                     .
1036         C115............
                V
                V
```

```
1039                                R115
                                     .
1045                                     448
                                         .
1055                                         .          449
                                         .              .
1065                                     C6364...........
                                             V
                                             V
1068                                     R6364
                                         .
1074                                         .          450
                                         .              .
1084                                     .              .          451
                                         .              .            .
1096                                     .              .            .
1094                                     .              .            .<-------   WSH66
                                         .              .          RT66
1097                                     .              .            .
                                         .              .            .          452
                                         .              .            .            .
1107                                     .              .          C6465...........
                                         .              .            V
1110                                     .              .            V
                                         .              .          R6566
                                         .              .            .
1116                                     C116.................................
                                             V
                                             V
1119                                     BASIN5
                                             V
                                             V
1126                                     R116
                                         .
1132                                     .          453
                                         .              .
1142                                     C117............
                                         .
1145                                 C118............
                                         V
                                         V
1148                                 R118
                                     .
1157                                     .-------> BASIN6
1154                                 DIV7
                                     .
                                     \
1162                                     .<-------  BASIN6
1160                                     RTDIV7
                                             V
                                             V
1163                                     RFDIV7
                                         .
1169                                 CDIV7............
                                     .
1172                                     454
                                         .
1182                                 C119............
                                     .
1185                             C454............
                                     V
                                     V
1188                             R454
                                     .
1195                                 415
                                     .
1205                         415C......................
                                 .
1211                             .-------> BS415
1208                         D415
                                 .
1216                                 .<-------  BS415
1214                             RT415
                                     V
                                     V
1217                             SR415
                                     .
1223                         C415............
                                 V
                                 V
```

```
1226          .        R415
              .          .
              .          .
1233          .          .        455
              .          .         .
              .          .         .
1248          .          .         .-------->   BS455
1243          .          .       D455
              .          .         .
              .          .         .
1253          .          .         .          .<-------   BS455
1251          .          .         .      RT455
              .          .         .          V
              .          .         .          V
1254          .          .         .      SR455
              .          .         .         .
              .          .         .         .
1260          .          .       C455............
              .          .         .
              .          .         .
1263       455C......................
              V
              V
1266      SR440
              V
              V
1275      RR455
              .
              .
1281          .        456
              .          .
              .          .
1294          .          .-------->  BASIN1
1291          .       DIV1
              .          .
              .          .
1300          .          .-------->    WA30
1297          .       DIV2
              .          V
              .          V
1303          .       R456
              .          .
              .          .
1309          .          .        457
              .          .         .
              .          .         .
1319          .       C101............
              .          .
              .          .
1325          .          .-------->  BASIN2
1322          .       DIV3
              .          .
              .          .
1330          .          .          .<-------  BASIN2
1328          .          .     RTDIV3
              .          .         V
              .          .         V
1331          .          .     RFDIV3
              .          .         .
              .          .         .
1337          .      CDIV3............
              .          V
              .          V
1340          .       R101
              .          .
              .          .
1346          .          .        458
              .          .         .
              .          .         .
1356          .       C103............
              .          V
              .          V
1359          .       R103
              .          .
              .          .
1367          .          .          .<-------    WA30
1365          .          .       RT30
              .          .         V
              .          .         V
1368          .          .       R30
              .          .         .
              .          .         .
1376          .          .         .          .<-------  BASIN1
1374          .          .         .       RTB1
              .          .         .          V
              .          .         .          V
1377          .          .         .         B1
              .          .         .          V
              .          .         .          V
1384          .          .         .       RB1
              .          .         .         .
              .          .         .         .
1390          .          .       CDIV............
              .          .         .
              .          .         .
1393          .          .         .       459
              .          .         .         .
              .          .         .         .
1403          .          .       C52............
              .          .         V
              .          .         V
```

```
1406                R52
                     .
1412                 .          460
                     .            .
1422                C102...........
                     V
                     V
1425              BASIN3
                     V
                     V
1432                R3
                     .
1438                 .          461
                     .            .
1448                C104...........
                     .
                     .
1451          C106...........
                 V
                 V
1454          R106
                 .
1460                462
                     .
1470           C56...........
                     .
1473                480
                     .
1488                 .-------->   BS480
1483              D480
                     .
1493                 .          .<-------   BS480
1491                 .       RT480
                     .          V
                     .          V
1494                 .       SR480
                     .            .
1500              C480...........
                     .
1503       480C........................
              V
              V
1506       RR480
              .
              .
1512          .        500
              .          .
              .          .
1522       500C...........
```

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT	10	951.	12.27	114.	31.	15.	.70		
+	ROUTED TO	R10	882.	12.40	114.	31.	15.	.70		
+	ROUTED TO	R12	833.	12.60	114.	31.	15.	.70		
+	HYDROGRAPH AT	20	959.	12.43	128.	32.	16.	1.12		
+	2 COMBINED AT	C20	1663.	12.53	240.	63.	30.	1.82		
+	HYDROGRAPH AT	40	2582.	12.30	252.	66.	32.	2.23		
+	HYDROGRAPH AT	60	1553.	12.40	228.	61.	29.	1.75		
+	3 COMBINED AT	60C	5274.	12.37	708.	188.	90.	5.80		
+	ROUTED TO	SR60	92.	14.40	92.	89.	70.	5.80		
+	ROUTED TO	R60	92.	14.40	92.	89.	70.	5.80		
+	ROUTED TO	RR60	92.	14.53	92.	89.	70.	5.80		
+	HYDROGRAPH AT	80	1868.	12.27	179.	46.	22.	1.48		
+	2 COMBINED AT	80C	1942.	12.27	266.	134.	92.	1.48		
+	ROUTED TO	R80	1919.	12.27	266.	134.	92.	1.48		
+	HYDROGRAPH AT	100	404.	12.20	58.	15.	7.	.48		
+	2 COMBINED AT	100C	2300.	12.27	321.	148.	99.	1.96		
+	ROUTED TO	R100	2292.	12.30	321.	148.	99.	1.96		
+	HYDROGRAPH AT	120	3232.	12.27	326.	88.	42.	2.20		
+	2 COMBINED AT	120C	5469.	12.27	636.	229.	141.	4.16		
+	ROUTED TO	R120	5397.	12.30	636.	229.	140.	4.16		
+	HYDROGRAPH AT	140	632.	12.13	64.	17.	8.	.60		
+	HYDROGRAPH AT	150	135.	13.20	47.	13.	6.	.41		
+	ROUTED TO	R150	134.	13.30	47.	13.	6.	.41		
+	ROUTED TO	R152	133.	13.50	47.	13.	6.	.41		
+	HYDROGRAPH AT	160	217.	12.40	35.	9.	4.	.37		
+	HYDROGRAPH AT	180	785.	12.37	90.	23.	11.	1.00		
+	5 COMBINED AT	180C	6707.	12.30	857.	286.	168.	6.54		
+	HYDROGRAPH AT	210	870.	12.20	80.	21.	10.	.58		
+	ROUTED TO	R210	815.	12.27	80.	21.	10.	.58		
+	HYDROGRAPH AT	240	1405.	12.30	155.	39.	19.	1.40		
+	2 COMBINED AT	240C	2185.	12.30	233.	60.	29.	1.98		

+	ROUTED TO	SR240	634.	12.77	186.	49.	23.	1.98
+	HYDROGRAPH AT	220	1126.	12.17	98.	25.	12.	.73
+	2 COMBINED AT	220C	1138.	12.20	279.	73.	35.	2.71
+	ROUTED TO	SR220	914.	12.43	272.	71.	34.	2.71
+	HYDROGRAPH AT	190	1403.	12.17	116.	31.	15.	.92
+	ROUTED TO	R190	1348.	12.23	116.	31.	15.	.92
+	ROUTED TO	R192	1267.	12.30	116.	31.	15.	.92
+	HYDROGRAPH AT	200	806.	12.17	69.	19.	9.	.54
+	3 COMBINED AT	200C	2624.	12.27	447.	119.	57.	4.16
+	ROUTED TO	SR200	2493.	12.37	442.	115.	55.	4.16
+	ROUTED TO	200SR	1725.	12.60	320.	85.	41.	4.16
+	2 COMBINED AT	C180	6707.	12.30	1170.	369.	208.	10.69
+	ROUTED TO	SR180	138.	18.53	138.	137.	111.	10.69
+	ROUTED TO	R180	138.	18.50	138.	137.	110.	10.69
+	HYDROGRAPH AT	260	418.	12.10	43.	12.	6.	.27
+	2 COMBINED AT	260C	527.	12.10	175.	148.	117.	.27
+	ROUTED TO	R260	514.	12.20	175.	148.	117.	.27
+	HYDROGRAPH AT	280	478.	12.10	42.	12.	6.	.30
+	2 COMBINED AT	280C	945.	12.13	214.	158.	122.	.57
+	ROUTED TO	R280	909.	12.20	214.	158.	122.	.57
+	HYDROGRAPH AT	300	875.	12.20	109.	29.	14.	.99
+	2 COMBINED AT	300C	1769.	12.20	319.	185.	135.	1.56
+	ROUTED TO	R300	1732.	12.27	319.	185.	135.	1.56
+	ROUTED TO	RR300	1699.	12.33	319.	184.	134.	1.56
+	HYDROGRAPH AT	350	1192.	12.20	103.	27.	13.	.97
+	DIVERSION TO	SF350	715.	12.20	62.	16.	8.	.97
+	HYDROGRAPH AT	D350	477.	12.20	41.	11.	5.	.97
+	ROUTED TO	350R	414.	12.43	41.	11.	5.	.97
+	HYDROGRAPH AT	310	376.	12.33	49.	12.	6.	.56
+	2 COMBINED AT	C310	749.	12.40	89.	23.	11.	.94
+	ROUTED TO	R310	679.	12.77	89.	23.	11.	.94
+	HYDROGRAPH AT	320	965.	12.20	123.	34.	17.	.97
+	DIVERSION TO	BS320	377.	11.97	21.	6.	3.	.97
+	HYDROGRAPH AT	D320	965.	12.20	109.	28.	14.	.97

+	HYDROGRAPH AT	RT320	377.	11.97	21.	6.	3.	.97
+	ROUTED TO	SR320	4.	4.13	4.	4.	3.	.97
+	4 COMBINED AT	C320	2601.	12.33	514.	238.	161.	3.47
+	HYDROGRAPH AT	340	1471.	12.17	186.	55.	26.	1.45
+	DIVERSION TO	BS340	1471.	12.17	104.	28.	14.	1.45
+	HYDROGRAPH AT	D340	1199.	12.33	97.	27.	13.	1.45
+	HYDROGRAPH AT	RT340	1471.	12.17	104.	28.	14.	1.45
+	ROUTED TO	SR340	19.	9.00	19.	19.	14.	1.45
+	3 COMBINED AT	C340	3786.	12.33	624.	282.	186.	4.92
+	HYDROGRAPH AT	RT350	715.	12.20	62.	16.	8.	.97
+	ROUTED TO	RR350	630.	12.43	62.	16.	8.	.97
+	HYDROGRAPH AT	355	500.	12.33	69.	18.	9.	.66
+	2 COMBINED AT	C355	1080.	12.40	130.	34.	16.	1.24
+	ROUTED TO	R355	971.	12.70	130.	34.	16.	1.24
+	HYDROGRAPH AT	360	504.	12.23	84.	25.	12.	.67
+	DIVERSION TO	BS360	504.	12.23	53.	14.	7.	.67
+	HYDROGRAPH AT	D360	306.	12.63	38.	11.	5.	.67
+	HYDROGRAPH AT	RT360	504.	12.23	53.	14.	7.	.67
+	ROUTED TO	SR360	10.	9.83	10.	10.	7.	.67
+	4 COMBINED AT	360C	4013.	12.33	791.	332.	213.	6.83
+	HYDROGRAPH AT	380	666.	12.27	98.	26.	13.	.97
+	DIVERSION TO	BS380	666.	12.27	56.	14.	7.	.97
+	HYDROGRAPH AT	D380	472.	12.57	46.	12.	6.	.97
+	HYDROGRAPH AT	RT380	666.	12.27	56.	14.	7.	.97
+	ROUTED TO	SR380	10.	11.33	10.	10.	7.	.97
+	3 COMBINED AT	380C	4015.	12.33	841.	353.	225.	7.81
+	HYDROGRAPH AT	400	351.	12.23	47.	13.	6.	.62
+	DIVERSION TO	BS400	262.	12.10	10.	3.	1.	.62
+	HYDROGRAPH AT	D400	351.	12.23	39.	10.	5.	.62
+	HYDROGRAPH AT	RT400	262.	12.10	10.	3.	1.	.62
+	ROUTED TO	SR400	2.	8.70	2.	2.	1.	.62
+	2 COMBINED AT	C400	353.	12.23	41.	12.	6.	.62
+	2 COMBINED AT	400C	4325.	12.33	879.	364.	231.	8.42
+	HYDROGRAPH AT	420	562.	12.17	77.	22.	11.	.59

+	DIVERSION TO	BS420	206.	11.93	14.	4.	2.	.59
+	HYDROGRAPH AT	D420	562.	12.17	69.	18.	9.	.59
+	HYDROGRAPH AT	RT420	206.	11.93	14.	4.	2.	.59
+	ROUTED TO	SR420	13.	10.83	12.	4.	2.	.59
+	3 COMBINED AT	420C	4791.	12.33	949.	383.	241.	9.01
+	HYDROGRAPH AT	370	588.	12.30	79.	21.	10.	.67
+	HYDROGRAPH AT	395	182.	12.23	25.	7.	3.	.20
+	2 COMBINED AT	3739C	758.	12.30	103.	28.	13.	.87
+	DIVERSION TO	BS3739	658.	12.30	65.	16.	8.	.87
+	HYDROGRAPH AT	D3739	100.	11.90	38.	12.	6.	.87
+	HYDROGRAPH AT	RT3739	658.	12.30	65.	16.	8.	.87
+	ROUTED TO	SR3739	9.	11.90	9.	9.	7.	.87
+	2 COMBINED AT	3739C	109.	11.90	46.	19.	13.	.87
+	ROUTED TO	R395	109.	12.07	46.	19.	13.	.87
+	HYDROGRAPH AT	390	463.	12.03	33.	10.	5.	.24
+	DIVERSION TO	BS390	95.	11.73	6.	2.	1.	.24
+	HYDROGRAPH AT	D390	463.	12.03	30.	8.	4.	.24
+	HYDROGRAPH AT	RT390	95.	11.73	6.	2.	1.	.24
+	ROUTED TO	SR390	1.	.90	1.	1.	1.	.24
+	3 COMBINED AT	390C	564.	12.03	76.	28.	17.	1.11
+	ROUTED TO	RR390	461.	12.27	76.	28.	17.	1.11
+	HYDROGRAPH AT	410	336.	12.10	32.	9.	4.	.27
+	2 COMBINED AT	410C	690.	12.23	106.	36.	21.	1.38
+	HYDROGRAPH AT	385	782.	12.23	87.	24.	12.	.65
+	HYDROGRAPH AT	411	329.	12.07	25.	7.	3.	.20
+	2 COMBINED AT	3841C	964.	12.20	111.	31.	15.	.85
+	DIVERSION TO	SF3841	814.	12.20	66.	17.	8.	.85
+	HYDROGRAPH AT	D3841	150.	11.80	45.	14.	7.	.85
+	HYDROGRAPH AT	RT3841	814.	12.20	66.	17.	8.	.85
+	ROUTED TO	SR3841	10.	11.83	10.	10.	8.	.85
+	2 COMBINED AT	3841C	160.	11.83	53.	22.	14.	.85
+	ROUTED TO	R411	160.	12.07	53.	22.	14.	.85
+	HYDROGRAPH AT	413	108.	12.03	8.	2.	1.	.06
+	2 COMBINED AT	413C	264.	12.03	60.	24.	15.	.91

+	ROUTED TO	R413	250.	12.17	60.	24.	15.	.91
+	HYDROGRAPH AT	440	180.	12.03	12.	3.	2.	.08
+	ROUTED TO	R70	176.	12.07	12.	3.	2.	.08
+	HYDROGRAPH AT	441	16.	12.03	1.	0.	0.	.01
+	2 COMBINED AT	C108	191.	12.07	14.	4.	2.	.09
+	DIVERSION TO	SPLIT	96.	12.07	7.	2.	1.	.09
+	HYDROGRAPH AT	DIV4	96.	12.07	7.	2.	1.	.09
+	ROUTED TO	R108	88.	12.13	7.	2.	1.	.09
+	HYDROGRAPH AT	442	102.	12.10	9.	2.	1.	.10
+	2 COMBINED AT	C67	187.	12.10	15.	4.	2.	.19
+	DIVERSION TO	BASIN4	115.	12.10	6.	1.	1.	.19
+	HYDROGRAPH AT	DIV6	72.	12.10	10.	3.	1.	.19
+	HYDROGRAPH AT	RTDIV6	115.	12.10	6.	1.	1.	.19
+	ROUTED TO	RFDIV6	1.	11.90	1.	1.	1.	.19
+	2 COMBINED AT	CDIV6	74.	12.10	10.	4.	2.	.19
+	HYDROGRAPH AT	443	148.	12.07	14.	4.	2.	.08
+	DIVERSION TO	WSH66	78.	11.90	12.	3.	2.	.08
+	HYDROGRAPH AT	DIV66	70.	12.07	3.	1.	0.	.08
+	ROUTED TO	R113	69.	12.07	3.	1.	0.	.08
+	2 COMBINED AT	C114	140.	12.07	13.	4.	2.	.27
+	HYDROGRAPH AT	444	82.	12.03	5.	1.	1.	.04
+	ROUTED TO	R58	75.	12.07	5.	1.	1.	.04
+	HYDROGRAPH AT	445	296.	12.03	18.	5.	2.	.19
+	2 COMBINED AT	C107	365.	12.03	22.	6.	3.	.23
+	ROUTED TO	R107	365.	12.07	22.	6.	3.	.23
+	HYDROGRAPH AT	RTB2	96.	12.07	7.	2.	1.	.09
+	ROUTED TO	RSPLIT	95.	12.07	7.	2.	1.	.09
+	HYDROGRAPH AT	446	65.	12.03	6.	2.	1.	.04
+	3 COMBINED AT	C109	520.	12.07	35.	9.	4.	.27
+	DIVERSION TO	WSH404	35.	11.73	8.	2.	1.	.27
+	HYDROGRAPH AT	DIV5	485.	12.07	27.	7.	3.	.27
+	ROUTED TO	R109	469.	12.10	27.	7.	3.	.27
+	HYDROGRAPH AT	447	138.	12.07	12.	4.	2.	.09
+	HYDROGRAPH AT	RT404	35.	11.73	8.	2.	1.	.27

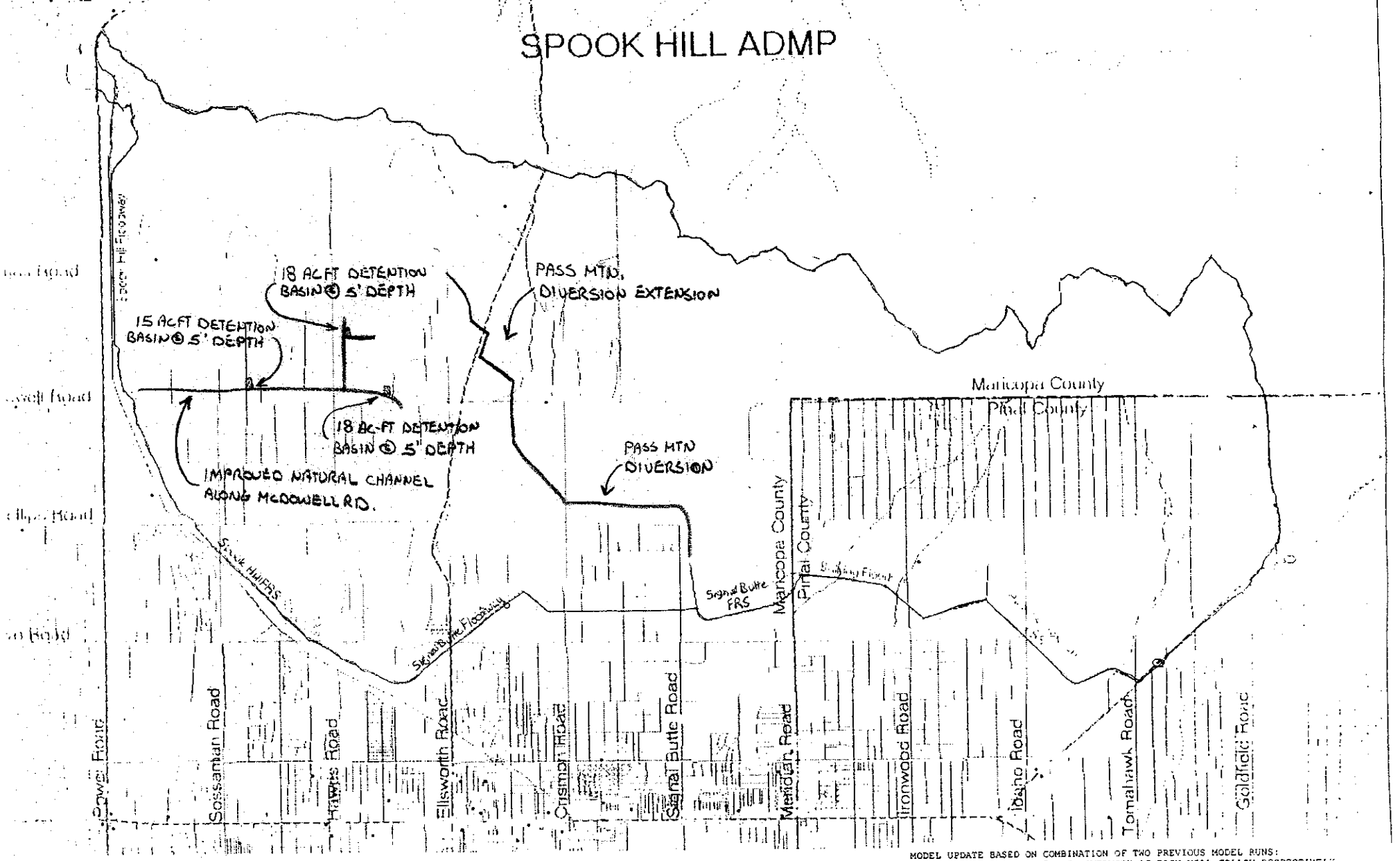
+	ROUTED TO	R404	35.	11.90	8.	2.	1.	.27
+	3 COMBINED AT	C110	635.	12.07	46.	13.	6.	.36
+	ROUTED TO	R110	632.	12.10	46.	13.	6.	.36
+	2 COMBINED AT	C115	764.	12.10	59.	17.	8.	.63
+	ROUTED TO	R115	757.	12.10	59.	17.	8.	.63
+	HYDROGRAPH AT	448	88.	12.03	6.	2.	1.	.05
+	HYDROGRAPH AT	449	80.	12.03	5.	1.	1.	.05
+	2 COMBINED AT	C6364	166.	12.03	11.	3.	1.	.09
+	ROUTED TO	R6364	137.	12.17	11.	3.	1.	.09
+	HYDROGRAPH AT	450	61.	12.20	6.	2.	1.	.07
+	HYDROGRAPH AT	451	18.	12.17	2.	1.	0.	.03
+	HYDROGRAPH AT	RT66	78.	11.90	12.	3.	2.	.08
+	HYDROGRAPH AT	452	62.	12.03	4.	1.	1.	.04
+	2 COMBINED AT	C6465	140.	12.03	16.	4.	2.	.04
+	ROUTED TO	R6566	135.	12.10	16.	4.	2.	.04
+	4 COMBINED AT	C116	341.	12.17	35.	9.	4.	.23
+	ROUTED TO	BASIN5	152.	12.47	35.	9.	4.	.23
+	ROUTED TO	R116	150.	12.53	35.	9.	4.	.23
+	HYDROGRAPH AT	453	62.	12.10	7.	2.	1.	.06
+	2 COMBINED AT	C117	169.	12.50	41.	11.	5.	.29
+	2 COMBINED AT	C118	842.	12.10	99.	28.	14.	.92
+	ROUTED TO	R118	837.	12.13	99.	28.	14.	.92
+	DIVERSION TO	BASIN6	240.	12.13	10.	2.	1.	.92
+	HYDROGRAPH AT	DIV7	597.	12.13	89.	25.	13.	.92
+	HYDROGRAPH AT	RTDIV7	240.	12.13	10.	2.	1.	.92
+	ROUTED TO	RFDIV7	1.	11.97	1.	1.	1.	.92
+	2 COMBINED AT	CDIV7	598.	12.13	90.	26.	13.	.92
+	HYDROGRAPH AT	454	157.	12.17	21.	6.	3.	.18
+	2 COMBINED AT	C119	750.	12.13	110.	32.	16.	1.10
+	2 COMBINED AT	C454	990.	12.13	168.	54.	31.	2.01
+	ROUTED TO	R454	961.	12.20	168.	54.	31.	2.01
+	HYDROGRAPH AT	415	279.	12.07	23.	7.	3.	.22
+	3 COMBINED AT	415C	1812.	12.20	294.	96.	55.	3.61
+	DIVERSION TO	BS415	587.	12.20	25.	6.	3.	3.61

+	HYDROGRAPH AT	D415	1225.	12.03	269.	89.	52.	3.61
+	HYDROGRAPH AT	RT415	587.	12.20	25.	6.	3.	3.61
+	ROUTED TO	SR415	5.	12.07	5.	5.	3.	3.61
+	2 COMBINED AT	C415	1230.	12.07	273.	94.	55.	3.61
+	ROUTED TO	R415	1238.	12.13	273.	94.	55.	3.61
+	HYDROGRAPH AT	455	1346.	12.13	142.	43.	21.	1.11
+	DIVERSION TO	BS455	1346.	12.13	137.	37.	18.	1.11
+	HYDROGRAPH AT	D455	55.	12.77	16.	6.	3.	1.11
+	HYDROGRAPH AT	RT455	1346.	12.13	137.	37.	18.	1.11
+	ROUTED TO	SR455	25.	10.47	25.	25.	18.	1.11
+	2 COMBINED AT	C455	80.	12.77	41.	31.	21.	1.11
+	3 COMBINED AT	455C	5831.	12.37	1225.	497.	312.	13.73
+	ROUTED TO	SR440	794.	13.83	778.	497.	311.	13.73
+	ROUTED TO	RR455	794.	14.13	778.	497.	309.	13.73
+	HYDROGRAPH AT	456	468.	12.07	35.	10.	5.	.26
+	DIVERSION TO	BASIN1	184.	12.07	8.	2.	1.	.26
+	HYDROGRAPH AT	DIV1	284.	12.07	27.	8.	4.	.26
+	DIVERSION TO	WA30	58.	12.07	10.	3.	2.	.26
+	HYDROGRAPH AT	DIV2	226.	12.07	18.	4.	2.	.26
+	ROUTED TO	R456	213.	12.13	18.	4.	2.	.26
+	HYDROGRAPH AT	457	264.	12.07	20.	5.	3.	.19
+	2 COMBINED AT	C101	462.	12.10	38.	10.	5.	.45
+	DIVERSION TO	BASIN2	165.	12.10	7.	2.	1.	.45
+	HYDROGRAPH AT	DIV3	297.	12.10	30.	8.	4.	.45
+	HYDROGRAPH AT	RTDIV3	165.	12.10	7.	2.	1.	.45
+	ROUTED TO	RFDIV3	2.	11.90	2.	2.	1.	.45
+	2 COMBINED AT	CDIV3	299.	12.10	32.	9.	5.	.45
+	ROUTED TO	R101	297.	12.10	32.	9.	5.	.45
+	HYDROGRAPH AT	458	356.	12.03	25.	7.	3.	.19
+	2 COMBINED AT	C103	635.	12.07	56.	16.	8.	.64
+	ROUTED TO	R103	630.	12.07	56.	16.	8.	.64
+	HYDROGRAPH AT	RT30	58.	12.07	10.	3.	2.	.26
+	ROUTED TO	R30	57.	12.10	10.	3.	2.	.26
+	HYDROGRAPH AT	RTB1	184.	12.07	8.	2.	1.	.26

+	ROUTED TO	B1	37.	12.23	8.	2.	1.	.26
+	ROUTED TO	RB1	37.	12.30	8.	2.	1.	.26
+	2 COMBINED AT	CDIV	86.	12.20	17.	5.	3.	.12
+	HYDROGRAPH AT	459	44.	12.03	3.	1.	0.	.03
+	2 COMBINED AT	C52	113.	12.10	20.	6.	3.	.15
+	ROUTED TO	R52	112.	12.17	20.	6.	3.	.15
+	HYDROGRAPH AT	460	214.	12.07	19.	6.	3.	.14
+	2 COMBINED AT	C102	313.	12.07	39.	12.	6.	.29
+	ROUTED TO	BASIN3	71.	12.63	39.	12.	6.	.29
+	ROUTED TO	R3	71.	12.77	39.	12.	6.	.29
+	HYDROGRAPH AT	461	161.	12.10	17.	5.	2.	.12
+	2 COMBINED AT	C104	213.	12.10	55.	17.	8.	.41
+	2 COMBINED AT	C106	835.	12.07	110.	32.	16.	1.05
+	ROUTED TO	R106	797.	12.13	110.	32.	16.	1.05
+	HYDROGRAPH AT	462	538.	12.07	40.	11.	5.	.30
+	2 COMBINED AT	C56	1254.	12.10	149.	42.	21.	1.35
+	HYDROGRAPH AT	480	1050.	12.10	96.	29.	14.	.73
+	DIVERSION TO	BS480	455.	11.90	27.	8.	4.	.73
+	HYDROGRAPH AT	D480	1050.	12.10	78.	21.	10.	.73
+	HYDROGRAPH AT	RT480	455.	11.90	27.	8.	4.	.73
+	ROUTED TO	SR480	6.	3.90	6.	6.	4.	.73
+	2 COMBINED AT	C480	1056.	12.10	84.	27.	14.	.73
+	3 COMBINED AT	480C	2520.	12.10	958.	578.	352.	2.09
+	ROUTED TO	RR480	2357.	12.13	955.	578.	352.	2.09
+	HYDROGRAPH AT	500	1073.	12.27	122.	33.	16.	.93
+	2 COMBINED AT	500C	3246.	12.17	1066.	606.	366.	3.02

*** NORMAL END OF HEC-1 ***

SPOOK HILL ADMP



MODEL UPDATE BASED ON COMBINATION OF TWO PREVIOUS MODEL RUNS: S24CE14.DAT AND S24CE17.DAT. OVERVIEW OF EACH WILL FOLLOW RESPECTIVELY.

UPDATE TO PASS MOUNTAIN DIVERSION ALTERNATIVE. ADDITIONAL DIVERSIONS PLACED UPSTREAM OF ORIGINAL LEVEE EXTENSION AT PASS MOUNTAIN DIVERSION CREATING NEW DRAINAGE BASIN BOUNDARIES: 383 FROM 385; 393 FROM 395; 365 FROM 370; AND 353 FROM 355. 383, 393, 365, AND 353 WILL NOW BE ROUTED TO THE PASS MOUNTAIN DIVERSION AND ULTIMATELY INTO SIGNAL BUTTE FRS. SUB-BASINS: 385, 395, 370, AND 355 WILL REMAIN WITH REDUCED AREAS AND CONTINUE TO BE ROUTED ON THEIR ORIGINAL WATERCOURSES.

UPDATE BASED ON IMPROVED NATURAL CHANNELS ALONG MCDOWELL BETWEEN POWER & ELLSWORTH, ALONG OAK ST. BETWEEN HAWES & THUNDER MTN. , ALONG HAWES NORTH OF OAK ST. TO MCDOWELL RD. THIS WILL GENERATE NEW SUB-BASINS 410, AND 411 FROM SUB-BASINS 415 AND 420. DETENTION BASINS WILL BE ADDED OFF-LINE TO SUB-BASINS 370 & 395, 385 & 411, AND 455.

```
1****************************************                                    ****************************************
*                                      *                                    *                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *                                    *   U.S. ARMY CORPS OF ENGINEERS       *
*              JUN  1998               *                                    *   HYDROLOGIC ENGINEERING CENTER      *
*           VERSION 4.1                *                                    *          609 SECOND STREET           *
*                                      *                                    *       DAVIS, CALIFORNIA 95616        *
*  RUN DATE   13JUN00  TIME  13:10:04  *                                    *          (916) 756-1104              *
*                                      *                                    *                                      *
****************************************                                    ****************************************

                                        X     X  XXXXXXX   XXXXX           X
                                        X     X  X        X     X         XX
                                        X     X  X        X               X
                                        XXXXXXX  XXXX     X        XXXXX  X
                                        X     X  X        X               X
                                        X     X  X        X     X         X
                                        X     X  XXXXXXX   XXXXX         XXX
```

THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

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1                                          HEC-1 INPUT                                                          PAGE  1

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  1           ID   EXISTING LAND USE CALCULATIONS WERE BASED ON 1 YR. FROM 11/5/99
  2           ID   FOR LAS SENDAS       AND LANDISCOR JAN.1999 AERIAL PHOTOGPRAPHS
  3           ID
  4           ID   ALL DAMS WERE ANALYZED WITH NO STORAGE BELOW PRINCIPLE SPILLWAY ELEVATIONS
  5           ID
  6           ID   A CONSERVATIVE ESTIMATE WAS USED FOR THE LOCATION OF THE CENTROID FOR
  7           ID   PRECIPITATION VALUES
  8           ID
  9           ID   ALL CHANNEL ROUTING INFORMATION WAS OBTAINED FROM MCFCD SPOOK HILL   SIGNAL
 10           ID   BUTTE        AND BULLDOG FLOODWAY PLANS
 11           ID
 12           ID   MODEL UPDATE BASED ON COMBINATION OF TWO PREVIOUS MODEL RUNS:
 13           ID   S24CE14.DAT AND S24CE17.DAT. OVERVIEW OF EACH WILL FOLLOW RESPECTIVELY.
 14           ID
 15           ID   UPDATE TO PASS MOUNTAIN DIVERSION ALTERNATIVE.  ADDITIONAL DIVERSIONS
 16           ID   PLACED UPSTREAM OF ORIGINAL LEVEE EXTENSION AT PASS MOUNTAIN DIVERSION
 17           ID   CREATING NEW DRAINAGE BASIN BOUNDARIES: 383 FROM 385; 393 FROM 395;
 18           ID   365 FROM 370; AND 353 FROM 355.  383, 393, 365, AND 353 WILL NOW BE ROUTED
 19           ID   TO THE PASS MOUNTAIN DIVERSION AND ULTIMATELY INTO SIGNAL BUTTE FRS.
 20           ID   SUB-BASINS: 385, 395, 370, AND 355 WILL REMAIN WITH REDUCED AREAS AND
 21           ID   CONTINUE TO BE ROUTED ON THEIR ORIGINAL WATERCOURSES.
 22           ID
 23           ID   UPDATE BASED ON IMPROVED NATURAL CHANNELS ALONG MCDOWELL BETWEEN
 24           ID   POWER & ELLSWORTH, ALONG OAK ST. BETWEEN HAWES & THUNDER MTN. , ALONG
 25           ID   HAWES NORTH OF OAK ST. TO MCDOWELL RD.  THIS WILL GENERATE NEW SUB-BASINS
 26           ID   410, AND 411 FROM SUB-BASINS 415 AND 420.  DETENTION BASINS WILL BE
 27           ID   ADDED OFF-LINE TO SUB-BASINS 370 & 395, 385 & 411, AND 455.
 28           ID
 29           ID   ANALYSIS FOR CURRENT ALTERNATIVE PERFORMED BY: WOOD/PATEL,  MW,  06/06/2000
 30           ID   FILE:   S24CE10.DAT
 31           ID
 32           ID
 33           ID   DDM MCUHP1 SPOOK HILL AMDP - EXISTING CONDITIONS MODEL - 100YR, 24HR STORM
              *DIAGRAM
 34           IT       2                    1500
 35           IO       3
 36           IN      15
 37           JD    3.81    0.01
 38           PC    .000    .002    .005    .008    .011    .014    .017    .020    .023    .026
 39           PC    .029    .032    .035    .038    .041    .044    .048    .052    .056    .060
 40           PC    .064    .068    .072    .076    .080    .085    .090    .095    .100    .105
 41           PC    .110    .115    .120    .126    .133    .140    .147    .155    .163    .172
 42           PC    .181    .191    .203    .218    .236    .257    .283    .387    .663    .707
 43           PC    .735    .758    .776    .791    .804    .815    .825    .834    .842    .849
 44           PC    .856    .863    .869    .875    .881    .887    .893    .898    .903    .908
 45           PC    .913    .918    .922    .926    .930    .934    .938    .942    .946    .950
 46           PC    .953    .956    .959    .962    .965    .968    .971    .974    .977    .980
 47           PC    .983    .986    .989    .992    .995    .998   1.000
 48           JD    3.58   10.00
 49           JD    3.43   30.00
 50           JD    3.28   60.00
 51           JD    3.22   90.00
 52           JD    3.18  120.00
 53           JD    3.14  150.00
 54           JD    3.05  300.00
1                                          HEC-1 INPUT                                                          PAGE  2

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 55           JD    2.97  500.00
              * DDM   ***** Updated *****

 56           KK      10
 57           KM   SUB-BASIN 10
 58           KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 59           KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
 60           KM     L = 2.00  Kb = .044  Adj. Slope =  165.0
 61           BA    .702
 62           LG    .350    .320   7.600    .090  15.000
 63           UC    .421    .302
 64           UA       0       3       5       8      12      20      43      75      90      96
 65           UA     100
              * DDM   ***** Preserved *****

 66           KK     R10
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 67          KM   ROUTING OF FLOW FROM SUB-BASIN 10 TO R12
 68          RS       4     FLOW      -1
 69          RC    .045     .03    .045    8700    .021
 70          RX       0       1       2      17      27      42      43      44
 71          RY       5       5       5       0       0       5       5       5
             * DDM   ***** Preserved *****

 72          KK     R12
 73          KM   ROUTING OF FLOW FROM R12 TO SUB-BASIN 20
 74          RS       6     FLOW      -1
 75          RC    .045     .03    .045    4500     .01
 76          RX       0       1      30    37.5    57.5      65      94      95
 77          RY       3     2.5     2.5       0       0     2.5     2.5       3
             * DDM   ***** Updated *****

 78          KK      20
 79          KM   SUB-BASIN 20
 80          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 81          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
 82          KM     L = 2.50  Kb = .041  Adj. Slope =   88.0
 83          BA   1.120
 84          LG    .350    .390   5.800    .190   1.000
 85          UC    .658    .454
 86          UA       0       3       5       8      12      20      43      75      90      96
 87          UA     100
             * DDM   ***** Preserved *****

 88          KK     C20
 89          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 10 AND 20
 90          HC       2
             * DDM   ***** Updated *****

 91          KK      40
 92          KM   SUB-BASIN 40
 93          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 94          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
 95          KM     L = 3.08  Kb = .036  Adj. Slope =  189.0
 96          BA   2.233
 97          LG    .340    .340   4.900    .280   5.000
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 98          UC    .496    .264
 99          UA       0       3       5       8      12      20      43      75      90      96
100          UA     100
             * DDM   ***** Updated *****

101          KK      60
102          KM   SUB-BASIN 60
103          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
104          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .990
105          KM     L = 4.19  Kb = .038  Adj. Slope =  209.6
106          BA   1.746
107          LG    .330    .350   5.800    .190   9.000
108          UC    .596    .477
109          UA       0       3       5       8      12      20      43      75      90      96
110          UA     100
             * DDM   ***** Preserved *****

111          KK     60C
112          KM   HYDROGRAPH COMBINATION FOR APACHE JUNCTION FRS
             *      1       2
113          HC       3
             * DDM   ***** Preserved *****

114          KK    SR60
115          KM   APACHE JUNCTION FRS AS-BUILT PLANS 12/19/88
116          KM   OUTLET PIPE=30"RCP; L=136.6'; INLET INV.=1783.5; OUTLET INV.=1783
117          KM   EMERGENCY SPILLWAY ELEV.=1799.77'; PRINCIPLE SPILLWAY ELEV.=1793.5'
118          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 100 ACRE-FEET
119          RS       1     STOR       0
120          SV       0       1     100     200     300     400
121          SQ       0      71      81      87    91.5      94
122          SE    83.5    93.5      96    97.7      99   99.77
             * DDM   ***** Preserved *****

123          KK     R60
124          KM        ROUTE FLOW THROUGH BULLDOG FLOODWAY FROM APACHE JUNCTION FRS
125          RS       1     FLOW      -1
126          RC    .016    .016    .016    2850    .012
127          RX       0       1       2     2.1     5.6     5.7       6       7
128          RY     3.5     3.5     3.5       0       0     3.5     3.5     3.5
             * DDM   ***** Preserved *****

129          KK    RR60
130          KM   ROUTE FLOW FROM BULLDOG FLOODWAY TO SUB-BASIN 80
131          RS       4     FLOW      -1
132          RC    .016    .016    .016    3500    .005
133          RX       0       1       2     2.1     7.1     7.2       8       9
134          RY     3.5     3.5     3.5       0       0     3.5     3.5     3.5
             * DDM   ***** Updated *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

135          KK      80
136          KM   SUB-BASIN 80
137          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
138          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .991
139          KM     L = 2.69  Kb = .039  Adj. Slope =  229.8
140          BA   1.475
141          LG    .330    .330   5.600    .210   4.000
142          UC    .433    .259
143          UA       0       3       5       8      12      20      43      75      90      96
144          UA     100
             * DDM   ***** Preserved *****

145          KK     80C
146          KM   HYDROGRAPH COMBINATION FOR FLOW FROM APACHE JUNCTION FRS & SUB-BASIN 80
147          HC       2   1.475
             * DDM   ***** Preserved *****
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148          KK     R80
149          KM   ROUTE FLOW FROM SUB-BASIN 80 TO SUB-BASIN 100
150          RS       1    FLOW      -1
151          RC    .025    .016    .025    1200    .003
152          RX       0       2       6     6.1    41.1    41.2    56.2    58.2
153          RY     5.5     4.5     4.5       0       0     4.5     4.5     5.5
             * DDM   ***** Updated *****

154          KK     100
155          KM   SUB-BASIN 100
156          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
157          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
158          KM     L = 1.94  Kb = .046  Adj. Slope =  108.0
159          BA    .484
160          LG    .320    .290   5.100    .260   3.000
161          UC    .533    .473
162          UA       0       5      16      30      65      77      84      90      94      97
163          UA     100
             * DDM   ***** Preserved *****

164          KK    100C
165          KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 80 & 100
166          HC       2
             * DDM   ***** Preserved *****

167          KK    R100
168          KM   ROUTE FLOW FROM SUB-BASIN 100 TO SUB-BASIN 120
169          RS       1    FLOW      -1
170          RC    .016    .016    .016     940    .005
171          RX       0       1       2     2.1    52.1    52.2      53      54
172          RY     4.5     4.5     4.5       0       0     4.5     4.5     4.5
             * DDM   ***** Updated *****
1                                        HEC-1 INPUT                                          PAGE  5

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

173          KK     120
174          KM   SUB-BASIN 120
175          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
176          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
177          KM     L = 3.07  Kb = .037  Adj. Slope =  239.0
178          BA   2.202
179          LG    .330    .280   6.800    .130  11.000
180          UC    .429    .226
181          UA       0       3       5       8      12      20      43      75      90      96
182          UA     100
             * DDM   ***** Preserved *****

183          KK    120C
184          KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 100 & 120
185          HC       2
             * DDM   ***** Preserved *****

186          KK    R120
187          KM   ROUTE FLOW FROM SUB-BASIN 120 TO SIGNAL BUTTE FRS
188          RS       1    FLOW      -1
189          RC    .025    .016    .025    2100    .005
190          RX       0       6      10    10.1    60.1    60.2    74.2    80.2
191          RY       8       5       5       0       0       5       5       8
             * DDM   ***** Updated *****

192          KK     140
193          KM   SUB-BASIN 140
194          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
195          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
196          KM     L = 1.61  Kb = .044  Adj. Slope =  149.0
197          BA    .598
198          LG    .310    .280   4.200    .440   5.000
199          UC    .421    .278
200          UA       0       5      16      30      65      77      84      90      94      97
201          UA     100
             * DDM   ***** Updated *****

202          KK     150
203          KM   SUB-BASIN 150
204          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
205          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
206          KM     L = 1.50  Kb = .047  Adj. Slope =  315.0
207          BA    .408
208          LG    .350    .360   5.100    .260   7.000
209          UC   1.579   1.417
210          UA       0       3       5       8      12      20      43      75      90      96
211          UA     100
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE  6

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

212          KK    R150
213          KM   ROUTING OF FLOW FROM SUB-BASIN 150 TO R152
214          RS       3    FLOW      -1
215          RC    .045     .04    .045    3100    .032
216          RX       0       1       2      23      33      54      55      56
217          RY       7       7       7       0       0       7       7       7
             * DDM   ***** Preserved *****

218          KK    R152
219          KM   ROUTING OF FLOW FROM R152 TO SUB-BASIN 160
220          RS       6    FLOW      -1
221          RC    .045     .03    .045    5900    .019
222          RX       0       1       2       8      33      39      40      41
223          RY       2       2       2       0       0       2       2       2
             * DDM   ***** Updated *****

224          KK     160
225          KM   SUB-BASIN 160
226          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
227          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
228          KM     L = 2.10  Kb = .047  Adj. Slope =  129.0
229          BA    .369
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230          LG    .340    .330   4.150    .440   1.000
231          UC    .587    .655
232          UA       0       3       5       8      12      20      43      75      90      96
233          UA     100
             * DDM   ***** Updated *****

234          KK     180
235          KM   SUB-BASIN 180
236          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
237          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
238          KM     L = 2.42  Kb = .041  Adj. Slope =  140.0
239          BA   1.000
240          LG    .350    .350   4.150    .430    .000
241          UC    .571    .403
242          UA       0       3       5       8      12      20      43      75      90      96
243          UA     100
             * DDM   ***** Preserved *****

244          KK    180C
245          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
             *      1       2
246          HC       5
             * DDM   ***** Updated *****

247          KK     383
248          KM   SUB-BASIN 383
249          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
250          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
251          KM     L = 1.50  Kb = .047  Adj. Slope =  315.0
252          BA    .419
253          LG    .350    .400   6.000    .170  16.000
254          UC    .292    .214
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

255          UA       0       3       5       8      12      20      43      75      90      96
256          UA     100
             * DDM   ***** Preserved *****

257          KK    R383
258          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
259          KM   ROUTING OF FLOW FROM SUB-BASIN 383 TO SUB-BASIN 393
260          KM   OVERBANK MANNINGS INCREASED TO ACCOUNT FOR SKEWED FLOW TO NATURAL
261          KM   WATERCOURSE FLOW PATH
262          RS       2    FLOW      -1
263          RC     .07     .03     .07    1115    .045
264          RX       0       1       3       9      39      45      46      47
265          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

266          KK     393
267          KM   SUB-BASIN 393
268          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
269          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
270          KM     L =  .61  Kb = .061  Adj. Slope =  246.2
271          BA    .040
272          LG    .350    .350   4.200    .420    .000
273          UC    .233    .310
274          UA       0       3       5       8      12      20      43      75      90      96
275          UA     100
             * DDM   ***** Preserved *****

276          KK    393C
277          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 383 & 393
278          HC       2
             * DDM   ***** Preserved *****

279          KK    R393
280          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
281          KM   ROUTING OF FLOW FROM SUB-BASIN 393 TO SUB-BASIN 365
282          RS       1    FLOW      -1
283          RC    .055     .03    .055    1115    .045
284          RX       0       1       3       9      39      45      46      47
285          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

286          KK     365
287          KM   SUB-BASIN 365
288          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
289          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
290          KM     L = 2.20  Kb = .047  Adj. Slope =  299.5
291          BA    .415
292          LG    .350    .350   4.600    .330   4.000
293          UC    .400    .415
294          UA       0       3       5       8      12      20      43      75      90      96
295          UA     100
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

296          KK    365C
297          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 393 & 365
298          HC       2
             * DDM   ***** Preserved *****

299          KK    R365
300          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
301          KM   ROUTING OF FLOW FROM SUB-BASIN 365 TO ROUTING 365R
302          RS       2    FLOW      -1
303          RC    .045     .03    .045    1000    .025
304          RX       0       1      50      56      76      82     131     132
305          RY     2.5       2       2       0       0       2       2     2.5
             * DDM   ***** Preserved *****

306          KK    365R
307          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
308          KM   ROUTING OF FLOW FROM 365R TO SUB-BASIN 353
309          KM   OVERBANK MANNINGS INCREASED TO ACCOUNT FOR SKEWED FLOW TO NATURAL
310          KM   WATERCOURSE FLOW PATH
311          RS       3    FLOW      -1
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312          RC     .07     .03     .07    1300    .008
313          RX       0       3       5      11      41      47     147     247
314          RY       3     2.5       2       0       0       2     2.5       3
             * DDM   ***** Updated *****

315          KK     353
316          KM   SUB-BASIN 353
317          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
318          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
319          KM     L = 2.50  Kb = .046  Adj. Slope =  297.9
320          BA    .502
321          LG    .350    .350   4.350    .380   1.000
322          UC    .442    .460
323          UA       0       3       5       8      12      20      43      75      90      96
324          UA     100
             * DDM   ***** Preserved *****

325          KK    353C
326          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 365 & 353
327          HC       2
             * DDM   ***** Preserved *****

328          KK    R353
329          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
330          KM   ROUTING OF FLOW FROM SUB-BASIN 353 TO ROUTING 353R
331          KM   OVERBANK MANNINGS INCREASED TO ACCOUNT FOR SKEWED FLOW TO NATURAL
332          KM   WATERCOURSE FLOW PATH
333          RS       2    FLOW      -1
334          RC     .07     .03     .07    1100    .009
335          RX       0       3       5      11      41      47     172     302
336          RY     3.5     2.5       2       0       0       2     2.5     3.5
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

337          KK    353R
338          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
339          KM   ROUTING OF FLOW FROM 353R TO SUB-BASIN 310
340          RS       1    FLOW      -1
341          RC    .045     .03    .045    1692     .03
342          RX       0       1      25      31      51      57      81      82
343          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

344          KK     350
345          KM   SUB-BASIN 350
346          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
347          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
348          KM     L = 2.22  Kb = .042  Adj. Slope =  311.0
349          BA    .935
350          LG    .350    .350   4.600    .330   5.000
351          UC    .367    .239
352          UA       0       3       5       8      12      20      43      75      90      96
353          UA     100
             * DDM   ***** Preserved *****

354          KK    350R
355          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
356          KM   ROUTING OF FLOW FROM SUB-BASIN 350 TO SUB-BASIN 310
357          RS       6    FLOW      -1
358          RC    .045    .035    .045    7650    .025
359          RX       0       1      50      56      86      92     141     142
360          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

361          KK     310
362          KM   SUB-BASIN 310
363          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
364          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
365          KM     L = 2.70  Kb = .045  Adj. Slope =  283.5
366          BA    .555
367          LG    .350    .350   3.910    .480    .000
368          UC    .483    .511
369          UA       0       3       5       8      12      20      43      75      90      96
370          UA     100
             * DDM   ***** Preserved *****

371          KK    C310
372          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 350 & 310
373          HC       3
             * DDM   ***** Preserved *****

374          KK    R310
375          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
376          KM   ROUTING OF FLOW FROM SUB-BASIN 310 TO R312
377          RS       2    FLOW      -1
378          RC    .045     .03    .045    1500    .021
379          RX       0       1     100     106     126     132     231     232
380          RY     3.5       2       2       0       0       2       2     3.5
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

381          KK    R312
382          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
383          KM   ROUTING OF FLOW FROM R312 TO SUB-BASIN 295
384          KM   OVERBANK MANNINGS INCREASED TO ACCOUNT FOR SKEWED FLOW TO NATURAL
385          KM   WATERCOURSE FLOW PATH
386          RS       4    FLOW      -1
387          RC     .07     .03     .07    2100   .0124
388          RX       0       3       5      11      61      67     200     395
389          RY       4     2.5       2       0       0       2     2.5       4
             * DDM   ***** Updated *****

390          KK     295
391          KM   SUB-BASIN 295
392          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
393          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
394          KM     L = 1.60  Kb = .047  Adj. Slope =  131.0
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395          BA    .380
396          LG    .350    .350   4.900    .280    .000
397          UC    .450    .386
398          UA      0       3       5       8      12      20      43      75      90      96
399          UA    100
             * DDM   ***** Preserved *****

400          KK    295C
401          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 310 & 295
402          HC      2
             * DDM   ***** Preserved *****

403          KK    295R
404          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
405          KM   ROUTING OF FLOW FROM SUB-BASIN 295 TO BEGINNING OF PASS MTN. DIVERSION.
406          KM   OVERBANK MANNINGS INCREASED TO ACCOUNT FOR SKEWED FLOW TO NATURAL
407          KM   WATERCOURSE FLOW PATH
408          RS      2    FLOW      -1
409          RC    .07     .03     .07    1100    .013
410          RX      0       3       5      11      51      57     200     400
411          RY      4     2.5       2       0       0       2     2.5       4
             * DDM   ***** Updated *****

412          KK     210
413          KM   SUB-BASIN 210
414          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
415          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
416          KM     L = 1.84  Kb = .045  Adj. Slope =  315.0
417          BA    .583
418          LG    .350    .350   7.000    .120   7.000
419          UC    .321    .232
420          UA      0       3       5       8      12      20      43      75      90      96
421          UA    100
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

422          KK    R210
423          KM   ROUTING OF FLOW FROM SUB-BASIN 210 TO SUB-BASIN 220
424          RS      2    FLOW      -1
425          RC   .045     .03    .045    5100    .022
426          RX      0       1       2      14      34      46      47      48
427          RY      4       4       4       0       0       4       4       4
             * DDM   ***** Updated *****

428          KK     240
429          KM   SUB-BASIN 240
430          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
431          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .992
432          KM     L = 3.50  Kb = .039  Adj. Slope =  298.6
433          BA   1.398
434          LG    .350    .370   5.200    .240   2.000
435          UC    .471    .361
436          UA      0       3       5       8      12      20      43      75      90      96
437          UA    100
             * DDM   ***** Preserved *****

438          KK    240C
439          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
440          HC      3
             * DDM   ***** Preserved *****

441          KK   SR240
442          KM   DIGITAL MAPPING SHOWS SEDIMENTATION.  FOR SIMPLICITY NO ADDITIONAL
443          KM   SEDIMENTATION WILL BE CONSIDERED FOR STORAGE ROUTING ANALYSIS. 5/11/00
444          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
445          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
446          RS      1    STOR       0
447          SA   1.38    14.2    36.5
448          SE      0       5      11
449          SS      5      42       3     1.5
             * DDM   ***** Updated *****

450          KK     220
451          KM   SUB-BASIN 220
452          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
453          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
454          KM     L = 1.92  Kb = .043  Adj. Slope =  315.0
455          BA    .725
456          LG    .350    .350   7.000    .120   4.000
457          UC    .317    .209
458          UA      0       3       5       8      12      20      43      75      90      96
459          UA    100
             * DDM   ***** Preserved *****

460          KK    220C
461          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
462          HC      2
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

463          KK   SR220
464          KM   DIGITAL MAPPING SHOWS SEDIMENTATION.  FOR SIMPLICITY NO ADDITIONAL
465          KM   SEDIMENTATION WILL BE CONSIDERED FOR STORAGE ROUTING ANALYSIS. 5/11/00
466          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
467          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
468          RS      1    STOR       0
469          SA    .78     4.1    13.7
470          SE      0       3      10
471          SS      3      65       3     1.5
             * DDM   ***** Updated *****

472          KK     190
473          KM   SUB-BASIN 190
474          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
475          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
476          KM     L = 1.91  Kb = .042  Adj. Slope =  315.0
477          BA    .918
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LG    .350    .390   5.800    .190   8.000
UC    .321    .185
UA       0       3       5       8      12      20      43      75      90      96
UA     100
* DDM   ***** Preserved *****

KK    R190
KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
RS       2    FLOW      -1
RC    .045     .03    .045    4740     .03
RX       0       1       2      17      37      52      53      54
RY       5       5       5       0       0       5       5       5
* DDM   ***** Preserved *****

KK    R192
KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
RS       2    FLOW      -1
RC    .045    .035    .045    2200    .018
RX       0       1      50      59      79      88     137     138
RY     3.5       3       3       0       0       3       3     3.5
* DDM   ***** Updated *****

KK     200
KM   SUB-BASIN 200
KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
KM     L = 1.92  Kb = .045  Adj. Slope =  315.0
BA    .535
LG    .350    .390   5.700    .200  10.000
UC    .338    .267
UA       0       3       5       8      12      20      43      75      90      96
UA     100
* DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

KK    200C
KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 220 & 200
HC       3
* DDM   ***** Preserved *****

KK   SR200
KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
RS       1    STOR       0
SA    2.56     3.1     9.4
SE       0       3      10
SS       3     112       3     1.5
* DDM   ***** Preserved *****

KK   200SR
KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
*      1       2
RS       1    STOR       0
SA       8     9.2     9.2
SE       0       7      10
SS       7     251       3     1.5
KM   ******************************************************************
KM   ************* END OF PASS MOUNTAIN ALTERNATIVE UPDATE. **************
KM
* DDM   ***** Preserved *****

KK    C180
KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
*      1       2
HC       2
* DDM   ***** Preserved *****

KK   SR180
KM   SIGNAL BUTTE FRS DATED 1/28/85
KM   OUTLET PIPE=36"RCP; L= 147';  INLET INV.=1690; OUTLET INV.=1687
KM   EMERGENCY SPILLWAY ELEV.=1712.4; PRINCIPLE SPILLWAY ELEV.=1701
KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 250 ACRE-FEET
RS       1    STOR       0
SV       0       1     250     500     750    1060
SQ       0   106.5   125.5   137.5     146     160
SE      90     101   104.5     107     109   112.4
* DDM   ***** Preserved *****

KK    R180
KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
KM   ROUTE FLOW FROM SIGNAL BUTTE FRS TO SUB-BASIN 260
RS       2    FLOW      -1
RC    .035    .025    .035    1500    .003
RX       0       1       2    22.6    38.6    59.2      60      61
RY     9.3     9.3     9.3       0       0     9.3     9.3     9.3
* DDM   ***** Updated *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

KK     260
KM   SUB-BASIN 260
KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
KM     L =  .81  Kb = .049  Adj. Slope =   68.0
BA    .267
LG    .300    .170   6.800    .160  15.000
UC    .363    .215
UA       0       5      16      30      65      77      84      90      94      97
UA     100
* DDM   ***** Preserved *****

KK    260C
KM   HYDROGRAPH COMBINATION FOR OUTFLOW OF SIGNAL BUTTE FRS & SUB-BASIN 260
HC       2    .267
* DDM   ***** Preserved *****

KK    R260
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557          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
558          KM   ROUTE FLOW FROM SUB-BASIN 260 TO SUB-BASIN 280
559          RS       3     FLOW      -1
560          RC    .035     .025     .035    2300     .003
561          RX       0        1        2    23.4     43.4     64.8       65       66
562          RY     9.7      9.7      9.7       0        0      9.7      9.7      9.7
             * DDM   ***** Updated *****

563          KK     280
564          KM   SUB-BASIN 280
565          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
566          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
567          KM     L =  .77  Kb = .049  Adj. Slope =   84.0
568          BA    .304
569          LG    .300     .250    5.300    .290   15.000
570          UC    .333     .175
571          UA       0        5       16       30       65       77       84       90       94       97
572          UA     100
             * DDM   ***** Preserved *****

573          KK    280C
574          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 260 & SUB-BASIN 280
575          HC       2
             * DDM   ***** Preserved *****

576          KK    R280
577          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
578          KM   ROUTE FLOW FROM SUB-BASIN 280 TO SUB-BASIN 300
579          RS       2     FLOW      -1
580          RC    .035     .025     .035    2500     .003
581          RX       0        1        2    23.4     43.4     64.8       65       66
582          RY     9.7      9.7      9.7       0        0      9.7      9.7      9.7
             * DDM   ***** Updated *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

583          KK     300
584          KM   SUB-BASIN 300
585          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
586          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
587          KM     L =  .80  Kb = .049  Adj. Slope =  100.0
588          BA    .297
589          LG    .320     .280    4.200    .480   11.000
590          UC    .333     .183
591          UA       0        5       16       30       65       77       84       90       94       97
592          UA     100
             * DDM   ***** Preserved *****

593          KK    C300
594          KM   HYDROGRAPH COMBINATION OF DIVERTED FLOW
595          HC       2
             * DDM   ***** Preserved *****

596          KK    D300
597          KM   DIVERT FLOW INTO OFFLINE BASIN AT SIGNAL BUTTE FLOODWAY TO BE COMBINED
598          KM   LATER WITH BASIN 305 AT END OF SIGNAL BUTTE FLOODWAY
599          DT   DIV300
600          DI       0     300     5000
601          DQ       0       0     4700
             * DDM   ***** Preserved *****

602          KK   RTDIV300
603          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
604          DR   DIV300
             * DDM   ***** Preserved *****

605          KK   SRDIV300
606          KM   RETRIEVE FLOW INTO BASIN AND BLEED OFF WITHIN 36 HOURS
607          KM
608          RS       1    STOR        0
609          SV       0      60
610          SE       0      12
611          SQ       0     300
             * DDM   ***** Preserved *****

612          KK    300C
613          KM   HYDROGRAPH COMBINATION OF DIVERTED FLOW
614          HC       2
             * DDM   ***** Updated *****

615          KK     305
616          KM   SUB-BASIN 305
617          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
618          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
619          KM     L = 1.20  Kb = .047  Adj. Slope =   92.0
620          BA    .377
621          LG    .340     .330    4.450    .380    8.000
622          UC    .438     .298
623          UA       0        3        5        8       12       20       43       75       90       96
624          UA     100
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

625          KK    D305
626          KM   DIVERT FLOW INTO OFFLINE BASIN TO BE COMBINED LATER WITH PASS MOUNTAIN
627          KM   DIVERSION FLOW AT END OF SIGNAL BUTTE FLOODWAY
628          DT    305D
629          DI       0    1000
630          DQ       0    1000
             * DDM   ***** Preserved *****

631          KK   RT305D
632          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
633          DR    305D
             * DDM   ***** Preserved *****

634          KK   SR305D
635          KM   RETRIEVE FLOW INTO BASIN AND BLEED OFF WITHIN 36 HOURS
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636          KM
637          RS       1    STOR       0
638          SV       0      25
639          SE       0       6
640          SQ       0     100
             * DDM   ***** Preserved *****

641          KK    305C
642          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 280 & 300
643          HC       3
             * DDM   ***** Preserved *****

644          KK    R305
645          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
646          KM   ROUTE FLOW FROM SUB-BASIN 300 TO START OF FLOODWAY CONCRETE CHANNEL
647          RS       2    FLOW      -1
648          RC    .035    .025    .035    2200    .003
649          RX       0       1       2    23.4    55.4    76.8      77      78
650          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Preserved *****

651          KK   RR305
652          KM   CHANNEL GEOMETRY FOR SPOOK HILL FRS OBTAINED FROM AS-BUILTS PLANS.
653          KM   CONTINUE TO ROUTE FLOW WITHIN CONCRETE CHANNEL TO SPOOK HILL FRS
654          RS       1    FLOW      -1
655          RC    .016    .016    .016    6050   .0146
656          RX       0       1       2     2.1    16.1    16.2      17      18
657          RY     7.5     7.5     7.5       0       0     7.5     7.5     7.5
             *      1       2
             * DDM   ***** Updated *****

658          KK     320
659          KM   SUB-BASIN 320
660          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
661          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .995
662          KM     L = 1.60  Kb = .042  Adj. Slope =  106.0
663          BA    .870
664          LG    .310    .290   4.500    .380  15.000
665          UC    .450    .240
1                                    HEC-1 INPUT                                                    PAGE 17

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

666          UA       0       5      16      30      65      77      84      90      94      97
667          UA     100
             * DDM   ***** Preserved *****

668          KK    D320
669          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
670          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
671          KM   SIERRA HEIGHTS       FALCON RIDGE    & MARBLE CREEK
672          KM        MAXIMUM VOLUME DIVERSION = 12.27acre-feet
             *      1
673          DT   BS320   12.27
674          DI       0   10000
675          DQ       0   10000
             * DDM   ***** Preserved *****

676          KK   RT320
677          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
678          DR   BS320
             * DDM   ***** Preserved *****

679          KK   SR320
680          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
681          KM   12.27 ACRE-FEETx43560/36x3600=4.1cfs
             *      1
682          RS       1    STOR       0
683          SV       0     .01    12.3
684          SQ       0     4.2     4.2
             * DDM   ***** Preserved *****

685          KK    C320
686          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
687          HC       3
             * DDM   ***** Updated *****

688          KK     340
689          KM   SUB-BASIN 340
690          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
691          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .991
692          KM     L = 2.40  Kb = .042  Adj. Slope =  160.0
693          BA   1.449
694          LG    .280    .280   4.150    .520  21.000
695          UC    .512    .287
696          UA       0       5      16      30      65      77      84      90      94      97
697          UA     100
             * DDM   ***** Preserved *****

698          KK    D340
699          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
700          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
701          KM   GRANDVIEW ESTATES    BOULDER MOUNTAIN & 33% OF MESA HIGHLANDS
702          KM        MAXIMUM VOLUME DIVERSION = 56.0 acre-feet
             *      1
703          DT   BS340      56
704          DI       0   10000
705          DQ       0   10000
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                                    PAGE 18

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

706          KK   RT340
707          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
708          DR   BS340
             * DDM   ***** Preserved *****

709          KK   SR340
710          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
711          KM    56.0 ACRE-FEETx43560/36x3600=18.8cfs
             *      1
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712          RS       1    STOR       0
713          SV       0     .01      56
714          SQ       0    18.9    18.9
             * DDM   ***** Preserved *****

715          KK    C340
716          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
717          HC       3
             * DDM   ***** Updated *****

718          KK     355
719          KM   SUB-BASIN 355
720          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
721          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
722          KM     L =  .80  Kb = .052  Adj. Slope =  125.0
723          BA    .174
724          LG    .320    .300   4.550    .360  12.000
725          UC    .308    .227
726          UA       0       5      16      30      65      77      84      90      94      97
727          UA     100
             * DDM   ***** Preserved *****

728          KK    R355
729          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
730          KM   ROUTING OF FLOW FROM SUB-BASIN 355 TO SUB-BASIN 360
731          RS       8    FLOW      -1
732          RC    .045    .035    .045   10100    .026
733          RX       0       1      40      46      56      62     102     103
734          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

735          KK     360
736          KM   SUB-BASIN 360
737          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
738          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
739          KM     L = 2.10  Kb = .048  Adj. Slope =  124.0
740          BA    .670
741          LG    .260    .270   4.100    .560  20.000
742          UC    .587    .466
743          UA       0       5      16      30      65      77      84      90      94      97
744          UA     100
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

745          KK    D360
746          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
747          KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
748          KM        MAXIMUM VOLUME DIVERSION = 28.6 acre-feet
             *      1
749          DT   BS360    28.6
750          DI       0   10000
751          DQ       0   10000
             * DDM   ***** Preserved *****

752          KK   RT360
753          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
754          DR   BS360
             * DDM   ***** Preserved *****

755          KK   SR360
756          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
757          KM    28.6 ACRE-FEETx43560/36x3600=9.6cfs
758          RS       1    STOR       0
759          SV       0     .01    28.6
760          SQ       0     9.6     9.6
             * DDM   ***** Preserved *****

761          KK    360C
762          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
763          HC       4
             * DDM   ***** Updated *****

764          KK     380
765          KM   SUB-BASIN 380
766          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
767          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
768          KM     L = 2.20  Kb = .048  Adj. Slope =  114.0
769          BA    .972
770          LG    .300    .310   4.150    .500   7.000
771          UC    .658    .444
772          UA       0       5      16      30      65      77      84      90      94      97
773          UA     100
             * DDM   ***** Preserved *****

774          KK    D380
775          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
776          KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
777          KM        MAXIMUM VOLUME DIVERSION = 28.6 acre-feet
             *      1
778          DT   BS380    28.6
779          DI       0   10000
780          DQ       0   10000
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

781          KK   RT380
782          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
783          DR   BS380
             * DDM   ***** Preserved *****

784          KK   SR380
785          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
786          KM    28.6 ACRE-FEETx43560/36x3600=9.6cfs
787          RS       1    STOR       0
788          SV       0     .01    28.6
789          SQ       0     9.6     9.6
             * DDM   ***** Preserved *****
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790          KK    380C
791          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
792          HC       3
             * DDM   ***** Updated *****

793          KK     400
794          KM   SUB-BASIN 400
795          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
796          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
797          KM     L = 1.64  Kb = .046  Adj. Slope =  110.0
798          BA    .616
799          LG    .320    .320   3.130    .930   6.000
800          UC    .592    .405
801          UA       0       5      16      30      65      77      84      90      94      97
802          UA     100
             * DDM   ***** Preserved *****

803          KK    D400
804          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
805          KM   DETENTION/RETENTION BASIN LOCATED WITHIN SAGUARO VISTA SUBDIVISION
806          KM        MAXIMUM VOLUME DIVERSION = 5.6 ACRE-FEET
             *      1
807          DT   BS400     5.6
808          DI       0   10000
809          DQ       0   10000
             * DDM   ***** Preserved *****

810          KK   RT400
811          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
812          DR   BS400
             * DDM   ***** Preserved *****

813          KK   SR400
814          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
815          KM     5.6 ACRE-FEETx43560/36x3600 = 2 cfs
816          RS       1    STOR       0
817          SV       0     .01     5.6
818          SQ       0       2       2
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

819          KK    C400
820          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
821          HC       2
             * DDM   ***** Preserved *****

822          KK    400C
823          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
824          HC       2
             * DDM   ***** Updated *****

825          KK     420
826          KM   SUB-BASIN 420
827          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
828          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
829          KM     L = 1.69  Kb = .043  Adj. Slope =  101.0
830          BA    .588
831          LG    .290    .250   4.250    .510  20.000
832          UC    .492    .347
833          UA       0       5      16      30      65      77      84      90      94      97
834          UA     100
             * DDM   ***** Preserved *****

835          KK    D420
836          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
837          KM   DETENTION/RETENTION BASINS LOCATED WITHIN GRAY FOX SUBDIVISION
838          KM        MAXIMUM VOLUME DIVERSION = 8.65 acre-feet
             *      1
839          DT   BS420    8.65
840          DI       0   10000
841          DQ       0   10000
             * DDM   ***** Preserved *****

842          KK   RT420
843          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
844          DR   BS420
             * DDM   ***** Preserved *****

845          KK   SR420
846          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
847          KM   38.55 ACRE-FEETx43560/36x3600=13cfs
848          RS       1    STOR       0
849          SV       0     .01   38.55
850          SQ       0      13      13
             * DDM   ***** Preserved *****

851          KK    420C
852          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
853          HC       3   10.87
             * DDM   ***** Updated *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

854          KK     370
855          KM   SUB-BASIN 370
856          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
857          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
858          KM     L =  .90  Kb = .050  Adj. Slope =  189.0
859          BA    .257
860          LG    .310    .280   4.800    .340  16.000
861          UC    .271    .173
862          UA       0       5      16      30      65      77      84      90      94      97
863          UA     100
             * DDM   ***** Preserved *****

864          KK    D370
865          KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN LOCATED WITHIN SUB-BASINS
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866          KM   370 AND 395.
             *      1
867          DT   BS370
868          DI       0      50    5000
869          DQ       0       0    4950
             * DDM   ***** Preserved *****

870          KK   RT370
871          KM   RETRIEVE FLOW FROM DIVERSION
872          DR   BS370
             * DDM   ***** Preserved *****

873          KK   SR370
874          KM   RETRIEVE FLOW INTO OFFLINE BASIN AND BLEED OFF WITHIN 36 HOURS.
875          KM      11 ACRE-FEETx43560/36x3600 = 4 cfs
876          RS       1    STOR       0
877          SV       0     .01      11
878          SQ       0       4       4
             * DDM   ***** Preserved *****

879          KK    370C
880          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
881          HC       2
             * DDM   ***** Updated *****

882          KK     395
883          KM   SUB-BASIN 395
884          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
885          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
886          KM     L = 1.00  Kb = .052  Adj. Slope =  188.0
887          BA    .160
888          LG    .330    .320   5.100    .280  12.000
889          UC    .300    .276
890          UA       0       5      16      30      65      77      84      90      94      97
891          UA     100
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 23

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


892          KK    D395
893          KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN LOCATED WITHIN SUB-BASINS
894          KM   370 AND 395.
             *      1
895          DT   BS395
896          DI       0      25    5000
897          DQ       0       0    4975
             * DDM   ***** Preserved *****

898          KK   RT395
899          KM   RETRIEVE FLOW FROM DIVERSION
900          DR   BS395
             * DDM   ***** Preserved *****

901          KK   SR395
902          KM   RETRIEVE FLOW INTO OFFLINE BASIN AND BLEED OFF WITHIN 36 HOURS.
903          KM       7 ACRE-FEETx43560/36x3600 = 2 cfs
904          RS       1    STOR       0
905          SV       0     .01       7
906          SQ       0       2       2
             * DDM   ***** Preserved *****

907          KK    395C
908          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
909          HC       3
             * DDM   ***** Preserved *****

910          KK    R395
911          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
912          KM   ROUTING OF FLOW FROM SUB-BASINS 370 AND 395 TO SUB-BASIN 390
913          RS       6    FLOW      -1
914          RC    .045    .035    .045    2600    .023
915          RX       0       1      40      46      56      62     102     103
916          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

917          KK     385
918          KM   SUB-BASIN 385
919          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
920          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
921          KM     L =  .90  Kb = .050  Adj. Slope =  309.5
922          BA    .235
923          LG    .340    .320   4.700    .320   9.000
924          UC    .229    .151
925          UA       0       5      16      30      65      77      84      90      94      97
926          UA     100
             * DDM   ***** Preserved *****

927          KK    D385
928          KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN LOCATED WITHIN SUB-BASINS
929          KM   385 AND 411.
930          DT   SF385
931          DI       0      50    5000
932          DQ       0       0    4950
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 24

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


933          KK   RT385
934          KM   RETRIEVE FLOW FROM DIVERSION OF SUB-BASIN 385
935          DR   SF385
             * DDM   ***** Preserved *****

936          KK   SR385
937          KM   RETRIEVE FLOW INTO OFFLINE BASIN AND BLEED OFF WITHIN 36 HOURS.
938          KM       9 ACRE-FEETx43560/36x3600 = 3 cfs
939          RS       1    STOR       0
940          SV       0     .01       9
941          SQ       0       3       3
             * DDM   ***** Preserved *****
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942          KK    385C
943          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 385 AND DIVERTED 385 FLOW
944          HC       2
             * DDM   ***** Updated *****

945          KK     411
946          KM   SUB-BASIN 411
947          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
948          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
949          KM     L =  .90  Kb = .051  Adj. Slope =  309.5
950          BA    .202
951          LG    .340    .350   5.100    .260   9.000
952          UC    .233    .168
953          UA       0       5      16      30      65      77      84      90      94      97
954          UA     100
             * DDM   ***** Preserved *****

955          KK    D411
956          KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN LOCATED WITHIN SUB-BASINS
957          KM   385 AND 411.
958          DT   SF411
959          DI       0      25    5000
960          DQ       0       0    4975
             * DDM   ***** Preserved *****

961          KK   RT411
962          KM   RETRIEVE FLOW FROM DIVERSION OF SUB-BASIN 411.
963          DR   SF411
             * DDM   ***** Preserved *****

964          KK   SR411
965          KM   RETRIEVE FLOW INTO OFFLINE BASIN AND BLEED OFF WITHIN 36 HOURS.
966          KM       9 ACRE-FEETx43560/36x3600 = 3 cfs
967          RS       1    STOR       0
968          SV       0     .01       9
969          SQ       0       3       3
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

970          KK    411C
971          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 411
972          HC       3
             * DDM   ***** Preserved *****

973          KK    R411
974          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
975          KM   ROUTING OF SPLIT FLOW FROM SUB-BASIN 385 AND SUB-BASIN 411 TO SUB-BASIN 390.
976          RS       3    FLOW      -1
977          RC    .045    .035    .045   1300    .038
978          RX       0       1      40      46      56      62     102     103
979          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

980          KK     390
981          KM   SUB-BASIN 390
982          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
983          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
984          KM     L =  .70  Kb = .050  Adj. Slope =  299.4
985          BA    .244
986          LG    .300    .250   4.700    .380  18.000
987          UC    .204    .107
988          UA       0       5      16      30      65      77      84      90      94      97
989          UA     100
             * DDM   ***** Preserved *****

990          KK    D390
991          KM          DIVERT FLOW INTO ONLINE  DETENTION BASIN
992          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THUNDER MOUNTAIN ESTATES
993          KM        MAXIMUM VOLUME DIVERSION  = 3.5 acre-feet
             *      1
994          DT   BS390     3.5
995          DI       0    5000
996          DQ       0    5000
             * DDM   ***** Preserved *****

997          KK   RT390
998          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
999          DR   BS390
             * DDM   ***** Preserved *****

1000         KK   SR390
1001         KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1002         KM     3.5 ACRE-FEETx43560/36x3600=1.2cfs
1003         RS       1    STOR       0
1004         SV       0     .01     3.5
1005         SQ       0     1.2     1.2
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1006         KK    390C
1007         KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1008         HC       4
             * DDM   ***** Preserved *****

1009         KK   RR390
1010         KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1011         KM   FROM SUB-BASIN 390 TO SUB-BASIN 410.
1012         RS       7    FLOW      -1
1013         RC    .045    .035    .045   5500    .020
1014         RX       0       1      40      46      56      62     102     103
1015         RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

1016         KK     410
1017         KM   SUB-BASIN 410
1018         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
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1019        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1020        KM     L = 1.00  Kb = .049  Adj. Slope =  150.0
1021        BA    .273
1022        LG    .300    .250   3.910    .590  15.000
1023        UC    .329    .226
1024        UA       0       5      16      30      65      77      84      90      94      97
1025        UA     100
            * DDM   ***** Preserved *****

1026        KK    410C
1027        KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1028        HC       2
            * DDM   ***** Updated *****

1029        KK     440
1030        KM   SUB-BASIN 440
1031        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1032        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1033        KM     L =  .40  Kb = .039  Adj. Slope =  315.0
1034        BA    .080
1035        LG    .190    .380   6.400    .140  13.000
1036        UC    .129    .077
1037        UA       0       3       5       8      12      20      43      75      90      96
1038        UA     100
            * DDM   ***** Preserved *****

1039        KK     R70
1040        KM   ROUTE FLOW FROM SUB-BASIN 440 TO C108
1041        RS       1    FLOW      -1
1042        RC     .05    .035     .05    2250     .08
1043        RX    1000    1025    1050    1070    1075    1095    1120    1145
1044        RY      30    22.9    15.7      10      10    15.7    22.9      30
            * DDM   ***** Updated *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1045        KK     441
1046        KM   SUB-BASIN 441
1047        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1048        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1049        KM     L =  .28  Kb = .069  Adj. Slope =  315.0
1050        BA    .010
1051        LG    .300    .250   5.600    .220   5.000
1052        UC    .150    .225
1053        UA       0       5      16      30      65      77      84      90      94      97
1054        UA     100
            * DDM   ***** Preserved *****

1055        KK    C108
1056        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 440 & 441
1057        HC       2
            * DDM   ***** Preserved *****

1058        KK    DIV4
1059        KM        SPLIT FLOW WITH TWO 42 INCH PIPES TO WEST AND SOUTH
            *      1
1060        DT   SPLIT
1061        DI       0      14      40      82     120     154     180
1062        DQ       0       7      20      41      60      77      90
            * DDM   ***** Preserved *****

1063        KK    R108
1064        KM        ROUTE FLOW FROM SUB-BASIN C108 TO C67
1065        RS       2    FLOW      -1
1066        RC     .05    .035     .05    3200      .1
1067        RX    1000    1025    1050    1070    1075    1095    1120    1145
1068        RY      30    22.9    15.7      10      10    15.7    22.9      30
            * DDM   ***** Updated *****

1069        KK     442
1070        KM   SUB-BASIN 442
1071        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1072        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1073        KM     L =  .83  Kb = .055  Adj. Slope =  274.2
1074        BA    .100
1075        LG    .300    .270   3.290    .770   5.000
1076        UC    .258    .264
1077        UA       0       5      16      30      65      77      84      90      94      97
1078        UA     100
            * DDM   ***** Preserved *****

1079        KK     C67
1080        KM   COMBINE FLOW FROM SUB-BASIN 442 & DIV4
1081        HC       2
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1082        KK    DIV6
1083        KM        OFFLINE BASIN WITH 25 FOOT WEIR SET AT 2.5 FEET ABOVE BOTTOM OF CHANNEL
1084        KM        FLOW CONTINUES BEYOND BASIN THROUGH 2-30" PIPES
            *      1
1085        DT  BASIN4
1086        DI       0      10      32      44    79.9   132.5     198   272.9   356.8
1087        DQ       0       0       0       0    23.9    67.5     124   190.9   266.8
            * DDM   ***** Preserved *****

1088        KK  RTDIV6
1089        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1090        DR  BASIN4
            * DDM   ***** Preserved *****

1091        KK  RFDIV6
1092        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1093        KM     3.3 ACRE-FEETx43560/36x3600=1.1cfs
            *      1
1094        RS       1    STOR       0
1095        SV       0     .01     3.3
1096        SQ       0     1.1     1.1
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            * DDM   ***** Preserved *****

1097        KK   CDIV6
1098        KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1099        HC       2
            * DDM   ***** Updated *****

1100        KK     443
1101        KM   SUB-BASIN 443
1102        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1103        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1104        KM     L =  .71  Kb = .050  Adj. Slope =  315.0
1105        BA    .080
1106        LG    .250    .190   8.000    .080  10.000
1107        UC    .196    .194
1108        UA       0       5      16      30      65      77      84      90      94      97
1109        UA     100
            * DDM   ***** Preserved *****

1110        KK   DIV66
1111        KM        DIVERT FLOW INTO 3 NATURAL WASHES WITH ONE 24" PIPE IN EACH WASH.
1112        KM        EACH PIPE CAPACITY BASED ON 4 FEET OF HEAD
1113        DT   WSH66
1114        DI       0      78     100     200
1115        DQ       0      78      78      78
            * DDM   ***** Preserved *****

1116        KK    R113
1117        KM        ROUTE FLOW FROM C113 TO C114
1118        RS       1    FLOW      -1
1119        RC    .019    .019    .019    1300    .029
1120        RX    1000    1004    1008    1012    1018    1022    1026    1030
1121        RY      17   15.33   12.67      10      10   12.67   15.33      17
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 29

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1122        KK    C114
1123        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 67 AND C113
1124        HC       2
            * DDM   ***** Updated *****

1125        KK     444
1126        KM   SUB-BASIN 444
1127        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1128        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1129        KM     L =  .33  Kb = .034  Adj. Slope =  315.0
1130        BA    .040
1131        LG    .130    .350   4.450    .320   1.000
1132        UC    .112    .084
1133        UA       0       3       5       8      12      20      43      75      90      96
1134        UA     100
            * DDM   ***** Preserved *****

1135        KK     R58
1136        KM   ROUTE FLOW FROM SUB-BASIN 444 TO C107
1137        RS       1    FLOW      -1
1138        RC     .05    .035     .05    2370   .0516
1139        RX    1000    1010    1020    1050    1055    1085    1095    1105
1140        RY      19      18      17      10      10      17      18      19
            * DDM   ***** Updated *****

1141        KK     445
1142        KM   SUB-BASIN 445
1143        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1144        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1145        KM     L =  .82  Kb = .036  Adj. Slope =  315.0
1146        BA    .190
1147        LG    .170    .320   3.470    .590   3.000
1148        UC    .192    .130
1149        UA       0       5      16      30      65      77      84      90      94      97
1150        UA     100
            * DDM   ***** Preserved *****

1151        KK    C107
1152        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 444 & 445
1153        HC       2
            * DDM   ***** Preserved *****

1154        KK    R107
1155        KM        ROUTE FLOW FROM C107 TO C109
1156        RS       1    FLOW      -1
1157        RC     .05    .035     .05     700   .0516
1158        RX    1000    1010    1020    1050    1055    1085    1095    1105
1159        RY      19      18      17      10      10      17      18      19
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 30

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1160        KK    RTB2
1161        KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
            *      1
1162        DR   SPLIT
            * DDM   ***** Preserved *****

1163        KK  RSPLIT
1164        KM        ROUTE FLOW FROM SPLIT TO C109
1165        RS       1    FLOW      -1
1166        RC     .05    .035     .05     800     .05
1167        RX    1000    1025    1050    1070    1075    1095    1120    1145
1168        RY      30    22.9    15.7      10      10    15.7    22.9      30
            * DDM   ***** Updated *****

1169        KK     446
1170        KM   SUB-BASIN 446
1171        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1172        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1173        KM     L =  .46  Kb = .061  Adj. Slope =  303.9
1174        BA    .040
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1175        LG    .270    .250   4.500    .400  19.000
1176        UC    .183    .189
1177        UA       0       5      16      30      65      77      84      90      94      97
1178        UA     100
            * DDM   ***** Preserved *****

1179        KK    C109
1180        KM        COMBINE HYDROGRAPHS FROM COMBINES C107 AND C108
1181        HC       3
            * DDM   ***** Preserved *****

1182        KK    DIV5
1183        KM        DIVERT FLOW INTO WASHES TOWARDS WEST
1184        KM        DIVERSION THROUGH 36" PIPE WITH 3 FEET OF HEAD
            *      1
1185        DT  WSH404
1186        DI       0    40.7    71.2   121.6     190     276   379.4   500.6
1187        DQ       0      35      35      35      35      35      35      35
            * DDM   ***** Preserved *****

1188        KK    R109
1189        KM        ROUTE FLOW FROM C109 TO C110
1190        RS       1    FLOW      -1
1191        RC    .019    .019    .019    3080     .05
1192        RX    1000    1005    1010    1015    1025    1030    1035    1040
1193        RY   13.75    12.5   11.25      10      10   11.25    12.5   13.75
            * DDM   ***** Updated *****

1194        KK     447
1195        KM   SUB-BASIN 447
1196        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1197        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1198        KM     L =  .49  Kb = .056  Adj. Slope =  221.0
1199        BA    .090
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1200        LG    .250    .270   3.350    .870  30.000
1201        UC    .208    .145
1202        UA       0       5      16      30      65      77      84      90      94      97
1203        UA     100
            * DDM   ***** Preserved *****

1204        KK   RT404
1205        KM        RETRIEVE DIVERTED FLOW FOR WASH 109
1206        DR  WSH404
            * DDM   ***** Preserved *****

1207        KK    R404
1208        KM        ROUTE FLOW FROM C110 TO C110
1209        RS       5    FLOW      -1
1210        RC    .019    .019    .019    3540     .03
1211        RX    1000    1012    1016    1020    1025    1029    1033    1045
1212        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Preserved *****

1213        KK    C110
1214        KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 447 AND R404
1215        HC       3
            * DDM   ***** Preserved *****

1216        KK    R110
1217        KM        ROUTE FLOW FROM C110 TO C115
1218        RS       1    FLOW      -1
1219        RC    .019    .019    .019     580   .0291
1220        RX    1000    1012    1016    1020    1035    1039    1043    1055
1221        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Preserved *****

1222        KK    C115
1223        KM        COMBINE HYDROGRAPHS FROM C114 AND C110
1224        HC       2
            * DDM   ***** Preserved *****

1225        KK    R115
1226        KM        ROUTE FLOW FROM C115 TO C119
1227        RS       1    FLOW      -1
1228        RC    .019    .019    .019    2125    .029
1229        RC    .019    .019    .019     580   .0291
1230        RX    1000    1012    1016    1020    1035    1039    1043    1055
1231        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Updated *****

1232        KK     448
1233        KM   SUB-BASIN 448
1234        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1235        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1236        KM     L =  .36  Kb = .042  Adj. Slope =  315.0
1237        BA    .045
1238        LG    .170    .310   4.200    .390  11.000
1239        UC    .133    .102
1240        UA       0       5      16      30      65      77      84      90      94      97
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1241        UA     100
            * DDM   ***** Updated *****

1242        KK     449
1243        KM   SUB-BASIN 449
1244        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1245        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1246        KM     L =  .40  Kb = .054  Adj. Slope =  315.0
1247        BA    .050
1248        LG    .260    .280   3.500    .640   6.000
1249        UC    .167    .134
1250        UA       0       5      16      30      65      77      84      90      94      97
1251        UA     100
            * DDM   ***** Preserved *****

1252        KK   C6364
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1253        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 448 & 449
1254        HC       2
            * DDM   ***** Preserved *****

1255        KK   R6364
1256        KM   ROUTE FLOW FROM C116 AND SUB-BASINS 448 AND 449
1257        RS       4    FLOW      -1
1258        RC     .05    .035     .05    4375   .0333
1259        RX    1000    1027    1053    1080    1090    1117    1143    1170
1260        RY      15   13.33   11.67      10      10   11.67   13.33      15
            * DDM   ***** Updated *****

1261        KK     450
1262        KM   SUB-BASIN 450
1263        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1264        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1265        KM     L =  .85  Kb = .057  Adj. Slope =  210.5
1266        BA    .070
1267        LG    .340    .350   3.630    .570   4.000
1268        UC    .296    .383
1269        UA       0       3       5       8      12      20      43      75      90      96
1270        UA     100
            * DDM   ***** Updated *****

1271        KK     451
1272        KM   SUB-BASIN 451
1273        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1274        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1275        KM     L =  .57  Kb = .063  Adj. Slope =  175.0
1276        BA    .025
1277        LG    .340    .340   3.290    .750   3.000
1278        UC    .271    .453
1279        UA       0       3       5       8      12      20      43      75      90      96
1280        UA     100
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1281        KK    RT66
1282        KM        RETRIEVE DIVERTED FLOW FROM SUB-BASIN 66
1283        DR   WSH66
            * DDM   ***** Updated *****

1284        KK     452
1285        KM   SUB-BASIN 452
1286        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1287        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1288        KM     L =  .43  Kb = .055  Adj. Slope =  315.0
1289        BA    .040
1290        LG    .260    .280   3.700    .550   9.000
1291        UC    .171    .166
1292        UA       0       5      16      30      65      77      84      90      94      97
1293        UA     100
            * DDM   ***** Preserved *****

1294        KK   C6465
1295        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 443 AND 452
1296        HC       2
            * DDM   ***** Preserved *****

1297        KK   R6566
1298        KM        ROUTE FLOW FROM DIVERSIONS 65 AND 66 TO C116
1299        RS       2    FLOW      -1
1300        RC     .05    .035     .05    2435   .0282
1301        RX    1000    1045    1090    1150    1160    1220    1265    1310
1302        RY      25      23      20      10      10      20      23      25
            * DDM   ***** Preserved *****

1303        KK    C116
1304        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 450 & 451 AND R6364 & R6465
1305        HC       4
            * DDM   ***** Preserved *****

1306        KK  BASIN5
1307        KM        RESERVOIR WITHIN PARCEL 31      2-48 INCH PIPES AT OUTFALL
1308        KM        BASIN 5 FEET DEEP
1309        RS       1    ELEV       0
1310        SV       0     4.5     9.9
1311        SQ       0      69     190
1312        SE       0     2.5       5
            * DDM   ***** Preserved *****

1313        KK    R116
1314        KM   ROUTE FLOW FROM C116 TO C117
1315        RS       2    FLOW      -1
1316        RC     .05    .035     .05    1300   .0333
1317        RX    1000    1100    1200    1300    1320    1420    1520    1620
1318        RY      13      12      11      10      10      11      12      13
            * DDM   ***** Updated *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1319        KK     453
1320        KM   SUB-BASIN 453
1321        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1322        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1323        KM     L =  .58  Kb = .058  Adj. Slope =  138.0
1324        BA    .060
1325        LG    .290    .300   3.290    .820  18.000
1326        UC    .275    .284
1327        UA       0       5      16      30      65      77      84      90      94      97
1328        UA     100
            * DDM   ***** Preserved *****

1329        KK    C117
1330        KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 453 AND R116
1331        HC       2
            * DDM   ***** Preserved *****
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1332        KK    C118
1333        KM   COMBINE HYDROGRAPHS FROM R115 AND C117
1334        HC       2
            * DDM   ***** Preserved *****

1335        KK    R118
1336        KM        ROUTE FLOW FROM C118 TO  DIV7
1337        RS       1    FLOW      -1
1338        RC    .019    .019    .019    1500    .024
1339        RX    1000    1012    1016    1020    1035    1039    1043    1055
1340        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Preserved *****

1341        KK    DIV7
1342        KM        OFFLINE BASIN AT NORTH MOUNTAIN RIDGE   FLOWS ENTER BASIN OVER
1343        KM        30' WEIR SET AT 5.3' ABOVE THE CHANNEL BOTTOM
            *      1
1344        DT  BASIN6
1345        DI       0     363     487     563     645     844
1346        DQ       0       3      47      83     125     244
            * DDM   ***** Preserved *****

1347        KK  RTDIV7
1348        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1349        DR  BASIN6
            * DDM   ***** Preserved *****

1350        KK  RFDIV7
1351        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1352        KM     3.6 ACRE-FEETx43560/36x3600=1.2cfs
1353        RS       1    STOR       0
1354        SV       0     .01     3.6
1355        SQ       0     1.2     1.2
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1356        KK   CDIV7
1357        KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1358        HC       2
            * DDM   ***** Updated *****

1359        KK     454
1360        KM   SUB-BASIN 454
1361        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1362        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1363        KM     L = 1.23  Kb = .051  Adj. Slope =  163.0
1364        BA    .180
1365        LG    .300    .310   3.780    .560  14.000
1366        UC    .379    .395
1367        UA       0       5      16      30      65      77      84      90      94      97
1368        UA     100
            * DDM   ***** Preserved *****

1369        KK    C119
1370        KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 454 AND DIV7.
            *      1       2
1371        HC       2
            * DDM   ***** Preserved *****

1372        KK    R454
1373        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1374        KM   ROUTING OF FLOW FROM LAS SENDAS AND R413 TO SUB-BASIN 415.
1375        RS       3    FLOW      -1
1376        RC    .045    .035    .045    2500    .012
1377        RX       0      .5       1      33      42      67    67.5      68
1378        RY       5       4       4       0       0       6       6       6
            * DDM   ***** Updated *****

1379        KK     415
1380        KM   SUB-BASIN 415
1381        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1382        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1383        KM     L = 1.10  Kb = .049  Adj. Slope =  155.0
1384        BA    .281
1385        LG    .300    .260   3.630    .710  15.000
1386        UC    .358    .264
1387        UA       0       5      16      30      65      77      84      90      94      97
1388        UA     100
            * DDM   ***** Preserved *****

1389        KK    415C
1390        KM   HYDROGRAPH COMBINATION OF R454, SUB-BASIN 415, R410.
1391        HC       3
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1392        KK    D415
1393        KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN
1394        KM   MAXIMUM STORAGE VOLUME FOR DIVERSION = 45 AC-FT @ 5' DEPTH.
            *      1
1395        DT   BS415
1396        DI       0    1100    5000
1397        DQ       0       0    3900
            * DDM   ***** Preserved *****

1398        KK   RT415
1399        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1400        DR   BS415

1401        KK   SR415
1402        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1403        KM      15 ACRE-FEETx43560/36x3600 = 5 cfs
1404        RS       1    STOR       0
1405        SV       0     .01      15
1406        SQ       0       5       5
            * DDM   ***** Preserved *****
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KK    C415
KM   HYDROGRAPH COMBINATION OF 415 DIVERSION.
HC       2
* DDM   ***** Preserved *****

KK    R415
KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
KM   ROUTING OF FLOW FROM 415C TO 455C
RS       4    FLOW      -1
RC    .045     .03    .045    4100    .024
RX       0      .5       1       8      16      23    23.5      24
RY       8       8       8       0       0       8       8       8
* DDM   ***** Updated *****

KK     455
KM   SUB-BASIN 455
KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
KM     L = 1.70  Kb = .041  Adj. Slope =  146.0
BA   1.111
LG    .270    .280   3.700    .640  24.000
UC    .421    .204
UA       0       5      16      30      65      77      84      90      94      97
UA     100
* DDM   ***** Preserved *****

KK    D455
KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
KM   FOR BASIN #: 30      34      43      47&58
KM        MAXIMUM VOLUME DIVERSION = 74.1 acre-feet
*      1
DT   BS455    74.1
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

DI       0   10000
DQ       0   10000
* DDM   ***** Preserved *****

KK   RT455
KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
DR   BS455
* DDM   ***** Preserved *****

KK   SR455
KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
KM    74.1 ACRE-FEETx43560/36x3600=25cfs
RS       1    STOR       0
SV       0     .01    74.1
SQ       0      25      25
* DDM   ***** Preserved *****

KK    C455
KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 455 AND DIVERTED BASIN STORAGE OF 455
HC       2
* DDM   ***** Preserved *****

KK    455C
KM  HYDROGRAPH COMBINATION OF 420C, R415 AND C455
*      1       2
HC       3
* DDM   ***** Preserved *****

KK   SR440
KM   SPOOK HILL FRS PLANS DATED 6/15/77
KM   OUTLET PIPE=7'x7.5'RCBC; L=70 INLET INV.=1566; OUTLET INV.=1566
KM   EMERGENCY SPILLWAY ELEV.=1582; PRINCIPLE SPILLWAY ELEV.=1577.5
KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 200 ACRE-FEET
RS       1    STOR       0
SV       0      10     100     300     500     680
SQ       0     640     720     780     825     860
SE      66    77.5      79    80.2    81.2      82
* DDM   ***** Preserved *****

KK   RR455
KM   ROUTE FLOW FROM SPOOK HILL FRS TO SUB-BASIN 462
RS      10    FLOW      -1
RC    .035    .025    .035    9200    .002
RX       0       1       2      28      58      84      85      86
RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
* DDM   ***** Updated *****

KK     456
KM   SUB-BASIN 456
KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
KM     L =  .94  Kb = .045  Adj. Slope =  315.0
BA    .260
LG    .300    .380   5.600    .200  12.000
UC    .217    .139
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

UA       0       5      16      30      65      77      84      90      94      97
UA     100
* DDM   ***** Preserved *****

KK    DIV1
KM        DIVERT FLOW INTO OFFLINE DETENTION BASIN
KM        WEIR FOR BASIN SET AT 4 FEET ABOVE CHANNEL BOTTOM
*      1
DT  BASIN1
DI       0    11.1   127.9   234.4   577.7   789.9  1025.5  1280.9  1555.7
DQ       0       0       0    47.7     248   381.8   533.6   701.5     884
* DDM   ***** Preserved *****

KK    DIV2
KM        SPLIT OUT FLOW FOR WASHES THAT FLOW TO THE SOUTH FROM
KM        WASHES THAT DRAIN TO THE WES, SOUTHERN WASHES FED BY 30" & 24" PIPE
DT    WA30
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1485        DI       0    11.1   127.9   189.6   329.7     408   491.9   579.4   671.7
1486        DQ       0    11.1    38.4    48.2      63    69.5      76      81      86
            * DDM   ***** Preserved *****

1487        KK    R456
1488        KM        ROUTE FLOW FROM SUB-BASIN 51 TO C101
1489        RS       2    FLOW      -1
1490        RC     .05    .035     .05    3800    .044
1491        RX    1000    1010    1020    1036    1041    1057    1067    1077
1492        RY   14.88   14.44      14      10      10      14   14.44   14.88
            * DDM   ***** Updated *****

1493        KK     457
1494        KM   SUB-BASIN 457
1495        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1496        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1497        KM     L = 1.01  Kb = .045  Adj. Slope =  308.8
1498        BA    .190
1499        LG    .270    .330   3.950    .460   6.000
1500        UC    .237    .195
1501        UA       0       5      16      30      65      77      84      90      94      97
1502        UA     100
            * DDM   ***** Preserved *****

1503        KK    C101
1504        KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 50 AND 51
1505        HC       2
            * DDM   ***** Preserved *****

1506        KK    DIV3
1507        KM        RESERVOIR AT THE EDGE OF THE PROPERTY   FLOW FROM CHANNEL
1508        KM        DIVERTED  INTO OFFLINE BASIN A 25' WEIR SET AT ELEVATION 1808 FT
            *      1
1509        DT  BASIN2
1510        DI       0      36      70     110     180   313.5     402   500.9
1511        DQ       0       0       0       0       0    67.5     124   190.9
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1512        KK  RTDIV3
1513        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1514        DR  BASIN2
            * DDM   ***** Preserved *****

1515        KK  RFDIV3
1516        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1517        KM     5.0 ACRE-FEETx43560/36x3600=1.7cfs
1518        RS       1    STOR       0
1519        SV       0     .01       5
1520        SQ       0     1.7     1.7
            * DDM   ***** Preserved *****

1521        KK   CDIV3
1522        KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1523        HC       2
            * DDM   ***** Preserved *****

1524        KK    R101
1525        KM        ROUTE FLOW FROM SUBBASIN C101 TO C103
1526        RS       1    FLOW      -1
1527        RC     .05    .035     .05    1450     .05
1528        RX    1000    1010    1020    1036    1041    1057    1067    1077
1529        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Updated *****

1530        KK     458
1531        KM   SUB-BASIN 458
1532        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1533        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1534        KM     L =  .76  Kb = .048  Adj. Slope =  299.0
1535        BA    .190
1536        LG    .290    .330   5.800    .190   6.000
1537        UC    .204    .131
1538        UA       0       5      16      30      65      77      84      90      94      97
1539        UA     100
            * DDM   ***** Preserved *****

1540        KK    C103
1541        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 55 AND C101
1542        HC       2
            * DDM   ***** Preserved *****

1543        KK    R103
1544        KM        ROUTE FLOW FROM SUBBASIN C103 TO C106
1545        RS       1    FLOW      -1
1546        RC     .05    .035     .05     900     .03
1547        RX    1000    1010    1020    1030    1050    1060    1070    1080
1548        RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
            * DDM   ***** Preserved *****
```



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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1549        KK    RT30
1550        KM        RETRIEVE DIVERTED FLOW FOR WASH BELOW 30 INCH PIPE
1551        DR    WA30
            * DDM   ***** Preserved *****

1552        KK     R30
1553        KM        ROUTE FLOW FROM WASH DIVERSION TO COMBINE C52
1554        RS       1    FLOW      -1
1555        RC     .05    .035     .05    1630     .05
1556        RX    1000    1010    1020    1036    1041    1057    1067    1077
1557        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Preserved *****

1558        KK    RTB1
1559        KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
            *      1       2
```

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1560        DR  BASIN1
            * DDM   ***** Preserved *****

1561        KK      B1
1562        KM        ROUTE FLOW THROUGH OFFLINE DETENTION BASIN
1563        KM        FLOW OUTLETS THROUGH A 30 INCH OUTLET PIPE
            *       1       2
1564        RS       1    ELEV       0
1565        SV              .7     1.4     2.3     2.7     3.2
1566        SQ       0       5      16      28    32.5      37
1567        SE       0       1       2       3     3.5       4
            * DDM   ***** Preserved *****

1568        KK     RB1
1569        KM        ROUTE FLOW FROM BASIN DIVERSION TO COMBINE C52
1570        RS       2    FLOW      -1
1571        RC     .05    .035     .05    1720     .05
1572        RX    1000    1010    1020    1036    1041    1057    1067    1077
1573        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Preserved *****

1574        KK    CDIV
1575        KM        COMBINE FLOWS FROM WA30 AND BASIN 1
1576        HC       2      .12
            * DDM   ***** Updated *****

1577        KK     459
1578        KM   SUB-BASIN 459
1579        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1580        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1581        KM     L =  .35  Kb = .052  Adj. Slope =  251.6
1582        BA    .030
1583        LG    .220    .300   3.330    .710   8.000
1584        UC    .162    .157
1585        UA       0       5      16      30      65      77      84      90      94      97
1586        UA     100
            * DDM   ***** Preserved *****
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```
LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1587        KK     C52
1588        KM        COMBINE FLOWS FROM SUB-BASIN 52 WA30 AND BASIN 1
1589        HC       2
            * DDM   ***** Preserved *****

1590        KK     R52
1591        KM        ROUTE FLOW FROM SUBBASIN 52 TO C102
1592        RS       2    FLOW      -1
1593        RC     .05    .035     .05    2000     .05
1594        RX    1000    1010    1020    1036    1041    1057    1067    1077
1595        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Updated *****

1596        KK     460
1597        KM   SUB-BASIN 460
1598        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1599        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1600        KM     L =  .62  Kb = .058  Adj. Slope =  194.0
1601        BA    .140
1602        LG    .250    .260   3.740    .690  27.000
1603        UC    .242    .160
1604        UA       0       5      16      30      65      77      84      90      94      97
1605        UA     100
            * DDM   ***** Preserved *****

1606        KK    C102
1607        KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 52 AND 53
1608        HC       2
            * DDM   ***** Preserved *****

1609        KK  BASIN3
1610        KM        RESERVOIR AT CLUBHOUSE LOCATION 1-30 INCH PIPE AT OUTFALL
1611        KM        BOTTOM OF BASIN AT 6 FEET ABOVE 1795 ELEVATION
1612        RS       1    ELEV       0
1613        SA       0       0       0       0     .34    1.59    1.81    1.96    2.13     2.3
            *      0       0       0       0    1.14    3.25    5.52    9.23
1614        SQ       0      22      45    47.4      48      51      57      62      67      73
1615        SE    1795  1797.5    1800  1800.4  1800.5    1801    1802    1803    1804  1805.5
            * DDM   ***** Preserved *****

1616        KK      R3
1617        KM        ROUTE FLOW FROM C102 to C106
1618        RS       4    FLOW      -1
1619        RC     .05     .03     .05    2750   .0375
1620        RX    1000    1010    1020    1052    1086    1118    1128    1138
1621        RY    19.2    18.4      18      10      10      18    18.4    19.2
            * DDM   ***** Updated *****

1622        KK     461
1623        KM   SUB-BASIN 461
1624        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1625        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1626        KM     L =  .83  Kb = .052  Adj. Slope =  181.0
1627        BA    .120
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1628        LG    .270    .250   4.250    .450  21.000
1629        UC    .271    .250
1630        UA       0       5      16      30      65      77      84      90      94      97
1631        UA     100
            * DDM   ***** Preserved *****

1632        KK    C104
1633        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 54 AND R102
1634        HC       2
            * DDM   ***** Preserved *****

1635        KK    C106
1636        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN C103 AND C104
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1637          HC       2
              * DDM   ***** Preserved *****

1638          KK    R106
1639          KM        ROUTE FLOW FROM C106 TO C49
1640          RS       2    FLOW      -1
1641          RC     .05    .035     .05    3950    .033
1642          RX    1000    1010    1020    1030    1050    1060    1070    1080
1643          RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
              * DDM   ***** Updated *****

1644          KK     462
1645          KM   SUB-BASIN 462
1646          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1647          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1648          KM     L =  .97  Kb = .045  Adj. Slope =  297.7
1649          BA    .301
1650          LG    .300    .330   5.300    .240  12.000
1651          UC    .225    .137
1652          UA       0       5      16      30      65      77      84      90      94      97
1653          UA     100
              * DDM   ***** Preserved *****

1654          KK     C56
1655          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 56 AND C106
              *      1       2
1656          HC       2
              * DDM   ***** Updated *****

1657          KK     480
1658          KM   SUB-BASIN 480
1659          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1660          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
1661          KM     L = 1.21  Kb = .042  Adj. Slope =  165.0
1662          BA    .731
1663          LG    .270    .270   3.580    .730  27.000
1664          UC    .325    .148
1665          UA       0       5      16      30      65      77      84      90      94      97
1666          UA     100
              * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 43

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1667          KK    D480
1668          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1669          KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1670          KM   FOR BASIN #: 18 & 26
1671          KM        MAXIMUM VOLUME DIVERSION = 16.5 acre-feet
              *      1
1672          DT   BS480    16.5
1673          DI       0   10000
1674          DQ       0   10000
              * DDM   ***** Preserved *****

1675          KK   RT480
1676          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1677          DR   BS480
              * DDM   ***** Preserved *****

1678          KK   SR480
1679          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1680          KM    16.5 ACRE-FEETx43560/36x3600=5.5cfs
1681          RS       1    STOR       0
1682          SV       0     .01    16.5
1683          SQ       0     5.6     5.6
              * DDM   ***** Preserved *****

1684          KK    C480
1685          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1686          HC       2
              * DDM   ***** Preserved *****

1687          KK    480C
1688          KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1689          HC       3    2.09
              * DDM   ***** Preserved *****

1690          KK   RR480
1691          KM   ROUTE FLOW FROM SUB-BASIN 480 TO SUB-BASIN 500
1692          RS       1    FLOW      -1
1693          RC    .025    .025    .025    6500     .05
1694          RX       0       1       2      28      58      84      85      86
1695          RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
              * DDM   ***** Updated *****

1696          KK     500
1697          KM   SUB-BASIN 500
1698          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1699          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
1700          KM     L = 2.77  Kb = .042  Adj. Slope =  286.8
1701          BA    .930
1702          LG    .350    .400   6.000    .170   9.000
1703          UC    .421    .333
1704          UA       0       3       5       8      12      20      43      75      90      96
1705          UA     100
              * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 44

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1706          KK    500C
1707          KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1708          HC       2    3.02
1709          ZZ
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SCHEMATIC DIAGRAM OF STREAM NETWORK

```
INPUT
 LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW
  NO.      (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

  56         10
              V
              V
  66        R10
              V
              V
  72        R12
              .
              .
  78          .          20
              .           .
              .           .
  88        C20............
              .
              .
  91          .          40
              .           .
              .           .
 101          .           .          60
              .           .           .
              .           .           .
 111        60C........................
              V
              V
 114       SR60
              V
              V
 123        R60
              V
              V
 129       RR60
              .
              .
 135          .          80
              .           .
              .           .
 145        80C............
              V
              V
 148        R80
              .
              .
 154          .         100
              .           .
              .           .
 164       100C............
              V
              V
 167       R100
              .
              .
 173          .         120
              .           .
              .           .
 183       120C............
              V
              V
 186       R120
              .
              .
 192          .         140
              .           .
              .           .
 202          .           .         150
              .           .           V
              .           .           V
 212          .           .        R150
              .           .           V
              .           .           V
 218          .           .        R152
              .           .           .
              .           .           .
 224          .           .           .         160
              .           .           .           .
              .           .           .           .
 234          .           .           .           .         180
              .           .           .           .           .
              .           .           .           .           .
 244       180C..............................................
              .
              .
 247          .         383
              .           V
              .           V
 257          .        R383
              .           .
              .           .
 266          .           .         393
              .           .           .
              .           .           .
 276          .        393C............
              .           V
              .           V
 279          .        R393
              .           .
              .           .
 286          .           .         365
              .           .           .
              .           .           .
 296          .        365C............
              .           V
              .           V
 299          .        R365
              .           V
              .           V
 306          .        365R
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                .          .
                .          .
315             .          .        353
                .          .          .
                .          .          .
325             .      353C............
                .          V
                .          V
328             .      R353
                .          V
                .          V
337             .      353R
                .          .
                .          .
344             .          .        350
                .          .          V
                .          .          V
354             .          .       350R
                .          .          .
                .          .          .
361             .          .          .        310
                .          .          .          .
                .          .          .          .
371             .      C310........................
                .          V
                .          V
374             .      R310
                .          V
                .          V
381             .      R312
                .          .
                .          .
390             .          .        295
                .          .          .
                .          .          .
400             .      295C............
                .          V
                .          V
403             .      295R
                .          .
                .          .
412             .          .        210
                .          .          V
                .          .          V
422             .          .       R210
                .          .          .
                .          .          .
428             .          .          .        240
                .          .          .          .
                .          .          .          .
438             .      240C........................
                .          V
                .          V
441             .     SR240
                .          .
                .          .
450             .          .        220
                .          .          .
                .          .          .
460             .      220C............
                .          V
                .          V
463             .     SR220
                .          .
                .          .
472             .          .        190
                .          .          V
                .          .          V
482             .          .       R190
                .          .          V
                .          .          V
488             .          .       R192
                .          .          .
                .          .          .
494             .          .          .        200
                .          .          .          .
                .          .          .          .
504             .      200C........................
                .          V
                .          V
507             .     SR200
                .          V
                .          V
514             .     200SR
                .          .
                .          .
524         C180............
                V
                V
527        SR180
                V
                V
536         R180
                .
                .
543             .        260
                .          .
                .          .
553         260C............
                V
                V
556         R260
                .
                .
563             .        280
                .          .
                .          .
573         280C............
                V
                V
576         R280
                .
                .
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583          .         300
             .           .
             .           .
593       C300............
             .
             .
599          .-------->   DIV30
596       D300
             .
             .
604          .           .<-------   DIV30
602          .       RTDIV
             .           V
             .           V
605          .       SRDIV
             .           .
             .           .
612       300C............
             .
             .
615          .         305
             .           .
             .           .
628          .           .-------->    305D
625          .        D305
             .           .
             .           .
633          .           .           .<-------    305D
631          .           .       RT305
             .           .           V
             .           .           V
634          .           .       SR305
             .           .           .
             .           .           .
641       305C........................
             V
             V
644       R305
             V
             V
651      RR305
             .
             .
658          .         320
             .           .
             .           .
673          .           .-------->   BS320
668          .        D320
             .           .
             .           .
678          .           .           .<-------   BS320
676          .           .       RT320
             .           .           V
             .           .           V
679          .           .       SR320
             .           .           .
             .           .           .
685       C320........................
             .
             .
688          .         340
             .           .
             .           .
703          .           .-------->   BS340
698          .        D340
             .           .
             .           .
708          .           .           .<-------   BS340
706          .           .       RT340
             .           .           V
             .           .           V
709          .           .       SR340
             .           .           .
             .           .           .
715       C340........................
             .
             .
718          .         355
             .           V
             .           V
728          .        R355
             .           .
             .           .
735          .           .         360
             .           .           .
             .           .           .
749          .           .           .-------->   BS360
745          .           .        D360
             .           .           .
             .           .           .
754          .           .           .           .<-------   BS360
752          .           .           .       RT360
             .           .           .           V
             .           .           .           V
755          .           .           .       SR360
             .           .           .           .
             .           .           .           .
761       360C...................................
             .
             .
764          .         380
             .           .
             .           .
778          .           .-------->   BS380
774          .        D380
             .           .
             .           .
783          .           .           .<-------   BS380
781          .           .       RT380
             .           .           V
             .           .           V
784          .           .       SR380
             .           .           .
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790     380C.......................
                .
793             400
                .
                .
807             .-------->  BS400
803           D400
                .
                .
812             .           .<--------  BS400
810             .       RT400
                .           V
                .           V
813             .       SR400
                .           .
                .           .
819           C400............
                .
                .
822     400C............
                .
825             420
                .
                .
839             .-------->  BS420
835           D420
                .
                .
844             .           .<--------  BS420
842             .       RT420
                .           V
                .           V
845             .       SR420
                .           .
                .           .
851     420C........................
                .
854             370
                .
                .
867             .-------->  BS370
864           D370
                .
                .
872             .           .<--------  BS370
870             .       RT370
                .           V
                .           V
873             .       SR370
                .           .
                .           .
879           370C............
                .
                .
882             .         395
                .           .
                .           .
895             .           .-------->  BS395
892             .       D395
                .           .
                .           .
900             .           .           .<--------  BS395
898             .           .       RT395
                .           .           V
                .           .           V
901             .           .       SR395
                .           .           .
                .           .           .
907           395C........................
                V
                V
910           R395
                .
                .
917             .         385
                .           .
                .           .
930             .           .-------->  SF385
927             .       D385
                .           .
                .           .
935             .           .           .<--------  SF385
933             .           .       RT385
                .           .           V
                .           .           V
936             .           .       SR385
                .           .           .
                .           .           .
942             .       385C............
                .           .
                .           .
945             .           .         411
                .           .           .
                .           .           .
958             .           .           .-------->  SF411
955             .           .       D411
                .           .           .
                .           .           .
963             .           .           .           .<--------  SF411
961             .           .           .       RT411
                .           .           .           V
                .           .           .           V
964             .           .           .       SR411
                .           .           .           .
                .           .           .           .
970             .       411C........................
                .           V
                .           V
973             .       R411
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980                 390
                     .
                     .
994                  .-------> BS390
990                 D390
                     .
                     .
999                  .        .<-------  BS390
997                  .     RT390
                     .        V
                     .        V
1000                 .     SR390
                     .        .
                     .        .
1006            390C.................................
                   V
                   V
1009            RR390
                     .
                     .
1016                410
                     .
                     .
1026            410C............
                     .
                     .
1029                440
                      V
                      V
1039                R70
                     .
                     .
1045                 .        441
                     .         .
                     .         .
1055                C108............
                     .
                     .
1060                 .-------> SPLIT
1058                DIV4
                      V
                      V
1063                R108
                     .
                     .
1069                 .        442
                     .         .
                     .         .
1079                C67............
                     .
                     .
1085                 .-------> BASIN4
1082                DIV6
                     .
                     .
1090                 .        .<-------  BASIN4
1088                 .     RTDIV6
                     .        V
                     .        V
1091                 .     RFDIV6
                     .        .
                     .        .
1097                CDIV6............
                     .
                     .
1100                 .        443
                     .         .
                     .         .
1113                 .        .-------> WSH66
1110                 .     DIV66
                     .        V
                     .        V
1116                 .     R113
                     .        .
                     .        .
1122                C114............
                     .
                     .
1125                 .        444
                     .         V
                     .         V
1135                 .        R58
                     .         .
                     .         .
1141                 .         .        445
                     .         .         .
                     .         .         .
1151                 .     C107............
                     .        V
                     .        V
1154                 .     R107
                     .        .
                     .        .
1162                 .        .        .<-------  SPLIT
1160                 .        .     RTB2
                     .        .        V
                     .        .        V
1163                 .        .   RSPLIT
                     .        .        .
                     .        .        .
1169                 .        .        .        446
                     .        .        .         .
                     .        .        .         .
1179                 .     C109........................
                     .        .
                     .        .
1185                 .        .-------> WSH404
1182                 .     DIV5
                     .        V
                     .        V
1188                 .     R109
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1194                                447
                                     .
1206                                 .<-------  WSH404
1204                            RT404
                                    V
                                    V
1207                             R404
                                     .
                                     .
1213                     C110......................
                            V
                            V
1216                     R110
                                     .
                                     .
1222                 C115............
                        V
                        V
1225                 R115
                                     .
                                     .
1232                     448         .
                                     .
                                     .
1242                                 .
                                447  .
                                     .
                                     .
1252                 C6364............
                            V
                            V
1255                 R6364
                                     .
                                     .
1261                                 .
                                450  .
                                     .
                                     .
1271                                 .
                                     .
                                451  .
                                     .
                                     .
1283                                 .<-------   WSH66
1281                                 .
                                     .
                                     .
1284                                 .
                                     .
                                     .
                                     .
1294                                 .
                                     .
                                     .
                                     .
1297                                 .
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                                     .
1303                     C116.................................
                            V
                            V
1306                 BASIN5
                            V
                            V
1313                     R116
                                     .
                                     .
1319                                 .
                                453  .
                                     .
                                     .
1329                     C117............
                                     .
                                     .
1332                 C118............
                        V
                        V
1335                 R118
                                     .
                                     .
1344                     .-------> BASIN6
1341                 DIV7
                                     .
                                     .
1349                                 .<-------  BASIN6
1347                     RTDIV7
                            V
                            V
1350                     RFDIV7
                                     .
                                     .
1356                 CDIV7............
                                     .
                                     .
1359                     454         .
                                     .
                                     .
1369                 C119............
                        V
                        V
1372                 R454
                                     .
                                     .
1379                     415         .
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                                     .
1389             415C......................
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1395                .-------> BS415
1392             D415
                    .
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1400                     .<-------  BS415
1398                 RT415
                        V
                        V
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1401          .           .       SR415
              .           .           .
              .           .           .
1407          .        C415............
              .           V
              .           V
1410          .        R415
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              .           .
1417          .           .        455
              .           .           .
              .           .           .
1432          .           .           .-------->   BS455
1427          .           .       D455
              .           .           .
              .           .           .
1437          .           .           .           .<--------   BS455
1435          .           .           .       RT455
              .           .           .           V
              .           .           .           V
1438          .           .           .       SR455
              .           .           .           .
              .           .           .           .
1444          .           .       C455............
              .           .           .
              .           .           .
1447       455C........................
              V
              V
1450      SR440
              V
              V
1459      RR455
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1465          .        456
              .           .
              .           .
1478          .           .-------->  BASIN1
1475          .        DIV1
              .           .
              .           .
1484          .           .-------->    WA30
1481          .        DIV2
              .           V
              .           V
1487          .        R456
              .           .
              .           .
1493          .           .        457
              .           .           .
              .           .           .
1503          .        C101............
              .           .
              .           .
1509          .           .-------->  BASIN2
1506          .        DIV3
              .           .
              .           .
1514          .           .           .<--------  BASIN2
1512          .           .      RTDIV3
              .           .           V
              .           .           V
1515          .           .      RFDIV3
              .           .           .
              .           .           .
1521          .       CDIV3............
              .           V
              .           V
1524          .        R101
              .           .
              .           .
1530          .           .        458
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              .           .           .
1540          .        C103............
              .           V
              .           V
1543          .        R103
              .           .
              .           .
1551          .           .           .<--------    WA30
1549          .           .       RT30
              .           .           V
              .           .           V
1552          .           .        R30
              .           .           .
              .           .           .
1560          .           .           .           .<--------  BASIN1
1558          .           .           .       RTB1
              .           .           .           V
              .           .           .           V
1561          .           .           .          B1
              .           .           .           V
              .           .           .           V
1568          .           .           .         RB1
              .           .           .           .
              .           .           .           .
1574          .           .       CDIV............
              .           .           .
              .           .           .
1577          .           .           .        459
              .           .           .           .
              .           .           .           .
1587          .           .        C52............
              .           .           V
              .           .           V
1590          .           .        R52
              .           .           .
              .           .           .
1596          .           .           .        460
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1606          .           .        C102............
              .           .           V
              .           .           V
1609          .           .      BASIN3
              .           .           V
              .           .           V
1616          .           .          R3
              .           .           .
              .           .           .
1622          .           .           .         461
              .           .           .           .
              .           .           .           .
1632          .           .        C104............
              .           .           .
              .           .           .
1635          .        C106............
              .           V
              .           V
1638          ..       R106
              .           .
              .           .
1644          .           .         462
              .           .           .
              .           .           .
1654          .         C56............
              .           .
              .           .
1657          .           .         480
              .           .           .
              .           .           .
1672          .           .           .-------->   BS480
1667          .           .        D480
              .           .           .
              .           .           .
1677          .           .           .          .<-------   BS480
1675          .           .           .       RT480
              .           .           .           V
              .           .           .           V
1678          .           .           .       SR480
              .           .           .           .
              .           .           .           .
1684          .           .        C480............
              .           .           .
              .           .           .
1687       480C........................
              V
              V
1690      RR480
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              .
1696          .         500
              .           .
              .           .
1706       500C............
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(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT	10	951.	12.27	114.	31.	15.	.70		
+	ROUTED TO	R10	882.	12.40	114.	31.	15.	.70		
+	ROUTED TO	R12	833.	12.60	114.	31.	15.	.70		
+	HYDROGRAPH AT	20	959.	12.43	128.	32.	16.	1.12		
+	2 COMBINED AT	C20	1663.	12.53	240.	63.	30.	1.82		
+	HYDROGRAPH AT	40	2582.	12.30	252.	66.	32.	2.23		
+	HYDROGRAPH AT	60	1553.	12.40	228.	61.	29.	1.75		
+	3 COMBINED AT	60C	5274.	12.37	708.	188.	90.	5.80		
+	ROUTED TO	SR60	92.	14.40	92.	89.	70.	5.80		
+	ROUTED TO	R60	92.	14.40	92.	89.	70.	5.80		
+	ROUTED TO	RR60	92.	14.53	92.	89.	70.	5.80		
+	HYDROGRAPH AT	80	1868.	12.27	179.	46.	22.	1.48		
+	2 COMBINED AT	80C	1942.	12.27	266.	134.	92.	1.48		
+	ROUTED TO	R80	1919.	12.27	266.	134.	92.	1.48		
+	HYDROGRAPH AT	100	404.	12.20	58.	15.	7.	.48		
+	2 COMBINED AT	100C	2300.	12.27	321.	148.	99.	1.96		
+	ROUTED TO	R100	2292.	12.30	321.	148.	99.	1.96		
+	HYDROGRAPH AT	120	3232.	12.27	326.	88.	42.	2.20		
+	2 COMBINED AT	120C	5469.	12.27	636.	229.	141.	4.16		
+	ROUTED TO	R120	5397.	12.30	636.	229.	140.	4.16		
+	HYDROGRAPH AT	140	632.	12.13	64.	17.	8.	.60		
+	HYDROGRAPH AT	150	135.	13.20	47.	13.	6.	.41		
+	ROUTED TO	R150	134.	13.30	47.	13.	6.	.41		
+	ROUTED TO	R152	133.	13.50	47.	13.	6.	.41		
+	HYDROGRAPH AT	160	217.	12.40	35.	9.	4.	.37		
+	HYDROGRAPH AT	180	785.	12.37	90.	23.	11.	1.00		
+	5 COMBINED AT	180C	6707.	12.30	857.	286.	168.	6.54		
+	HYDROGRAPH AT	383	642.	12.17	60.	17.	8.	.42		
+	ROUTED TO	R383	636.	12.17	60.	17.	8.	.42		
+	HYDROGRAPH AT	393	44.	12.13	4.	1.	0.	.04		
+	2 COMBINED AT	393C	677.	12.17	64.	18.	9.	.46		
+	ROUTED TO	R393	674.	12.20	64.	18.	9.	.46		
+	HYDROGRAPH AT	365	380.	12.27	45.	12.	6.	.41		
+	2 COMBINED AT	365C	1020.	12.20	108.	29.	14.	.87		
+	ROUTED TO	R365	1010.	12.23	108.	29.	14.	.87		

+	ROUTED TO 365R	964.	12.33	108.	29.	14.	.87
+	HYDROGRAPH AT 353	401.	12.30	49.	12.	6.	.50
+	2 COMBINED AT 353C	1343.	12.33	155.	41.	20.	1.38
+	ROUTED TO R353	1303.	12.40	155.	41.	20.	1.38
+	ROUTED TO 353R	1286.	12.43	155.	41.	20.	1.38
+	HYDROGRAPH AT 350	1151.	12.20	102.	27.	13.	.94
+	ROUTED TO 350R	962.	12.47	102.	27.	13.	.94
+	HYDROGRAPH AT 310	376.	12.33	49.	12.	6.	.56
+	3 COMBINED AT C310	2523.	12.43	300.	79.	38.	2.87
+	ROUTED TO R310	2502.	12.47	300.	79.	38.	2.87
+	ROUTED TO R312	2453.	12.57	300.	79.	38.	2.87
+	HYDROGRAPH AT 295	364.	12.30	40.	10.	5.	.38
+	2 COMBINED AT 295C	2646.	12.57	339.	88.	43.	3.25
+	ROUTED TO 295R	2614.	12.60	339.	88.	43.	3.25
+	HYDROGRAPH AT 210	873.	12.20	82.	22.	10.	.58
+	ROUTED TO R210	818.	12.27	82.	22.	10.	.58
+	HYDROGRAPH AT 240	1405.	12.30	155.	39.	19.	1.40
+	3 COMBINED AT 240C	3735.	12.50	567.	147.	71.	5.23
+	ROUTED TO SR240	1710.	12.93	502.	131.	63.	5.23
+	HYDROGRAPH AT 220	1126.	12.17	98.	25.	12.	.73
+	2 COMBINED AT 220C	1760.	12.90	592.	155.	74.	5.95
+	ROUTED TO SR220	1679.	13.07	581.	152.	73.	5.95
+	HYDROGRAPH AT 190	1403.	12.17	116.	31.	15.	.92
+	ROUTED TO R190	1348.	12.23	116.	31.	15.	.92
+	ROUTED TO R192	1267.	12.30	116.	31.	15.	.92
+	HYDROGRAPH AT 200	703.	12.20	69.	19.	9.	.54
+	3 COMBINED AT 200C	2635.	12.30	753.	198.	96.	7.40
+	ROUTED TO SR200	2495.	12.40	748.	195.	94.	7.40
+	ROUTED TO 200SR	1896.	12.67	628.	165.	79.	7.40
+	2 COMBINED AT C180	6707.	12.30	1479.	451.	247.	13.94
+	ROUTED TO SR180	143.	19.37	142.	142.	114.	13.94
+	ROUTED TO R180	143.	19.43	142.	142.	114.	13.94
+	HYDROGRAPH AT 260	418.	12.10	43.	12.	6.	.27
+	2 COMBINED AT 260C	527.	12.10	179.	153.	121.	.27
+	ROUTED TO R260	514.	12.20	178.	153.	121.	.27
+	HYDROGRAPH AT 280	478.	12.10	42.	12.	6.	.30
+	2 COMBINED AT 280C	945.	12.13	218.	163.	126.	.57
+	ROUTED TO R280	909.	12.20	217.	163.	126.	.57

+ HYDROGRAPH AT	300	407.	12.10	34.	9.	5.	.30
+ 2 COMBINED AT	C300	1243.	12.17	249.	171.	130.	.87
DIVERSION TO	DIV30	943.	12.17	68.	17.	8.	.87
+ HYDROGRAPH AT	D300	300.	11.87	180.	154.	122.	.87
+ HYDROGRAPH AT	RTDIV	943.	12.17	68.	17.	8.	.87
+ ROUTED TO	SRDIV	141.	12.60	62.	17.	8.	.87
+ 2 COMBINED AT	300C	441.	12.60	242.	171.	130.	.87
+ HYDROGRAPH AT	305	409.	12.27	42.	11.	6.	.38
+ DIVERSION TO	305D	409.	12.27	42.	11.	6.	.38
+ HYDROGRAPH AT	D305	0.	.00	0.	0.	0.	.38
+ HYDROGRAPH AT	RT305	409.	12.27	42.	11.	6.	.38
+ ROUTED TO	SR305	62.	12.93	36.	11.	6.	.38
+ 3 COMBINED AT	305C	498.	12.67	276.	181.	135.	1.25
+ ROUTED TO	R305	497.	12.73	275.	181.	135.	1.25
+ ROUTED TO	RR305	494.	12.77	275.	181.	134.	1.25
+ HYDROGRAPH AT	320	1040.	12.17	111.	31.	15.	.87
+ DIVERSION TO	BS320	409.	11.93	21.	6.	3.	.87
+ HYDROGRAPH AT	D320	1040.	12.17	96.	25.	12.	.87
HYDROGRAPH AT	RT320	409.	11.93	21.	6.	3.	.87
+ ROUTED TO	SR320	4.	4.17	4.	4.	3.	.87
+ 3 COMBINED AT	C320	1351.	12.17	373.	210.	149.	2.12
+ HYDROGRAPH AT	340	1471.	12.17	186.	55.	26.	1.45
+ DIVERSION TO	BS340	1471.	12.17	104.	28.	14.	1.45
+ HYDROGRAPH AT	D340	1199.	12.33	97.	27.	13.	1.45
+ HYDROGRAPH AT	RT340	1471.	12.17	104.	28.	14.	1.45
+ ROUTED TO	SR340	19.	9.00	19.	19.	14.	1.45
+ 3 COMBINED AT	C340	2305.	12.33	484.	254.	175.	3.56
+ HYDROGRAPH AT	355	235.	12.10	22.	6.	3.	.17
+ ROUTED TO	R355	201.	12.37	22.	6.	3.	.17
+ HYDROGRAPH AT	360	504.	12.23	84.	25.	12.	.67
+ DIVERSION TO	BS360	504.	12.23	53.	14.	7.	.67
+ HYDROGRAPH AT	D360	306.	12.63	38.	11.	5.	.67
+ HYDROGRAPH AT	RT360	504.	12.23	53.	14.	7.	.67
+ ROUTED TO	SR360	10.	9.83	10.	10.	7.	.67
4 COMBINED AT	360C	2496.	12.33	547.	279.	189.	4.41
+ HYDROGRAPH AT	380	666.	12.27	98.	26.	13.	.97
+ DIVERSION TO	BS380	666.	12.27	56.	14.	7.	.97
+ HYDROGRAPH AT	D380	472.	12.57	46.	12.	6.	.97

HYDROGRAPH AT	RT380	666.	12.27	56.	14.	7.	.97
ROUTED TO	SR380	10.	11.33	10.	10.	7.	.97
3 COMBINED AT	380C	2499.	12.33	598.	299.	201.	5.38
HYDROGRAPH AT	400	351.	12.23	47.	13.	6.	.62
DIVERSION TO	BS400	262.	12.10	10.	3.	1.	.62
HYDROGRAPH AT	D400	351.	12.23	39.	10.	5.	.62
HYDROGRAPH AT	RT400	262.	12.10	10.	3.	1.	.62
ROUTED TO	SR400	2.	8.70	2.	2.	1.	.62
2 COMBINED AT	C400	353.	12.23	41.	12.	6.	.62
2 COMBINED AT	400C	2813.	12.33	636.	310.	207.	6.00
HYDROGRAPH AT	420	562.	12.17	77.	22.	11.	.59
DIVERSION TO	BS420	206.	11.93	14.	4.	2.	.59
HYDROGRAPH AT	D420	562.	12.17	69.	18.	9.	.59
HYDROGRAPH AT	RT420	206.	11.93	14.	4.	2.	.59
ROUTED TO	SR420	13.	10.83	12.	4.	2.	.59
3 COMBINED AT	420C	3167.	12.33	698.	326.	216.	10.87
HYDROGRAPH AT	370	406.	12.07	34.	10.	5.	.26
DIVERSION TO	BS370	356.	12.07	21.	5.	3.	.26
HYDROGRAPH AT	D370	50.	11.70	13.	4.	2.	.26
HYDROGRAPH AT	RT370	356.	12.07	21.	5.	3.	.26
ROUTED TO	SR370	4.	11.73	4.	4.	3.	.26
2 COMBINED AT	370C	54.	11.73	16.	7.	5.	.26
HYDROGRAPH AT	395	204.	12.10	21.	6.	3.	.16
DIVERSION TO	BS395	179.	12.10	13.	3.	2.	.16
HYDROGRAPH AT	D395	25.	11.73	8.	2.	1.	.16
HYDROGRAPH AT	RT395	179.	12.10	13.	3.	2.	.16
ROUTED TO	SR395	2.	11.77	2.	2.	2.	.16
3 COMBINED AT	395C	81.	11.77	25.	11.	7.	.42
ROUTED TO	R395	81.	11.93	25.	11.	7.	.42
HYDROGRAPH AT	385	389.	12.07	28.	8.	4.	.23
DIVERSION TO	SF385	339.	12.07	18.	5.	2.	.23
HYDROGRAPH AT	D385	50.	11.73	10.	3.	2.	.23
HYDROGRAPH AT	RT385	339.	12.07	18.	5.	2.	.23
ROUTED TO	SR385	3.	11.77	3.	3.	2.	.23
2 COMBINED AT	385C	53.	11.77	13.	6.	4.	.23
HYDROGRAPH AT	411	329.	12.07	25.	7.	3.	.20
DIVERSION TO	SF411	304.	12.07	19.	5.	2.	.20
HYDROGRAPH AT	D411	25.	11.67	6.	2.	1.	.20

+	HYDROGRAPH AT	RT411	304.	12.07	19.	5.	2.	.20
+	ROUTED TO	SR411	3.	11.70	3.	3.	2.	.20
	3 COMBINED AT	411C	81.	11.77	21.	10.	7.	.44
+	ROUTED TO	R411	81.	11.83	21.	10.	7.	.44
+	HYDROGRAPH AT	390	463.	12.03	33.	10.	5.	.24
+	DIVERSION TO	BS390	95.	11.73	6.	2.	1.	.24
+	HYDROGRAPH AT	D390	463.	12.03	30.	8.	4.	.24
+	HYDROGRAPH AT	RT390	95.	11.73	6.	2.	1.	.24
+	ROUTED TO	SR390	1.	.90	1.	1.	1.	.24
+	4 COMBINED AT	390C	617.	12.03	77.	31.	19.	1.10
+	ROUTED TO	RR390	536.	12.23	77.	31.	19.	1.10
+	HYDROGRAPH AT	410	336.	12.10	32.	9.	4.	.27
+	2 COMBINED AT	410C	787.	12.20	107.	39.	23.	1.37
+	HYDROGRAPH AT	440	180.	12.03	12.	3.	2.	.08
+	ROUTED TO	R70	176.	12.07	12.	3.	2.	.08
+	HYDROGRAPH AT	441	16.	12.03	1.	0.	0.	.01
+	2 COMBINED AT	C108	191.	12.07	14.	4.	2.	.09
+	DIVERSION TO	SPLIT	96.	12.07	7.	2.	1.	.09
	HYDROGRAPH AT	DIV4	96.	12.07	7.	2.	1.	.09
+	ROUTED TO	R108	88.	12.13	7.	2.	1.	.09
+	HYDROGRAPH AT	442	102.	12.10	9.	2.	1.	.10
+	2 COMBINED AT	C67	187.	12.10	15.	4.	2.	.19
+	DIVERSION TO	BASIN4	115.	12.10	6.	1.	1.	.19
+	HYDROGRAPH AT	DIV6	72.	12.10	10.	3.	1.	.19
+	HYDROGRAPH AT	RTDIV6	115.	12.10	6.	1.	1.	.19
+	ROUTED TO	RFDIV6	1.	11.90	1.	1.	1.	.19
+	2 COMBINED AT	CDIV6	74.	12.10	10.	4.	2.	.19
+	HYDROGRAPH AT	443	148.	12.07	14.	4.	2.	.08
+	DIVERSION TO	WSH66	78.	11.90	12.	3.	2.	.08
+	HYDROGRAPH AT	DIV66	70.	12.07	3.	1.	0.	.08
+	ROUTED TO	R113	69.	12.07	3.	1.	0.	.08
+	2 COMBINED AT	C114	140.	12.07	13.	4.	2.	.27
+	HYDROGRAPH AT	444	82.	12.03	5.	1.	1.	.04
+	ROUTED TO	R58	75.	12.07	5.	1.	1.	.04
	HYDROGRAPH AT	445	296.	12.03	18.	5.	2.	.19
+	2 COMBINED AT	C107	365.	12.03	22.	6.	3.	.23
+	ROUTED TO	R107	365.	12.07	22.	6.	3.	.23
+	HYDROGRAPH AT	RTB2	96.	12.07	7.	2.	1.	.09

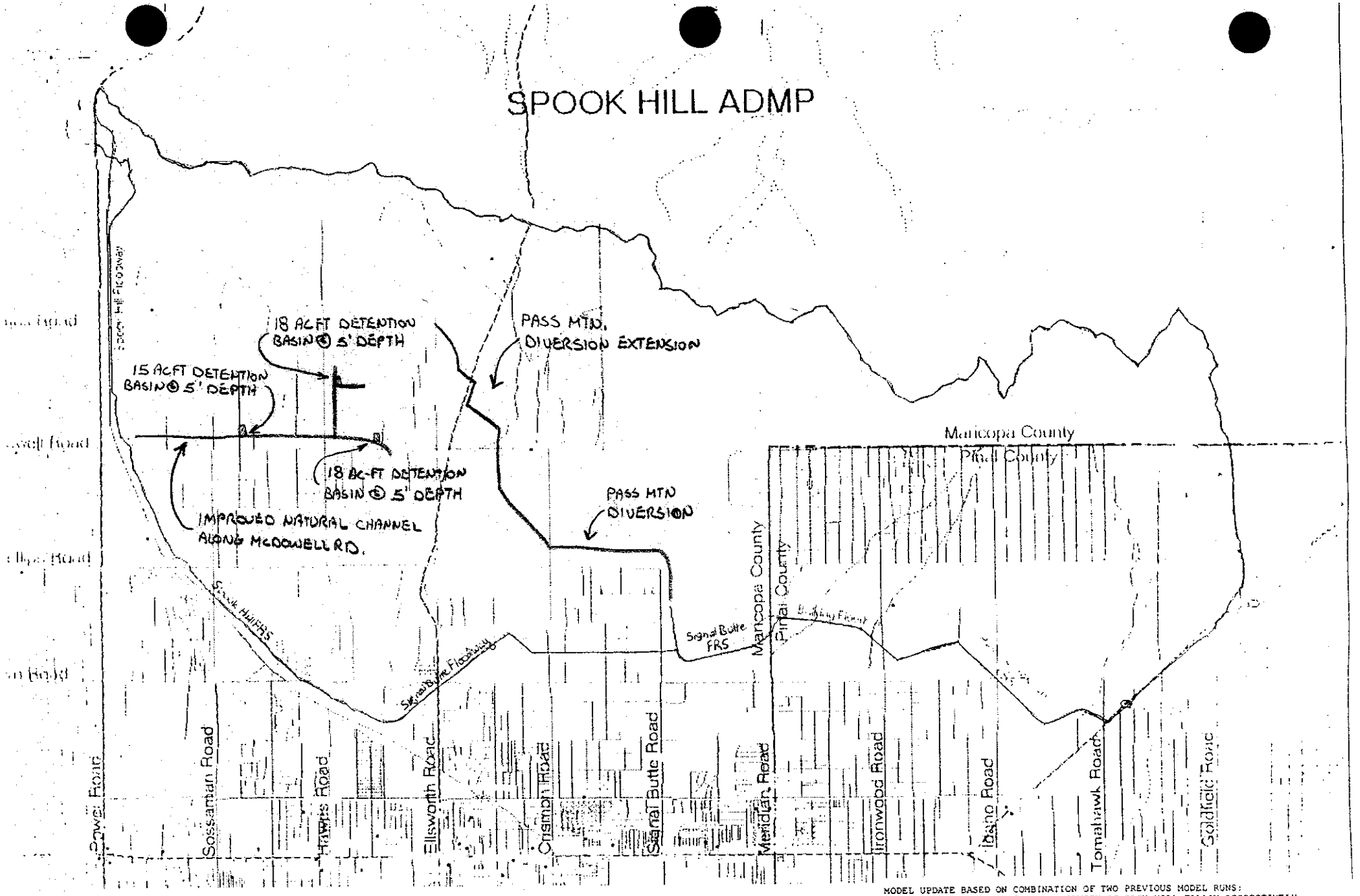
+	ROUTED TO RSPLIT	95.	12.07	7.	2.	1.	.09
+	HYDROGRAPH AT 446	65.	12.03	6.	2.	1.	.04
+	3 COMBINED AT C109	520.	12.07	35.	9.	4.	.27
+	DIVERSION TO WSH404	35.	11.73	8.	2.	1.	.27
+	HYDROGRAPH AT DIV5	485.	12.07	27.	7.	3.	.27
+	ROUTED TO R109	469.	12.10	27.	7.	3.	.27
+	HYDROGRAPH AT 447	138.	12.07	12.	4.	2.	.09
+	HYDROGRAPH AT RT404	35.	11.73	8.	2.	1.	.27
+	ROUTED TO R404	35.	11.90	8.	2.	1.	.27
+	3 COMBINED AT C110	635.	12.07	46.	13.	6.	.36
+	ROUTED TO R110	632.	12.10	46.	13.	6.	.36
+	2 COMBINED AT C115	764.	12.10	59.	17.	8.	.63
+	ROUTED TO R115	767.	12.10	59.	17.	8.	.63
+	HYDROGRAPH AT 448	88.	12.03	6.	2.	1.	.05
+	HYDROGRAPH AT 449	80.	12.03	5.	1.	1.	.05
+	2 COMBINED AT C6364	166.	12.03	11.	3.	1.	.09
+	ROUTED TO R6364	137.	12.17	11.	3.	1.	.09
+	HYDROGRAPH AT 450	61.	12.20	6.	2.	1.	.07
+	HYDROGRAPH AT 451	18.	12.17	2.	1.	0.	.03
+	HYDROGRAPH AT RT66	78.	11.90	12.	3.	2.	.08
+	HYDROGRAPH AT 452	62.	12.03	4.	1.	1.	.04
+	2 COMBINED AT C6465	140.	12.03	16.	4.	2.	.04
+	ROUTED TO R6566	135.	12.10	16.	4.	2.	.04
+	4 COMBINED AT C116	341.	12.17	35.	9.	4.	.23
+	ROUTED TO BASIN5	152.	12.47	35.	9.	4.	.23
+	ROUTED TO R116	150.	12.53	35.	9.	4.	.23
+	HYDROGRAPH AT 453	62.	12.10	7.	2.	1.	.06
+	2 COMBINED AT C117	169.	12.50	41.	11.	5.	.29
+	2 COMBINED AT C118	852.	12.10	99.	28.	14.	.92
+	ROUTED TO R118	842.	12.10	99.	28.	14.	.92
+	DIVERSION TO BASIN6	243.	12.10	10.	2.	1.	.92
+	HYDROGRAPH AT DIV7	599.	12.10	89.	25.	13.	.92
+	HYDROGRAPH AT RTDIV7	243.	12.10	10.	2.	1.	.92
+	ROUTED TO RFDIV7	1.	11.97	1.	1.	1.	.92
+	2 COMBINED AT CDIV7	600.	12.10	90.	26.	13.	.92
+	HYDROGRAPH AT 454	157.	12.17	21.	6.	3.	.18
+	2 COMBINED AT C119	748.	12.13	110.	32.	16.	1.10
+	ROUTED TO R454	731.	12.20	110.	32.	16.	1.10

+	HYDROGRAPH AT	415	294.	12.13	31.	9.	4.	.28
+	3 COMBINED AT	415C	1761.	12.20	244.	77.	43.	2.75
	DIVERSION TO	BS415	661.	12.20	28.	7.	3.	2.75
+	HYDROGRAPH AT	D415	1100.	12.03	215.	70.	39.	2.75
+	HYDROGRAPH AT	RT415	661.	12.20	28.	7.	3.	2.75
+	ROUTED TO	SR415	5.	12.03	5.	5.	3.	2.75
+	2 COMBINED AT	C415	1105.	12.03	220.	74.	43.	2.75
+	ROUTED TO	R415	1109.	12.13	220.	74.	43.	2.75
+	HYDROGRAPH AT	455	1346.	12.13	142.	43.	21.	1.11
+	DIVERSION TO	BS455	1346.	12.13	137.	37.	18.	1.11
+	HYDROGRAPH AT	D455	55.	12.77	16.	6.	3.	1.11
+	HYDROGRAPH AT	RT455	1346.	12.13	137.	37.	18.	1.11
+	ROUTED TO	SR455	25.	10.47	25.	25.	18.	1.11
+	2 COMBINED AT	C455	80.	12.77	41.	31.	21.	1.11
+	3 COMBINED AT	455C	4160.	12.37	927.	423.	274.	14.73
+	ROUTED TO	SR440	753.	13.63	738.	423.	274.	14.73
+	ROUTED TO	RR455	753.	13.97	738.	423.	271.	14.73
+	HYDROGRAPH AT	456	468.	12.07	35.	10.	5.	.26
	DIVERSION TO	BASIN1	184.	12.07	8.	2.	1.	.26
+	HYDROGRAPH AT	DIV1	284.	12.07	27.	8.	4.	.26
+	DIVERSION TO	WA30	58.	12.07	10.	3.	2.	.26
+	HYDROGRAPH AT	DIV2	226.	12.07	18.	4.	2.	.26
+	ROUTED TO	R456	213.	12.13	18.	4.	2.	.26
+	HYDROGRAPH AT	457	264.	12.07	20.	5.	3.	.19
+	2 COMBINED AT	C101	462.	12.10	38.	10.	5.	.45
+	DIVERSION TO	BASIN2	165.	12.10	7.	2.	1.	.45
+	HYDROGRAPH AT	DIV3	297.	12.10	30.	8.	4.	.45
+	HYDROGRAPH AT	RTDIV3	165.	12.10	7.	2.	1.	.45
+	ROUTED TO	RFDIV3	2.	11.90	2.	2.	1.	.45
+	2 COMBINED AT	CDIV3	299.	12.10	32.	9.	5.	.45
+	ROUTED TO	R101	297.	12.10	32.	9.	5.	.45
+	HYDROGRAPH AT	458	356.	12.03	25.	7.	3.	.19
+	2 COMBINED AT	C103	635.	12.07	56.	16.	8.	.64
+	ROUTED TO	R103	630.	12.07	56.	16.	8.	.64
	HYDROGRAPH AT	RT30	58.	12.07	10.	3.	2.	.26
	ROUTED TO	R30	57.	12.10	10.	3.	2.	.26
+	HYDROGRAPH AT	RTB1	184.	12.07	8.	2.	1.	.26
+	ROUTED TO	B1	37.	12.23	8.	2.	1.	.26

+	ROUTED TO	RB1	37.	12.30	8.	2.	1.	.26
+	2 COMBINED AT	CDIV	86.	12.20	17.	5.	3.	.12
	HYDROGRAPH AT	459	44.	12.03	3.	1.	0.	.03
+	2 COMBINED AT	C52	113.	12.10	20.	6.	3.	.15
+	ROUTED TO	R52	112.	12.17	20.	6.	3.	.15
+	HYDROGRAPH AT	460	214.	12.07	19.	6.	3.	.14
+	2 COMBINED AT	C102	313.	12.07	39.	12.	6.	.29
+	ROUTED TO	BASIN3	71.	12.63	39.	12.	6.	.29
+	ROUTED TO	R3	71.	12.77	39.	12.	6.	.29
+	HYDROGRAPH AT	461	161.	12.10	17.	5.	2.	.12
+	2 COMBINED AT	C104	213.	12.10	55.	17.	8.	.41
+	2 COMBINED AT	C106	835.	12.07	110.	32.	16.	1.05
+	ROUTED TO	R106	797.	12.13	110.	32.	16.	1.05
+	HYDROGRAPH AT	462	538.	12.07	40.	11.	5.	.30
+	2 COMBINED AT	C56	1254.	12.10	149.	42.	21.	1.35
+	HYDROGRAPH AT	480	1050.	12.10	96.	29.	14.	.73
+	DIVERSION TO	BS480	455.	11.90	27.	8.	4.	.73
+	HYDROGRAPH AT	D480	1050.	12.10	78.	21.	10.	.73
	HYDROGRAPH AT	RT480	455.	11.90	27.	8.	4.	.73
+	ROUTED TO	SR480	6.	3.90	6.	6.	4.	.73
+	2 COMBINED AT	C480	1056.	12.10	84.	27.	14.	.73
+	3 COMBINED AT	480C	2508.	12.10	923.	502.	314.	2.09
+	ROUTED TO	RR480	2345.	12.13	921.	502.	314.	2.09
+	HYDROGRAPH AT	500	1073.	12.27	122.	33.	16.	.93
+	2 COMBINED AT	500C	3234.	12.17	1032.	530.	328.	3.02

*** NORMAL END OF HEC-1 ***

SPOOK HILL ADMP



MODEL UPDATE BASED ON COMBINATION OF TWO PREVIOUS MODEL RUNS: S24CE14.DAT AND S24CE17.DAT. OVERVIEW OF EACH WILL FOLLOW RESPECTIVELY.

UPDATE TO PASS MOUNTAIN DIVERSION ALTERNATIVE. ADDITIONAL DIVERSIONS PLACED UPSTREAM OF ORIGINAL LEVEE EXTENSION AT PASS MOUNTAIN DIVERSION CREATING NEW DRAINAGE BASIN BOUNDARIES: 383 FROM 385; 393 FROM 395; 365 FROM 370; AND 353 FROM 355. 383, 393, 365, AND 353 WILL NOW BE ROUTED TO THE PASS MOUNTAIN DIVERSION AND ULTIMATELY INTO SIGNAL BUTTE FRS. SUB-BASINS: 385, 395, 370, AND 355 WILL REMAIN WITH REDUCED AREAS AND CONTINUE TO BE ROUTED ON THEIR ORIGINAL WATERCOURSES.

UPDATE BASED ON IMPROVED NATURAL CHANNELS ALONG MCDOWELL BETWEEN POWER & ELLSWORTH, ALONG OAK ST. BETWEEN HAWES & THUNDER MTN. , ALONG HAWES NORTH OF OAK ST. TO MCDOWELL RD. THIS WILL GENERATE NEW SUB-BASINS 410, AND 411 FROM SUB-BASINS 415 AND 420. DETENTION BASINS WILL BE ADDED OFF-LINE TO SUB-BASINS 370 & 395, 385 & 411, AND 455.

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1*************************************
*                                   *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)*
*              JUN  1998            *
*           VERSION 4.1             *
*                                   *
*  RUN DATE   13JUN00  TIME  13:10:04 *
*                                   *
*************************************
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+                                   +
+    U.S. ARMY CORPS OF ENGINEERS   +
+    HYDROLOGIC ENGINEERING CENTER  +
+          609 SECOND STREET        +
+       DAVIS, CALIFORNIA 95616     +
+           (916) 756-1104          +
+                                   +
+++++++++++++++++++++++++++++++++++++
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X     X  XXXXXXX   XXXXX          X
X     X  X        X     X        XX
X     X  X        X               X
XXXXXXX  XXXX     X        XXXXX  X
X     X  X        X               X
X     X  X        X     X         X
X     X  XXXXXXX   XXXXX         XXX
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THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

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1                                        HEC-1 INPUT                                                    PAGE  1

  LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

    1           ID   EXISTING LAND USE CALCULATIONS WERE BASED ON 1 YR. FROM 11/5/99
    2           ID   FOR LAS SENDAS       AND LANDISCOR JAN.1999 AERIAL PHOTOGPRAPHS
    3           ID
    4           ID   ALL DAMS WERE ANALYZED WITH NO STORAGE BELOW PRINCIPLE SPILLWAY ELEVATIONS
    5           ID
    6           ID   A CONSERVATIVE ESTIMATE WAS USED FOR THE LOCATION OF THE CENTROID FOR
    7           ID   PRECIPITATION VALUES
    8           ID
    9           ID   ALL CHANNEL ROUTING INFORMATION WAS OBTAINED FROM MCFCD SPOOK HILL   SIGNAL
   10           ID   BUTTE        AND BULLDOG FLOODWAY PLANS
   11           ID
   12           ID   MODEL UPDATE BASED ON COMBINATION OF TWO PREVIOUS MODEL RUNS:
   13           ID   S24CE14.DAT AND S24CE17.DAT. OVERVIEW OF EACH WILL FOLLOW RESPECTIVELY.
   14           ID
   15           ID   UPDATE TO PASS MOUNTAIN DIVERSION ALTERNATIVE.  ADDITIONAL DIVERSIONS
   16           ID   PLACED UPSTREAM OF ORIGINAL LEVEE EXTENSION AT PASS MOUNTAIN DIVERSION
   17           ID   CREATING NEW DRAINAGE BASIN BOUNDARIES: 383 FROM 385; 393 FROM 395;
   18           ID   365 FROM 370; AND 353 FROM 355.  383, 393, 365, AND 353 WILL NOW BE ROUTED
   19           ID   TO THE PASS MOUNTAIN DIVERSION AND ULTIMATELY INTO SIGNAL BUTTE FRS.
   20           ID   SUB-BASINS: 385, 395, 370, AND 355 WILL REMAIN WITH REDUCED AREAS AND
   21           ID   CONTINUE TO BE ROUTED ON THEIR ORIGINAL WATERCOURSES.
   22           ID
   23           ID   UPDATE BASED ON IMPROVED NATURAL CHANNELS ALONG MCDOWELL BETWEEN
   24           ID   POWER & ELLSWORTH, ALONG OAK ST. BETWEEN HAWES & THUNDER MTN. , ALONG
   25           ID   HAWES NORTH OF OAK ST. TO MCDOWELL RD.  THIS WILL GENERATE NEW SUB-BASINS
   26           ID   410, AND 411 FROM SUB-BASINS 415 AND 420.  DETENTION BASINS WILL BE
   27           ID   ADDED OFF-LINE TO SUB-BASINS 370 & 395, 385 & 411, AND 455.
   28           ID
   29           ID   ANALYSIS FOR CURRENT ALTERNATIVE PERFORMED BY: WOOD/PATEL,  MW,  06/06/2000
   30           ID   FILE:   S24CE18.DAT
   31           ID
   32           ID
   33           ID   DDM MCUHP1 SPOOK HILL AMDP - EXISTING CONDITIONS MODEL - 100YR, 24HR STORM
                *DIAGRAM
   34           IT       2                    1500
   35           IO       3
   36           IN      15
   37           JD    3.81    0.01
   38           PC    .000    .002    .005    .008    .011    .014    .017    .020    .023    .026
   39           PC    .029    .032    .035    .038    .041    .044    .048    .052    .056    .060
   40           PC    .064    .068    .072    .076    .080    .085    .090    .095    .100    .105
   41           PC    .110    .115    .120    .126    .133    .140    .147    .155    .163    .172
   42           PC    .181    .191    .203    .218    .236    .257    .283    .387    .663    .707
   43           PC    .735    .758    .776    .791    .804    .815    .825    .834    .842    .849
   44           PC    .856    .863    .869    .875    .881    .887    .893    .898    .903    .908
   45           PC    .913    .918    .922    .926    .930    .934    .938    .942    .946    .950
   46           PC    .953    .956    .959    .962    .965    .968    .971    .974    .977    .980
   47           PC    .983    .986    .989    .992    .995    .998   1.000
   48           JD    3.58   10.00
   49           JD    3.43   30.00
   50           JD    3.28   60.00
   51           JD    3.22   90.00
   52           JD    3.18  120.00
   53           JD    3.14  150.00
   54           JD    3.05  300.00
1                                        HEC-1 INPUT                                                    PAGE  2

  LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

   55           JD    2.97  500.00
                * DDM   ***** Updated *****

   56           KK      10
   57           KM   SUB-BASIN 10
   58           KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
   59           KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
   60           KM     L = 2.00  Kb = .044  Adj. Slope =  165.0
   61           BA    .702
   62           LG    .350    .320   7.600    .090  15.000
   63           UC    .421    .302
   64           UA       0       3       5       8      12      20      43      75      90      96
   65           UA     100
                * DDM   ***** Preserved *****

   66           KK     R10
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 67          KM   ROUTING OF FLOW FROM SUB-BASIN 10 TO R12
 68          RS       4    FLOW      -1
 69          RC    .045     .03    .045    8700    .021
 70          RX       0       1       2      17      27      42      43      44
 71          RY       5       5       5       0       0       5       5       5
             * DDM   ***** Preserved *****

 72          KK     R12
 73          KM   ROUTING OF FLOW FROM R12 TO SUB-BASIN 20
 74          RS       6    FLOW      -1
 75          RC    .045     .03    .045    4500     .01
 76          RX       0       1      30    37.5    57.5      65      94      95
 77          RY       3     2.5     2.5       0       0     2.5     2.5       3
             * DDM   ***** Updated *****

 78          KK      20
 79          KM   SUB-BASIN 20
 80          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 81          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
 82          KM     L = 2.50  Kb = .041  Adj. Slope =   88.0
 83          BA   1.120
 84          LG    .350    .390   5.800    .190   1.000
 85          UC    .658    .454
 86          UA       0       3       5       8      12      20      43      75      90      96
 87          UA     100
             * DDM   ***** Preserved *****

 88          KK     C20
 89          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 10 AND 20
 90          HC       2
             * DDM   ***** Updated *****

 91          KK      40
 92          KM   SUB-BASIN 40
 93          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 94          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
 95          KM     L = 3.08  Kb = .036  Adj. Slope =  189.0
 96          BA   2.233
 97          LG    .340    .340   4.900    .280   5.000
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 98          UC    .496    .264
 99          UA       0       3       5       8      12      20      43      75      90      96
100          UA     100
             * DDM   ***** Updated *****

101          KK      60
102          KM   SUB-BASIN 60
103          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
104          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .990
105          KM     L = 4.19  Kb = .038  Adj. Slope =  209.6
106          BA   1.746
107          LG    .330    .350   5.800    .190   9.000
108          UC    .596    .477
109          UA       0       3       5       8      12      20      43      75      90      96
110          UA     100
             * DDM   ***** Preserved *****

111          KK     60C
112          KM   HYDROGRAPH COMBINATION FOR APACHE JUNCTION FRS
             *      1       2
113          HC       3
             * DDM   ***** Preserved *****

114          KK    SR60
115          KM   APACHE JUNCTION FRS AS-BUILT PLANS 12/19/88
116          KM   OUTLET PIPE=30"RCP; L=136.6'; INLET INV.=1783.5; OUTLET INV.=1783
117          KM   EMERGENCY SPILLWAY ELEV.=1799.77'; PRINCIPLE SPILLWAY ELEV.=1793.5'
118          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 100 ACRE-FEET
119          RS       1    STOR       0
120          SV       0       1     100     200     300     400
121          SQ       0      71      81      87    91.5      94
122          SE    83.5    93.5      96    97.7      99   99.77
             * DDM   ***** Preserved *****

123          KK     R60
124          KM        ROUTE FLOW THROUGH BULLDOG FLOODWAY FROM APACHE JUNCTION FRS
125          RS       1    FLOW      -1
126          RC    .016    .016    .016    2850    .012
127          RX       0       1       2     2.1     5.6     5.7       6       7
128          RY     3.5     3.5     3.5       0       0     3.5     3.5     3.5
             * DDM   ***** Preserved *****

129          KK    RR60
130          KM   ROUTE FLOW FROM BULLDOG FLOODWAY TO SUB-BASIN 80
131          RS       4    FLOW      -1
132          RC    .016    .016    .016    3500    .005
133          RX       0       1       2     2.1     7.1     7.2       8       9
134          RY     3.5     3.5     3.5       0       0     3.5     3.5     3.5
             * DDM   ***** Updated *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

135          KK      80
136          KM   SUB-BASIN 80
137          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
138          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .991
139          KM     L = 2.69  Kb = .039  Adj. Slope =  229.8
140          BA   1.475
141          LG    .330    .330   5.600    .210   4.000
142          UC    .433    .259
143          UA       0       3       5       8      12      20      43      75      90      96
144          UA     100
             * DDM   ***** Preserved *****

145          KK     80C
146          KM   HYDROGRAPH COMBINATION FOR FLOW FROM APACHE JUNCTION FRS & SUB-BASIN 80
147          HC       2   1.475
             * DDM   ***** Preserved *****
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148          KK     R80
149          KM   ROUTE FLOW FROM SUB-BASIN 80 TO SUB-BASIN 100
150          RS       1    FLOW      -1
151          RC    .025    .016    .025    1200    .003
152          RX       0       2       6     6.1    41.1    41.2    56.2    58.2
153          RY     5.5     4.5     4.5       0       0     4.5     4.5     5.5
             * DDM   ***** Updated *****

154          KK     100
155          KM   SUB-BASIN 100
156          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
157          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
158          KM     L = 1.94  Kb = .046  Adj. Slope =  108.0
159          BA    .484
160          LG    .320    .290   5.100    .260   3.000
161          UC    .533    .473
162          UA       0       5      16      30      65      77      84      90      94      97
163          UA     100
             * DDM   ***** Preserved *****

164          KK    100C
165          KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 80 & 100
166          HC       2
             * DDM   ***** Preserved *****

167          KK    R100
168          KM   ROUTE FLOW FROM SUB-BASIN 100 TO SUB-BASIN 120
169          RS       1    FLOW      -1
170          RC    .016    .016    .016     940    .005
171          RX       0       1       2     2.1    52.1    52.2      53      54
172          RY     4.5     4.5     4.5       0       0     4.5     4.5     4.5
             * DDM   ***** Updated *****
1                                    HEC-1 INPUT                                          PAGE  5

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

173          KK     120
174          KM   SUB-BASIN 120
175          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
176          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
177          KM     L = 3.07  Kb = .037  Adj. Slope =  239.0
178          BA   2.202
179          LG    .330    .280   6.800    .130  11.000
180          UC    .429    .226
181          UA       0       3       5       8      12      20      43      75      90      96
182          UA     100
             * DDM   ***** Preserved *****

183          KK    120C
184          KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 100 & 120
185          HC       2
             * DDM   ***** Preserved *****

186          KK    R120
187          KM   ROUTE FLOW FROM SUB-BASIN 120 TO SIGNAL BUTTE FRS
188          RS       1    FLOW      -1
189          RC    .025    .016    .025    2100    .005
190          RX       0       6      10    10.1    60.1    60.2    74.2    80.2
191          RY       8       5       5       0       0       5       5       8
             * DDM   ***** Updated *****

192          KK     140
193          KM   SUB-BASIN 140
194          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
195          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
196          KM     L = 1.61  Kb = .044  Adj. Slope =  149.0
197          BA    .598
198          LG    .310    .280   4.200    .440   5.000
199          UC    .421    .278
200          UA       0       5      16      30      65      77      84      90      94      97
201          UA     100
             * DDM   ***** Updated *****

202          KK     150
203          KM   SUB-BASIN 150
204          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
205          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
206          KM     L = 1.50  Kb = .047  Adj. Slope =  315.0
207          BA    .408
208          LG    .350    .360   5.100    .260   7.000
209          UC   1.579   1.417
210          UA       0       3       5       8      12      20      43      75      90      96
211          UA     100
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE  6

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

212          KK    R150
213          KM   ROUTING OF FLOW FROM SUB-BASIN 150 TO R152
214          RS       3    FLOW      -1
215          RC    .045     .04    .045    3100    .032
216          RX       0       1       2      23      33      54      55      56
217          RY       7       7       7       0       0       7       7       7
             * DDM   ***** Preserved *****

218          KK    R152
219          KM   ROUTING OF FLOW FROM R152 TO SUB-BASIN 160
220          RS       6    FLOW      -1
221          RC    .045     .03    .045    5900    .019
222          RX       0       1       2       8      33      39      40      41
223          RY       2       2       2       0       0       2       2       2
             * DDM   ***** Updated *****

224          KK     160
225          KM   SUB-BASIN 160
226          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
227          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
228          KM     L = 2.10  Kb = .047  Adj. Slope =  129.0
229          BA    .369
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LG    .340    .330   4.150    .440   1.000
UC    .587    .655
UA       0       3       5       8      12      20      43      75      90      96
UA     100
* DDM   ***** Updated *****

KK     180
KM   SUB-BASIN 180
KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
KM     L = 2.42  Kb = .041  Adj. Slope =  140.0
BA   1.000
LG    .350    .350   4.150    .430    .000
UC    .571    .403
UA       0       3       5       8      12      20      43      75      90      96
UA     100
* DDM   ***** Preserved *****

KK    180C
KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
*      1       2
HC       5
* DDM   ***** Updated *****

KK     383
KM   SUB-BASIN 383
KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
KM     L = 1.50  Kb = .047  Adj. Slope =  315.0
BA    .419
LG    .350    .400   6.000    .170  16.000
UC    .292    .214
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

UA       0       3       5       8      12      20      43      75      90      96
UA     100
* DDM   ***** Preserved *****

KK    R383
KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
KM   ROUTING OF FLOW FROM SUB-BASIN 383 TO SUB-BASIN 393
KM   OVERBANK MANNINGS INCREASED TO ACCOUNT FOR SKEWED FLOW TO NATURAL
KM   WATERCOURSE FLOW PATH
RS       2    FLOW      -1
RC     .07     .03     .07    1115    .045
RX       0       1       3       9      39      45      46      47
RY       3       2       2       0       0       2       2       3
* DDM   ***** Updated *****

KK     393
KM   SUB-BASIN 393
KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
KM     L =  .61  Kb = .061  Adj. Slope =  246.2
BA    .040
LG    .350    .350   4.200    .420    .000
UC    .233    .310
UA       0       3       5       8      12      20      43      75      90      96
UA     100
* DDM   ***** Preserved *****

KK    393C
KM   HYDROGRAPH COMBINATION OF SUB-BASINS 383 & 393
HC       2
* DDM   ***** Preserved *****

KK    R393
KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
KM   ROUTING OF FLOW FROM SUB-BASIN 393 TO SUB-BASIN 365
RS       1    FLOW      -1
RC    .055     .03    .055    1115    .045
RX       0       1       3       9      39      45      46      47
RY       3       2       2       0       0       2       2       3
* DDM   ***** Updated *****

KK     365
KM   SUB-BASIN 365
KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
KM     L = 2.20  Kb = .047  Adj. Slope =  299.5
BA    .415
LG    .350    .350   4.600    .330   4.000
UC    .400    .415
UA       0       3       5       8      12      20      43      75      90      96
UA     100
* DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

KK    365C
KM   HYDROGRAPH COMBINATION OF SUB-BASINS 393 & 365
HC       2
* DDM   ***** Preserved *****

KK    R365
KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
KM   ROUTING OF FLOW FROM SUB-BASIN 365 TO ROUTING 365R
RS       2    FLOW      -1
RC    .045     .03    .045    1000    .025
RX       0       1      50      56      76      82     131     132
RY     2.5       2       2       0       0       2       2     2.5
* DDM   ***** Preserved *****

KK    365R
KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
KM   ROUTING OF FLOW FROM 365R TO SUB-BASIN 353
KM   OVERBANK MANNINGS INCREASED TO ACCOUNT FOR SKEWED FLOW TO NATURAL
KM   WATERCOURSE FLOW PATH
RS       3    FLOW      -1
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312          RC     .07     .03     .07    1300    .008
313          RX       0       3       5      11      41      47     147     247
314          RY       3     2.5       2       0       0       2     2.5       3
             * DDM   ***** Updated *****

315          KK     353
316          KM   SUB-BASIN 353
317          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
318          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
319          KM     L = 2.50  Kb = .046  Adj. Slope =  297.9
320          BA    .502
321          LG    .350    .350   4.350    .380   1.000
322          UC    .442    .460
323          UA       0       3       5       8      12      20      43      75      90      96
324          UA     100
             * DDM   ***** Preserved *****

325          KK    353C
326          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 365 & 353
327          HC       2
             * DDM   ***** Preserved *****

328          KK    R353
329          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
330          KM   ROUTING OF FLOW FROM SUB-BASIN 353 TO ROUTING 353R
331          KM   OVERBANK MANNINGS INCREASED TO ACCOUNT FOR SKEWED FLOW TO NATURAL
332          KM   WATERCOURSE FLOW PATH
333          RS       2    FLOW      -1
334          RC     .07     .03     .07    1100    .009
335          RX       0       3       5      11      41      47     172     302
336          RY     3.5     2.5       2       0       0       2     2.5     3.5
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

337          KK    353R
338          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
339          KM   ROUTING OF FLOW FROM 353R TO SUB-BASIN 310
340          RS       1    FLOW      -1
341          RC    .045     .03    .045    1692     .03
342          RX       0       1      25      31      51      57      81      82
343          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

344          KK     350
345          KM   SUB-BASIN 350
346          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
347          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
348          KM     L = 2.22  Kb = .042  Adj. Slope =  311.0
349          BA    .935
350          LG    .350    .350   4.600    .330   5.000
351          UC    .367    .239
352          UA       0       3       5       8      12      20      43      75      90      96
353          UA     100
             * DDM   ***** Preserved *****

354          KK    350R
355          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
356          KM   ROUTING OF FLOW FROM SUB-BASIN 350 TO SUB-BASIN 310
357          RS       6    FLOW      -1
358          RC    .045    .035    .045    7650    .025
359          RX       0       1      50      56      86      92     141     142
360          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

361          KK     310
362          KM   SUB-BASIN 310
363          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
364          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
365          KM     L = 2.70  Kb = .045  Adj. Slope =  283.5
366          BA    .555
367          LG    .350    .350   3.910    .480    .000
368          UC    .483    .511
369          UA       0       3       5       8      12      20      43      75      90      96
370          UA     100
             * DDM   ***** Preserved *****

371          KK    C310
372          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 350 & 310
373          HC       3
             * DDM   ***** Preserved *****

374          KK    R310
375          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
376          KM   ROUTING OF FLOW FROM SUB-BASIN 310 TO R312
377          RS       2    FLOW      -1
378          RC    .045     .03    .045    1500    .021
379          RX       0       1     100     106     126     132     231     232
380          RY     3.5       2       2       0       0       2       2     3.5
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

381          KK    R312
382          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
383          KM   ROUTING OF FLOW FROM R312 TO SUB-BASIN 295
384          KM   OVERBANK MANNINGS INCREASED TO ACCOUNT FOR SKEWED FLOW TO NATURAL
385          KM   WATERCOURSE FLOW PATH
386          RS       4    FLOW      -1
387          RC     .07     .03     .07    2100   .0124
388          RX       0       3       5      11      61      67     200     395
389          RY       4     2.5       2       0       0       2     2.5       4
             * DDM   ***** Updated *****

390          KK     295
391          KM   SUB-BASIN 295
392          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
393          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
394          KM     L = 1.60  Kb = .047  Adj. Slope =  131.0
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395          BA    .380
396          LG    .350    .350   4.900    .280    .000
397          UC    .450    .386
398          UA      0       3       5       8      12      20      43      75      90      96
399          UA    100
             * DDM   ***** Preserved *****

400          KK    295C
401          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 310 & 295
402          HC       2
             * DDM   ***** Preserved *****

403          KK    295R
404          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
405          KM   ROUTING OF FLOW FROM SUB-BASIN 295 TO BEGINNING OF PASS MTN. DIVERSION.
406          KM   OVERBANK MANNINGS INCREASED TO ACCOUNT FOR SKEWED FLOW TO NATURAL
407          KM   WATERCOURSE FLOW PATH
408          RS       2    FLOW      -1
409          RC     .07     .03     .07    1100    .013
410          RX       0       3       5      11      51      57     200     400
411          RY       4     2.5       2       0       0       2     2.5       4
             * DDM   ***** Updated *****

412          KK     210
413          KM   SUB-BASIN 210
414          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
415          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
416          KM     L = 1.84  Kb = .045  Adj. Slope =  315.0
417          BA    .583
418          LG    .350    .350   7.000    .120   7.000
419          UC    .321    .232
420          UA      0       3       5       8      12      20      43      75      90      96
421          UA    100
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 11

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

422          KK    R210
423          KM   ROUTING OF FLOW FROM SUB-BASIN 210 TO SUB-BASIN 220
424          RS       2    FLOW      -1
425          RC    .045     .03    .045    5100    .022
426          RX       0       1       2      14      34      46      47      48
427          RY       4       4       4       0       0       4       4       4
             * DDM   ***** Updated *****

428          KK     240
429          KM   SUB-BASIN 240
430          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
431          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .992
432          KM     L = 3.50  Kb = .039  Adj. Slope =  298.6
433          BA   1.398
434          LG    .350    .370   5.200    .240   2.000
435          UC    .471    .361
436          UA      0       3       5       8      12      20      43      75      90      96
437          UA    100
             * DDM   ***** Preserved *****

438          KK    240C
439          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
440          HC       3
             * DDM   ***** Preserved *****

441          KK   SR240
442          KM   DIGITAL MAPPING SHOWS SEDIMENTATION.  FOR SIMPLICITY NO ADDITIONAL
443          KM   SEDIMENTATION WILL BE CONSIDERED FOR STORAGE ROUTING ANALYSIS. 5/11/00
444          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
445          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
446          RS       1    STOR       0
447          SA    1.38    14.2    36.5
448          SE       0       5      11
449          SS       5      42       3     1.5
             * DDM   ***** Updated *****

450          KK     220
451          KM   SUB-BASIN 220
452          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
453          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
454          KM     L = 1.92  Kb = .043  Adj. Slope =  315.0
455          BA    .725
456          LG    .350    .350   7.000    .120   4.000
457          UC    .317    .209
458          UA      0       3       5       8      12      20      43      75      90      96
459          UA    100
             * DDM   ***** Preserved *****

460          KK    220C
461          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
462          HC       2
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 12

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

463          KK   SR220
464          KM   DIGITAL MAPPING SHOWS SEDIMENTATION.  FOR SIMPLICITY NO ADDITIONAL
465          KM   SEDIMENTATION WILL BE CONSIDERED FOR STORAGE ROUTING ANALYSIS. 5/11/00
466          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
467          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
468          RS       1    STOR       0
469          SA     .78     4.1    13.7
470          SE       0       3      10
471          SS       3      65       3     1.5
             * DDM   ***** Updated *****

472          KK     190
473          KM   SUB-BASIN 190
474          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
475          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
476          KM     L = 1.91  Kb = .042  Adj. Slope =  315.0
477          BA    .918
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478          LG    .350    .390   5.800    .190   8.000
479          UC    .321    .185
480          UA       0       3       5       8      12      20      43      75      90      96
481          UA     100
             * DDM   ***** Preserved *****

482          KK    R190
483          KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
484          RS       2    FLOW      -1
485          RC    .045     .03    .045    4740     .03
486          RX       0       1       2      17      37      52      53      54
487          RY       5       5       5       0       0       5       5       5
             * DDM   ***** Preserved *****

488          KK    R192
489          KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
490          RS       2    FLOW      -1
491          RC    .045    .035    .045    2200    .018
492          RX       0       1      50      59      79      88     137     138
493          RY     3.5       3       3       0       0       3       3     3.5
             * DDM   ***** Updated *****

494          KK     200
495          KM   SUB-BASIN 200
496          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
497          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
498          KM     L = 1.92  Kb = .045  Adj. Slope =  315.0
499          BA    .535
500          LG    .350    .390   5.700    .200  10.000
501          UC    .338    .267
502          UA       0       3       5       8      12      20      43      75      90      96
503          UA     100
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 13

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

504          KK    200C
505          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 220 & 200
506          HC       3
             * DDM   ***** Preserved *****

507          KK   SR200
508          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
509          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
510          RS       1    STOR       0
511          SA    2.56     3.1     9.4
512          SE       0       3      10
513          SS       3     112       3     1.5
             * DDM   ***** Preserved *****

514          KK   200SR
515          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
516          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
             *      1       2
517          RS       1    STOR       0
518          SA       8     9.2     9.2
519          SE       0       7      10
520          SS       7     251       3     1.5
521          KM   ****************************************************************
522          KM   ************* END OF PASS MOUNTAIN ALTERNATIVE UPDATE. **************
523          KM
             * DDM   ***** Preserved *****

524          KK    C180
525          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
             *      1       2
526          HC       2
             * DDM   ***** Preserved *****

527          KK   SR180
528          KM   SIGNAL BUTTE FRS DATED 1/28/85
529          KM   OUTLET PIPE=36"RCP; L= 147';  INLET INV.=1690; OUTLET INV.=1687
530          KM   EMERGENCY SPILLWAY ELEV.=1712.4; PRINCIPLE SPILLWAY ELEV.=1701
531          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 250 ACRE-FEET
532          RS       1    STOR       0
533          SV       0       1     250     500     750    1060
534          SQ       0   106.5   125.5   137.5     146     160
535          SE      90     101   104.5     107     109   112.4
             * DDM   ***** Preserved *****

536          KK    R180
537          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
538          KM   ROUTE FLOW FROM SIGNAL BUTTE FRS TO SUB-BASIN 260
539          RS       2    FLOW      -1
540          RC    .035    .025    .035    1500    .003
541          RX       0       1       2    22.6    38.6    59.2      60      61
542          RY     9.3     9.3     9.3       0       0     9.3     9.3     9.3
             * DDM   ***** Updated *****
1                                        HEC-1 INPUT                                          PAGE 14

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

543          KK     260
544          KM   SUB-BASIN 260
545          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
546          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
547          KM     L =  .81  Kb = .049  Adj. Slope =   68.0
548          BA    .267
549          LG    .300    .170   6.800    .160  15.000
550          UC    .363    .215
551          UA       0       5      16      30      65      77      84      90      94      97
552          UA     100
             * DDM   ***** Preserved *****

553          KK    260C
554          KM   HYDROGRAPH COMBINATION FOR OUTFLOW OF SIGNAL BUTTE FRS & SUB-BASIN 260
555          HC       2    .267
             * DDM   ***** Preserved *****

556          KK    R260
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557          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
558          KM   ROUTE FLOW FROM SUB-BASIN 260 TO SUB-BASIN 280
559          RS       3    FLOW      -1
560          RC    .035    .025    .035    2300    .003
561          RX       0       1       2    23.4    43.4    64.8      65      66
562          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Updated *****

563          KK     280
564          KM   SUB-BASIN 280
565          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
566          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
567          KM     L =  .77  Kb = .049  Adj. Slope =   84.0
568          BA    .304
569          LG    .300    .250   5.300    .290  15.000
570          UC    .333    .175
571          UA       0       5      16      30      65      77      84      90      94      97
572          UA     100
             * DDM   ***** Preserved *****

573          KK    280C
574          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 260 & SUB-BASIN 280
575          HC       2
             * DDM   ***** Preserved *****

576          KK    R280
577          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
578          KM   ROUTE FLOW FROM SUB-BASIN 280 TO SUB-BASIN 300
579          RS       2    FLOW      -1
580          RC    .035    .025    .035    2500    .003
581          RX       0       1       2    23.4    43.4    64.8      65      66
582          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Updated *****
1                                    HEC-1 INPUT                                          PAGE 15

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


583          KK     300
584          KM   SUB-BASIN 300
585          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
586          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
587          KM     L =  .80  Kb = .049  Adj. Slope =  100.0
588          BA    .297
589          LG    .320    .280   4.200    .480  11.000
590          UC    .333    .183
591          UA       0       5      16      30      65      77      84      90      94      97
592          UA     100
             * DDM   ***** Preserved *****

593          KK    C300
594          KM   HYDROGRAPH COMBINATION OF DIVERTED FLOW
595          HC       2
             * DDM   ***** Preserved *****

596          KK    D300
597          KM   DIVERT FLOW INTO OFFLINE BASIN AT SIGNAL BUTTE FLOODWAY TO BE COMBINED
598          KM   LATER WITH BASIN 305 AT END OF SIGNAL BUTTE FLOODWAY
599          DT   DIV300
600          DI       0     300    5000
601          DQ       0       0    4700
             * DDM   ***** Preserved *****

602          KK   RTDIV300
603          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
604          DR   DIV300
             * DDM   ***** Preserved *****

605          KK   SRDIV300
606          KM   RETRIEVE FLOW INTO BASIN AND BLEED OFF WITHIN 36 HOURS
607          KM
608          RS       1    STOR       0
609          SV       0      60
610          SE       0      12
611          SQ       0     300
             * DDM   ***** Preserved *****

612          KK    300C
613          KM   HYDROGRAPH COMBINATION OF DIVERTED FLOW
614          HC       2
             * DDM   ***** Updated *****

615          KK     305
616          KM   SUB-BASIN 305
617          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
618          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
619          KM     L = 1.20  Kb = .047  Adj. Slope =   92.0
620          BA    .377
621          LG    .340    .330   4.450    .380   8.000
622          UC    .438    .298
623          UA       0       3       5       8      12      20      43      75      90      96
624          UA     100
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 16

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


625          KK    D305
626          KM   DIVERT FLOW INTO OFFLINE BASIN TO BE COMBINED LATER WITH PASS MOUNTAIN
627          KM   DIVERSION FLOW AT END OF SIGNAL BUTTE FLOODWAY
628          DT    305D
629          DI       0    1000
630          DQ       0    1000
             * DDM   ***** Preserved *****

631          KK   RT305D
632          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
633          DR    305D
             * DDM   ***** Preserved *****

634          KK   SR305D
635          KM   RETRIEVE FLOW INTO BASIN AND BLEED OFF WITHIN 36 HOURS
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636          KM
637          RS       1    STOR       0
638          SV       0      25
639          SE       0       6
640          SQ       0     100
             * DDM   ***** Preserved *****

641          KK    305C
642          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 280 & 300
643          HC       3
             * DDM   ***** Preserved *****

644          KK    R305
645          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
646          KM   ROUTE FLOW FROM SUB-BASIN 300 TO START OF FLOODWAY CONCRETE CHANNEL
647          RS       2    FLOW      -1
648          RC    .035    .025    .035    2200    .003
649          RX       0       1       2    23.4    55.4    76.8      77      78
650          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Preserved *****

651          KK   RR305
652          KM   CHANNEL GEOMETRY FOR SPOOK HILL FRS OBTAINED FROM AS-BUILTS PLANS.
653          KM   CONTINUE TO ROUTE FLOW WITHIN CONCRETE CHANNEL TO SPOOK HILL FRS
654          RS       1    FLOW      -1
655          RC    .016    .016    .016    6050   .0146
656          RX       0       1       2     2.1    16.1    16.2      17      18
657          RY     7.5     7.5     7.5       0       0     7.5     7.5     7.5
             *      1       2
             * DDM   ***** Updated *****

658          KK     320
659          KM   SUB-BASIN 320
660          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
661          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .995
662          KM     L = 1.60  Kb = .042  Adj. Slope =  106.0
663          BA    .870
664          LG    .310    .290   4.500    .380  15.000
665          UC    .450    .240
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

666          UA       0       5      16      30      65      77      84      90      94      97
667          UA     100
             * DDM   ***** Preserved *****

668          KK    D320
669          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
670          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
671          KM   SIERRA HEIGHTS       FALCON RIDGE    & MARBLE CREEK
672          KM        MAXIMUM VOLUME DIVERSION = 12.27acre-feet
             *      1
673          DT   BS320   12.27
674          DI       0   10000
675          DQ       0   10000
             * DDM   ***** Preserved *****

676          KK   RT320
677          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
678          DR   BS320
             * DDM   ***** Preserved *****

679          KK   SR320
680          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
681          KM   12.27 ACRE-FEETx43560/36x3600=4.1cfs
             *      1
682          RS       1    STOR       0
683          SV       0     .01    12.3
684          SQ       0     4.2     4.2
             * DDM   ***** Preserved *****

685          KK    C320
686          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
687          HC       3
             * DDM   ***** Updated *****

688          KK     340
689          KM   SUB-BASIN 340
690          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
691          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .991
692          KM     L = 2.40  Kb = .042  Adj. Slope =  160.0
693          BA   1.449
694          LG    .280    .280   4.150    .520  21.000
695          UC    .512    .287
696          UA       0       5      16      30      65      77      84      90      94      97
697          UA     100
             * DDM   ***** Preserved *****

698          KK    D340
699          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
700          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
701          KM   GRANDVIEW ESTATES    BOULDER MOUNTAIN & 33% OF MESA HIGHLANDS
702          KM        MAXIMUM VOLUME DIVERSION = 56.0 acre-feet
             *      1
703          DT   BS340      56
704          DI       0   10000
705          DQ       0   10000
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

706          KK   RT340
707          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
708          DR   BS340
             * DDM   ***** Preserved *****

709          KK   SR340
710          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
711          KM    56.0 ACRE-FEETx43560/36x3600=18.8cfs
             *      1
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712          RS       1    STOR       0
713          SV       0     .01      56
714          SQ       0    18.9    18.9
             * DDM   ***** Preserved *****

715          KK    C340
716          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
717          HC       3
             * DDM   ***** Updated *****

718          KK     355
719          KM   SUB-BASIN 355
720          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
721          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
722          KM     L =  .80  Kb = .052  Adj. Slope =  125.0
723          BA    .174
724          LG    .320    .300   4.550    .360  12.000
725          UC    .308    .227
726          UA       0       5      16      30      65      77      84      90      94      97
727          UA     100
             * DDM   ***** Preserved *****

728          KK    R355
729          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
730          KM   ROUTING OF FLOW FROM SUB-BASIN 355 TO SUB-BASIN 360
731          RS       8    FLOW      -1
732          RC    .045    .035    .045   10100    .026
733          RX       0       1      40      46      56      62     102     103
734          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

735          KK     360
736          KM   SUB-BASIN 360
737          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
738          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
739          KM     L = 2.10  Kb = .048  Adj. Slope =  124.0
740          BA    .670
741          LG    .260    .270   4.100    .560  20.000
742          UC    .587    .466
743          UA       0       5      16      30      65      77      84      90      94      97
744          UA     100
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

745          KK    D360
746          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
747          KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
748          KM        MAXIMUM VOLUME DIVERSION = 28.6 acre-feet
             *      1
749          DT   BS360    28.6
750          DI       0   10000
751          DQ       0   10000
             * DDM   ***** Preserved *****

752          KK   RT360
753          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
754          DR   BS360
             * DDM   ***** Preserved *****

755          KK   SR360
756          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
757          KM    28.6 ACRE-FEETx43560/36x3600=9.6cfs
758          RS       1    STOR       0
759          SV       0     .01    28.6
760          SQ       0     9.6     9.6
             * DDM   ***** Preserved *****

761          KK    360C
762          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
763          HC       4
             * DDM   ***** Updated *****

764          KK     380
765          KM   SUB-BASIN 380
766          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
767          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
768          KM     L = 2.20  Kb = .048  Adj. Slope =  114.0
769          BA    .972
770          LG    .300    .310   4.150    .500   7.000
771          UC    .658    .444
772          UA       0       5      16      30      65      77      84      90      94      97
773          UA     100
             * DDM   ***** Preserved *****

774          KK    D380
775          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
776          KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
777          KM        MAXIMUM VOLUME DIVERSION = 28.6 acre-feet
             *      1
778          DT   BS380    28.6
779          DI       0   10000
780          DQ       0   10000
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

781          KK   RT380
782          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
783          DR   BS380
             * DDM   ***** Preserved *****

784          KK   SR380
785          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
786          KM    28.6 ACRE-FEETx43560/36x3600=9.6cfs
787          RS       1    STOR       0
788          SV       0     .01    28.6
789          SQ       0     9.6     9.6
             * DDM   ***** Preserved *****
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790          KK    380C
791          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
792          HC       3
             * DDM   ***** Updated *****

793          KK     400
794          KM   SUB-BASIN 400
795          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
796          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
797          KM     L = 1.64  Kb = .046  Adj. Slope =  110.0
798          BA    .616
799          LG    .320    .320   3.130    .930   6.000
800          UC    .592    .405
801          UA       0       5      16      30      65      77      84      90      94      97
802          UA     100
             * DDM   ***** Preserved *****

803          KK    D400
804          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
805          KM   DETENTION/RETENTION BASIN LOCATED WITHIN SAGUARO VISTA SUBDIVISION
806          KM        MAXIMUM VOLUME DIVERSION = 5.6 ACRE-FEET
             *      1
807          DT   BS400     5.6
808          DI       0   10000
809          DQ       0   10000
             * DDM   ***** Preserved *****

810          KK   RT400
811          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
812          DR   BS400
             * DDM   ***** Preserved *****

813          KK   SR400
814          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
815          KM     5.6 ACRE-FEETx43560/36x3600 = 2 cfs
816          RS       1    STOR       0
817          SV       0     .01     5.6
818          SQ       0       2       2
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

819          KK    C400
820          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
821          HC       2
             * DDM   ***** Preserved *****

822          KK    400C
823          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
824          HC       2
             * DDM   ***** Updated *****

825          KK     420
826          KM   SUB-BASIN 420
827          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
828          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
829          KM     L = 1.69  Kb = .043  Adj. Slope =  101.0
830          BA    .588
831          LG    .290    .250   4.250    .510  20.000
832          UC    .492    .347
833          UA       0       5      16      30      65      77      84      90      94      97
834          UA     100
             * DDM   ***** Preserved *****

835          KK    D420
836          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
837          KM   DETENTION/RETENTION BASINS LOCATED WITHIN GRAY FOX SUBDIVISION
838          KM        MAXIMUM VOLUME DIVERSION = 8.65 acre-feet
             *      1
839          DT   BS420    8.65
840          DI       0   10000
841          DQ       0   10000
             * DDM   ***** Preserved *****

842          KK   RT420
843          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
844          DR   BS420
             * DDM   ***** Preserved *****

845          KK   SR420
846          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
847          KM   38.55 ACRE-FEETx43560/36x3600=13cfs
848          RS       1    STOR       0
849          SV       0     .01   38.55
850          SQ       0      13      13
             * DDM   ***** Preserved *****

851          KK    420C
852          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
853          HC       3   10.87
             * DDM   ***** Updated *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

854          KK     370
855          KM   SUB-BASIN 370
856          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
857          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
858          KM     L =  .90  Kb = .050  Adj. Slope =  189.0
859          BA    .257
860          LG    .310    .280   4.800    .340  16.000
861          UC    .271    .173
862          UA       0       5      16      30      65      77      84      90      94      97
863          UA     100
             * DDM   ***** Preserved *****

864          KK    D370
865          KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN LOCATED WITHIN SUB-BASINS
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866          KM   370 AND 395.
             *      1
867          DT   BS370
868          DI       0      50    5000
869          DQ       0       0    4950
             * DDM   ***** Preserved *****

870          KK   RT370
871          KM   RETRIEVE FLOW FROM DIVERSION
872          DR   BS370
             * DDM   ***** Preserved *****

873          KK   SR370
874          KM   RETRIEVE FLOW INTO OFFLINE BASIN AND BLEED OFF WITHIN 36 HOURS.
875          KM      11 ACRE-FEETx43560/36x3600 = 4 cfs
876          RS       1    STOR       0
877          SV       0     .01      11
878          SQ       0       4       4
             * DDM   ***** Preserved *****

879          KK    370C
880          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
881          HC       2
             * DDM   ***** Updated *****

882          KK     395
883          KM   SUB-BASIN 395
884          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
885          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
886          KM     L = 1.00  Kb = .052  Adj. Slope =  188.0
887          BA    .160
888          LG    .330    .320   5.100    .280  12.000
889          UC    .300    .276
890          UA       0       5      16      30      65      77      84      90      94      97
891          UA     100
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 23

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

892          KK    D395
893          KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN LOCATED WITHIN SUB-BASINS
894          KM   370 AND 395.
             *      1
895          DT   BS395
896          DI       0      25    5000
897          DQ       0       0    4975
             * DDM   ***** Preserved *****

898          KK   RT395
899          KM   RETRIEVE FLOW FROM DIVERSION
900          DR   BS395
             * DDM   ***** Preserved *****

901          KK   SR395
902          KM   RETRIEVE FLOW INTO OFFLINE BASIN AND BLEED OFF WITHIN 36 HOURS.
903          KM       7 ACRE-FEETx43560/36x3600 = 2 cfs
904          RS       1    STOR       0
905          SV       0     .01       7
906          SQ       0       2       2
             * DDM   ***** Preserved *****

907          KK    395C
908          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
909          HC       3
             * DDM   ***** Preserved *****

910          KK    R395
911          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
912          KM   ROUTING OF FLOW FROM SUB-BASINS 370 AND 395 TO SUB-BASIN 390
913          RS       6    FLOW      -1
914          RC    .045    .035    .045    2600    .023
915          RX       0       1      40      46      56      62     102     103
916          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

917          KK     385
918          KM   SUB-BASIN 385
919          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
920          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
921          KM     L =  .90  Kb = .050  Adj. Slope =  309.5
922          BA    .235
923          LG    .340    .320   4.700    .320   9.000
924          UC    .229    .151
925          UA       0       5      16      30      65      77      84      90      94      97
926          UA     100
             * DDM   ***** Preserved *****

927          KK    D385
928          KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN LOCATED WITHIN SUB-BASINS
929          KM   385 AND 411.
930          DT   SF385
931          DI       0      50    5000
932          DQ       0       0    4950
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 24

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

933          KK   RT385
934          KM   RETRIEVE FLOW FROM DIVERSION OF SUB-BASIN 385
935          DR   SF385
             * DDM   ***** Preserved *****

936          KK   SR385
937          KM   RETRIEVE FLOW INTO OFFLINE BASIN AND BLEED OFF WITHIN 36 HOURS.
938          KM       9 ACRE-FEETx43560/36x3600 = 3 cfs
939          RS       1    STOR       0
940          SV       0     .01       9
941          SQ       0       3       3
             * DDM   ***** Preserved *****
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 942          KK    385C
 943          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 385 AND DIVERTED 385 FLOW
 944          HC       2
              * DDM   ***** Updated *****

 945          KK     411
 946          KM   SUB-BASIN 411
 947          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 948          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
 949          KM     L =  .90  Kb = .051  Adj. Slope =  309.5
 950          BA    .202
 951          LG    .340    .350   5.100    .260   9.000
 952          UC    .233    .168
 953          UA       0       5      16      30      65      77      84      90      94      97
 954          UA     100
              * DDM   ***** Preserved *****

 955          KK    D411
 956          KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN LOCATED WITHIN SUB-BASINS
 957          KM   385 AND 411.
 958          DT   SF411
 959          DI       0      25    5000
 960          DQ       0       0    4975
              * DDM   ***** Preserved *****

 961          KK   RT411
 962          KM   RETRIEVE FLOW FROM DIVERSION OF SUB-BASIN 411.
 963          DR   SF411
              * DDM   ***** Preserved *****

 964          KK   SR411
 965          KM   RETRIEVE FLOW INTO OFFLINE BASIN AND BLEED OFF WITHIN 36 HOURS.
 966          KM       9 ACRE-FEETx43560/36x3600 = 3 cfs
 967          RS       1    STOR       0
 968          SV       0     .01       9
 969          SQ       0       3       3
              * DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 970          KK    411C
 971          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 411
 972          HC       3
              * DDM   ***** Preserved *****

 973          KK    R411
 974          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
 975          KM   ROUTING OF SPLIT FLOW FROM SUB-BASIN 385 AND SUB-BASIN 411 TO SUB-BASIN 390.
 976          RS       3    FLOW      -1
 977          RC    .045    .035    .045    1300    .038
 978          RX       0       1      40      46      56      62     102     103
 979          RY       3       2       2       0       0       2       2       3
              * DDM   ***** Updated *****

 980          KK     390
 981          KM   SUB-BASIN 390
 982          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 983          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
 984          KM     L =  .70  Kb = .050  Adj. Slope =  299.4
 985          BA    .244
 986          LG    .300    .250   4.700    .380  18.000
 987          UC    .204    .107
 988          UA       0       5      16      30      65      77      84      90      94      97
 989          UA     100
              * DDM   ***** Preserved *****

 990          KK    D390
 991          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
 992          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THUNDER MOUNTAIN ESTATES
 993          KM        MAXIMUM VOLUME DIVERSION  = 3.5 acre-feet
              *      1
 994          DT   BS390     3.5
 995          DI       0    5000
 996          DQ       0    5000
              * DDM   ***** Preserved *****

 997          KK   RT390
 998          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
 999          DR   BS390
              * DDM   ***** Preserved *****

1000          KK   SR390
1001          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1002          KM     3.5 ACRE-FEETx43560/36x3600=1.2cfs
1003          RS       1    STOR       0
1004          SV       0     .01     3.5
1005          SQ       0     1.2     1.2
              * DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1006          KK    390C
1007          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1008          HC       4
              * DDM   ***** Preserved *****

1009          KK   RR390
1010          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1011          KM   FROM SUB-BASIN 390 TO SUB-BASIN 410.
1012          RS       7    FLOW      -1
1013          RC    .045    .035    .045    5500    .020
1014          RX       0       1      40      46      56      62     102     103
1015          RY       3       2       2       0       0       2       2       3
              * DDM   ***** Updated *****

1016          KK     410
1017          KM   SUB-BASIN 410
1018          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
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1019        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1020        KM     L = 1.00  Kb = .049  Adj. Slope =  150.0
1021        BA    .273
1022        LG    .300    .250   3.910    .590  15.000
1023        UC    .329    .226
1024        UA       0       5      16      30      65      77      84      90      94      97
1025        UA     100
            * DDM   ***** Preserved *****

1026        KK    410C
1027        KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1028        HC       2
            * DDM   ***** Updated *****

1029        KK     440
1030        KM   SUB-BASIN 440
1031        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1032        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1033        KM     L =  .40  Kb = .039  Adj. Slope =  315.0
1034        BA    .080
1035        LG    .190    .380   6.400    .140  13.000
1036        UC    .129    .077
1037        UA       0       3       5       8      12      20      43      75      90      96
1038        UA     100
            * DDM   ***** Preserved *****

1039        KK     R70
1040        KM   ROUTE FLOW FROM SUB-BASIN 440 TO C108
1041        RS       1    FLOW      -1
1042        RC     .05    .035     .05    2250     .08
1043        RX    1000    1025    1050    1070    1075    1095    1120    1145
1044        RY      30    22.9    15.7      10      10    15.7    22.9      30
            * DDM   ***** Updated *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1045        KK     441
1046        KM   SUB-BASIN 441
1047        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1048        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1049        KM     L =  .28  Kb = .069  Adj. Slope =  315.0
1050        BA    .010
1051        LG    .300    .250   5.600    .220   5.000
1052        UC    .150    .225
1053        UA       0       5      16      30      65      77      84      90      94      97
1054        UA     100
            * DDM   ***** Preserved *****

1055        KK    C108
1056        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 440 & 441
1057        HC       2
            * DDM   ***** Preserved *****

1058        KK    DIV4
1059        KM        SPLIT FLOW WITH TWO 42 INCH PIPES TO WEST AND SOUTH
            *      1
1060        DT   SPLIT
1061        DI       0      14      40      82     120     154     180
1062        DQ       0       7      20      41      60      77      90
            * DDM   ***** Preserved *****

1063        KK    R108
1064        KM        ROUTE FLOW FROM SUB-BASIN C108 TO C67
1065        RS       2    FLOW      -1
1066        RC     .05    .035     .05    3200      .1
1067        RX    1000    1025    1050    1070    1075    1095    1120    1145
1068        RY      30    22.9    15.7      10      10    15.7    22.9      30
            * DDM   ***** Updated *****

1069        KK     442
1070        KM   SUB-BASIN 442
1071        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1072        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1073        KM     L =  .83  Kb = .055  Adj. Slope =  274.2
1074        BA    .100
1075        LG    .300    .270   3.290    .770   5.000
1076        UC    .258    .264
1077        UA       0       5      16      30      65      77      84      90      94      97
1078        UA     100
            * DDM   ***** Preserved *****

1079        KK     C67
1080        KM   COMBINE FLOW FROM SUB-BASIN 442 & DIV4
1081        HC       2
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1082        KK    DIV6
1083        KM        OFFLINE BASIN WITH 25 FOOT WEIR SET AT 2.5 FEET ABOVE BOTTOM OF CHANNEL
1084        KM        FLOW CONTINUES BEYOND BASIN THROUGH 2-30" PIPES
            *      1
1085        DT  BASIN4
1086        DI       0      10      32      44    79.9   132.5     198   272.9   356.8
1087        DQ       0       0       0       0    23.9    67.5     124   190.9   266.8
            * DDM   ***** Preserved *****

1088        KK  RTDIV6
1089        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1090        DR  BASIN4
            * DDM   ***** Preserved *****

1091        KK  RFDIV6
1092        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1093        KM     3.3 ACRE-FEETx43560/36x3600=1.1cfs
            *      1
1094        RS       1    STOR       0
1095        SV       0     .01     3.3
1096        SQ       0     1.1     1.1
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            * DDM   ***** Preserved *****

1097        KK   CDIV6
1098        KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1099        HC       2
            * DDM   ***** Updated *****

1100        KK     443
1101        KM   SUB-BASIN 443
1102        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1103        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1104        KM     L =  .71  Kb = .050  Adj. Slope =  315.0
1105        BA    .080
1106        LG    .250    .190   8.000    .080  10.000
1107        UC    .196    .194
1108        UA       0       5      16      30      65      77      84      90      94      97
1109        UA     100
            * DDM   ***** Preserved *****

1110        KK   DIV66
1111        KM        DIVERT FLOW INTO 3 NATURAL WASHES WITH ONE 24" PIPE IN EACH WASH.
1112        KM        EACH PIPE CAPACITY BASED ON 4 FEET OF HEAD
1113        DT   WSH66
1114        DI       0      78     100     200
1115        DQ       0      78      78      78
            * DDM   ***** Preserved *****

1116        KK    R113
1117        KM        ROUTE FLOW FROM C113 TO C114
1118        RS       1    FLOW      -1
1119        RC    .019    .019    .019    1300    .029
1120        RX    1000    1004    1008    1012    1018    1022    1026    1030
1121        RY      17   15.33   12.67      10      10   12.67   15.33      17
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 29

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1122        KK    C114
1123        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 67 AND C113
1124        HC       2
            * DDM   ***** Updated *****

1125        KK     444
1126        KM   SUB-BASIN 444
1127        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1128        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1129        KM     L =  .33  Kb = .034  Adj. Slope =  315.0
1130        BA    .040
1131        LG    .130    .350   4.450    .320   1.000
1132        UC    .112    .084
1133        UA       0       3       5       8      12      20      43      75      90      96
1134        UA     100
            * DDM   ***** Preserved *****

1135        KK     R58
1136        KM   ROUTE FLOW FROM SUB-BASIN 444 TO C107
1137        RS       1    FLOW      -1
1138        RC     .05    .035     .05    2370   .0516
1139        RX    1000    1010    1020    1050    1055    1085    1095    1105
1140        RY      19      18      17      10      10      17      18      19
            * DDM   ***** Updated *****

1141        KK     445
1142        KM   SUB-BASIN 445
1143        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1144        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1145        KM     L =  .82  Kb = .036  Adj. Slope =  315.0
1146        BA    .190
1147        LG    .170    .320   3.470    .590   3.000
1148        UC    .192    .130
1149        UA       0       5      16      30      65      77      84      90      94      97
1150        UA     100
            * DDM   ***** Preserved *****

1151        KK    C107
1152        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 444 & 445
1153        HC       2
            * DDM   ***** Preserved *****

1154        KK    R107
1155        KM        ROUTE FLOW FROM C107 TO C109
1156        RS       1    FLOW      -1
1157        RC     .05    .035     .05     700   .0516
1158        RX    1000    1010    1020    1050    1055    1085    1095    1105
1159        RY      19      18      17      10      10      17      18      19
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 30

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1160        KK    RTB2
1161        KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
            *      1
1162        DR   SPLIT
            * DDM   ***** Preserved *****

1163        KK  RSPLIT
1164        KM        ROUTE FLOW FROM SPLIT TO C109
1165        RS       1    FLOW      -1
1166        RC     .05    .035     .05     800     .05
1167        RX    1000    1025    1050    1070    1075    1095    1120    1145
1168        RY      30    22.9    15.7      10      10    15.7    22.9      30
            * DDM   ***** Updated *****

1169        KK     446
1170        KM   SUB-BASIN 446
1171        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1172        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1173        KM     L =  .46  Kb = .061  Adj. Slope =  303.9
1174        BA    .040
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1175        LG    .270    .250   4.500    .400  19.000
1176        UC    .183    .189
1177        UA       0       5      16      30      65      77      84      90      94      97
1178        UA     100
            * DDM   ***** Preserved *****

1179        KK    C109
1180        KM        COMBINE HYDROGRAPHS FROM COMBINES C107 AND C108
1181        HC       3
            * DDM   ***** Preserved *****

1182        KK    DIV5
1183        KM        DIVERT FLOW INTO WASHES TOWARDS WEST
1184        KM        DIVERSION THROUGH 36" PIPE WITH 3 FEET OF HEAD
            *       1
1185        DT  WSH404
1186        DI       0    40.7    71.2   121.6     190     276   379.4   500.6
1187        DQ       0      35      35      35      35      35      35      35
            * DDM   ***** Preserved *****

1188        KK    R109
1189        KM        ROUTE FLOW FROM C109 TO C110
1190        RS       1    FLOW      -1
1191        RC    .019    .019    .019    3080     .05
1192        RX    1000    1005    1010    1015    1025    1030    1035    1040
1193        RY   13.75    12.5   11.25      10      10   11.25    12.5   13.75
            * DDM   ***** Updated *****

1194        KK     447
1195        KM   SUB-BASIN 447
1196        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1197        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1198        KM     L =  .49  Kb = .056  Adj. Slope =  221.0
1199        BA    .090
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1200        LG    .250    .270   3.350    .870  30.000
1201        UC    .208    .145
1202        UA       0       5      16      30      65      77      84      90      94      97
1203        UA     100
            * DDM   ***** Preserved *****

1204        KK   RT404
1205        KM        RETRIEVE DIVERTED FLOW FOR WASH 109
1206        DR  WSH404
            * DDM   ***** Preserved *****

1207        KK    R404
1208        KM        ROUTE FLOW FROM C110 TO C110
1209        RS       5    FLOW      -1
1210        RC    .019    .019    .019    3540     .03
1211        RX    1000    1012    1016    1020    1025    1029    1033    1045
1212        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Preserved *****

1213        KK    C110
1214        KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 447 AND R404
1215        HC       3
            * DDM   ***** Preserved *****

1216        KK    R110
1217        KM        ROUTE FLOW FROM C110 TO C115
1218        RS       1    FLOW      -1
1219        RC    .019    .019    .019     580   .0291
1220        RX    1000    1012    1016    1020    1035    1039    1043    1055
1221        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Preserved *****

1222        KK    C115
1223        KM        COMBINE HYDROGRAPHS FROM C114 AND C110
1224        HC       2
            * DDM   ***** Preserved *****

1225        KK    R115
1226        KM        ROUTE FLOW FROM C115 TO C119
1227        RS       1    FLOW      -1
1228        RC    .019    .019    .019    2125    .029
1229        RC    .019    .019    .019     580   .0291
1230        RX    1000    1012    1016    1020    1035    1039    1043    1055
1231        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Updated *****

1232        KK     448
1233        KM   SUB-BASIN 448
1234        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1235        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1236        KM     L =  .36  Kb = .042  Adj. Slope =  315.0
1237        BA    .045
1238        LG    .170    .310   4.200    .390  11.000
1239        UC    .133    .102
1240        UA       0       5      16      30      65      77      84      90      94      97
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1241        UA     100
            * DDM   ***** Updated *****

1242        KK     449
1243        KM   SUB-BASIN 449
1244        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1245        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1246        KM     L =  .40  Kb = .054  Adj. Slope =  315.0
1247        BA    .050
1248        LG    .260    .280   3.500    .640   6.000
1249        UC    .167    .134
1250        UA       0       5      16      30      65      77      84      90      94      97
1251        UA     100
            * DDM   ***** Preserved *****

1252        KK   C6364
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1253        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 448 & 449
1254        HC       2
            * DDM   ***** Preserved *****

1255        KK   R6364
1256        KM   ROUTE FLOW FROM C116 AND SUB-BASINS 448 AND 449
1257        RS       4    FLOW      -1
1258        RC     .05    .035     .05    4375   .0333
1259        RX    1000    1027    1053    1080    1090    1117    1143    1170
1260        RY      15   13.33   11.67      10      10   11.67   13.33      15
            * DDM   ***** Updated *****

1261        KK     450
1262        KM   SUB-BASIN 450
1263        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1264        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1265        KM     L =  .85  Kb = .057  Adj. Slope =  210.5
1266        BA    .070
1267        LG    .340    .350   3.630    .570   4.000
1268        UC    .296    .383
1269        UA       0       3       5       8      12      20      43      75      90      96
1270        UA     100
            * DDM   ***** Updated *****

1271        KK     451
1272        KM   SUB-BASIN 451
1273        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1274        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1275        KM     L =  .57  Kb = .063  Adj. Slope =  175.0
1276        BA    .025
1277        LG    .340    .340   3.290    .750   3.000
1278        UC    .271    .453
1279        UA       0       3       5       8      12      20      43      75      90      96
1280        UA     100
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1281        KK    RT66
1282        KM        RETRIEVE DIVERTED FLOW FROM SUB-BASIN 66
1283        DR   WSH66
            * DDM   ***** Updated *****

1284        KK     452
1285        KM   SUB-BASIN 452
1286        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1287        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1288        KM     L =  .43  Kb = .055  Adj. Slope =  315.0
1289        BA    .040
1290        LG    .260    .280   3.700    .550   9.000
1291        UC    .171    .166
1292        UA       0       5      16      30      65      77      84      90      94      97
1293        UA     100
            * DDM   ***** Preserved *****

1294        KK   C6465
1295        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 443 AND 452
1296        HC       2
            * DDM   ***** Preserved *****

1297        KK   R6566
1298        KM        ROUTE FLOW FROM DIVERSIONS 65 AND 66 TO C116
1299        RS       2    FLOW      -1
1300        RC     .05    .035     .05    2435   .0282
1301        RX    1000    1045    1090    1150    1160    1220    1265    1310
1302        RY      25      23      20      10      10      20      23      25
            * DDM   ***** Preserved *****

1303        KK    C116
1304        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 450 & 451 AND R6364 & R6465
1305        HC       4
            * DDM   ***** Preserved *****

1306        KK  BASIN5
1307        KM        RESERVOIR WITHIN PARCEL 31      2-48 INCH PIPES AT OUTFALL
1308        KM        BASIN 5 FEET DEEP
1309        RS       1    ELEV       0
1310        SV       0     4.5     9.9
1311        SQ       0      69     190
1312        SE       0     2.5       5
            * DDM   ***** Preserved *****

1313        KK    R116
1314        KM   ROUTE FLOW FROM C116 TO C117
1315        RS       2    FLOW      -1
1316        RC     .05    .035     .05    1300   .0333
1317        RX    1000    1100    1200    1300    1320    1420    1520    1620
1318        RY      13      12      11      10      10      11      12      13
            * DDM   ***** Updated *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1319        KK     453
1320        KM   SUB-BASIN 453
1321        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1322        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1323        KM     L =  .58  Kb = .058  Adj. Slope =  138.0
1324        BA    .060
1325        LG    .290    .300   3.290    .820  18.000
1326        UC    .275    .284
1327        UA       0       5      16      30      65      77      84      90      94      97
1328        UA     100
            * DDM   ***** Preserved *****

1329        KK    C117
1330        KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 453 AND R116
1331        HC       2
            * DDM   ***** Preserved *****
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1332        KK    C118
1333        KM   COMBINE HYDROGRAPHS FROM R115 AND C117
1334        HC       2
            * DDM   ***** Preserved *****

1335        KK    R118
1336        KM        ROUTE FLOW FROM C118 TO  DIV7
1337        RS       1    FLOW      -1
1338        RC    .019    .019    .019    1500    .024
1339        RX    1000    1012    1016    1020    1035    1039    1043    1055
1340        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Preserved *****

1341        KK    DIV7
1342        KM        OFFLINE BASIN AT NORTH MOUNTAIN RIDGE   FLOWS ENTER BASIN OVER
1343        KM        30' WEIR SET AT 5.3' ABOVE THE CHANNEL BOTTOM
            *      1
1344        DT  BASIN6
1345        DI       0     363     487     563     645     844
1346        DQ       0       3      47      83     125     244
            * DDM   ***** Preserved *****

1347        KK  RTDIV7
1348        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1349        DR  BASIN6
            * DDM   ***** Preserved *****

1350        KK  RFDIV7
1351        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1352        KM     3.6 ACRE-FEETx43560/36x3600=1.2cfs
1353        RS       1    STOR       0
1354        SV       0     .01     3.6
1355        SQ       0     1.2     1.2
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1356        KK   CDIV7
1357        KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1358        HC       2
            * DDM   ***** Updated *****

1359        KK     454
1360        KM   SUB-BASIN 454
1361        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1362        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1363        KM     L = 1.23  Kb = .051  Adj. Slope =  163.0
1364        BA    .180
1365        LG    .300    .310   3.780    .560  14.000
1366        UC    .379    .395
1367        UA       0       5      16      30      65      77      84      90      94      97
1368        UA     100
            * DDM   ***** Preserved *****

1369        KK    C119
1370        KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 454 AND DIV7.
            *      1       2
1371        HC       2
            * DDM   ***** Preserved *****

1372        KK    R454
1373        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1374        KM   ROUTING OF FLOW FROM LAS SENDAS AND R413 TO SUB-BASIN 415.
1375        RS       3    FLOW      -1
1376        RC    .045    .035    .045    2500    .012
1377        RX       0      .5       1      33      42      67    67.5      68
1378        RY       5       4       4       0       0       6       6       6
            * DDM   ***** Updated *****

1379        KK     415
1380        KM   SUB-BASIN 415
1381        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1382        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1383        KM     L = 1.10  Kb = .049  Adj. Slope =  155.0
1384        BA    .281
1385        LG    .300    .260   3.630    .710  15.000
1386        UC    .358    .264
1387        UA       0       5      16      30      65      77      84      90      94      97
1388        UA     100
            * DDM   ***** Preserved *****

1389        KK    415C
1390        KM   HYDROGRAPH COMBINATION OF R454, SUB-BASIN 415, R410.
1391        HC       3
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1392        KK    D415
1393        KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN
1394        KM   MAXIMUM STORAGE VOLUME FOR DIVERSION = 45 AC-FT @ 5' DEPTH.
            *      1
1395        DT   BS415
1396        DI       0    1100    5000
1397        DQ       0       0    3900
            * DDM   ***** Preserved *****

1398        KK   RT415
1399        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1400        DR   BS415

1401        KK   SR415
1402        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1403        KM      15 ACRE-FEETx43560/36x3600 = 5 cfs
1404        RS       1    STOR       0
1405        SV       0     .01      15
1406        SQ       0       5       5
            * DDM   ***** Preserved *****
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KK    C415
KM   HYDROGRAPH COMBINATION OF 415 DIVERSION.
HC       2
* DDM   ***** Preserved *****

KK    R415
KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
KM   ROUTING OF FLOW FROM 415C TO 455C
RS       4    FLOW      -1
RC    .045     .03     .045    4100     .024
RX       0      .5       1       8       16      23    23.5      24
RY       8       8       8       0        0       8       8       8
* DDM   ***** Updated *****

KK     455
KM   SUB-BASIN 455
KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
KM     L = 1.70  Kb = .041  Adj. Slope =  146.0
BA   1.111
LG    .270    .280   3.700    .640  24.000
UC    .421    .204
UA       0       5      16      30      65      77      84      90      94      97
UA     100
* DDM   ***** Preserved *****

KK    D455
KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
KM   FOR BASIN #: 30      34      43      47&58
KM        MAXIMUM VOLUME DIVERSION = 74.1 acre-feet
*      1
DT   BS455    74.1
```



```
LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

DI       0   10000
DQ       0   10000
* DDM   ***** Preserved *****

KK   RT455
KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
DR   BS455
* DDM   ***** Preserved *****

KK   SR455
KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
KM    74.1 ACRE-FEETx43560/36x3600=25cfs
RS       1    STOR       0
SV       0     .01    74.1
SQ       0      25      25
* DDM   ***** Preserved *****

KK    C455
KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 455 AND DIVERTED BASIN STORAGE OF 455
HC       2
* DDM   ***** Preserved *****

KK    455C
KM  HYDROGRAPH COMBINATION OF 420C, R415 AND C455
*      1       2
HC       3
* DDM   ***** Preserved *****

KK   SR440
KM   SPOOK HILL FRS PLANS DATED 6/15/77
KM   OUTLET PIPE=7'x7.5'RCBC; L=70 INLET INV.=1566; OUTLET INV.=1566
KM   EMERGENCY SPILLWAY ELEV.=1582; PRINCIPLE SPILLWAY ELEV.=1577.5
KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 200 ACRE-FEET
RS       1    STOR       0
SV       0      10     100     300     500     680
SQ       0     640     720     780     825     860
SE      66    77.5      79    80.2    81.2      82
* DDM   ***** Preserved *****

KK   RR455
KM   ROUTE FLOW FROM SPOOK HILL FRS TO SUB-BASIN 462
RS      10    FLOW      -1
RC    .035    .025    .035    9200     .002
RX       0       1       2      28      58      84      85      86
RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
* DDM   ***** Updated *****

KK     456
KM   SUB-BASIN 456
KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
KM     L =  .94  Kb = .045  Adj. Slope =  315.0
BA    .260
LG    .300    .380   5.600    .200  12.000
UC    .217    .139
```



```
LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

UA       0       5      16      30      65      77      84      90      94      97
UA     100
* DDM   ***** Preserved *****

KK    DIV1
KM        DIVERT FLOW INTO OFFLINE DETENTION BASIN
KM        WEIR FOR BASIN SET AT 4 FEET ABOVE CHANNEL BOTTOM
*      1
DT  BASIN1
DI       0    11.1   127.9   234.4   577.7   789.9  1025.5  1280.9  1555.7
DQ       0       0       0    47.7     248   381.8   533.6   701.5     884
* DDM   ***** Preserved *****

KK    DIV2
KM        SPLIT OUT FLOW FOR WASHES THAT FLOW TO THE SOUTH FROM
KM        WASHES THAT DRAIN TO THE WES, SOUTHERN WASHES FED BY 30" & 24" PIPE
DT    WA30
```

```
1485        DI       0    11.1   127.9   189.6   329.7     408   491.9   579.4   671.7
1486        DQ       0    11.1    38.4    48.2      63    69.5      76      81      86
            * DDM   ***** Preserved *****

1487        KK    R456
1488        KM        ROUTE FLOW FROM SUB-BASIN 51 TO C101
1489        RS       2    FLOW      -1
1490        RC     .05    .035     .05    3800    .044
1491        RX    1000    1010    1020    1036    1041    1057    1067    1077
1492        RY   14.88   14.44      14      10      10      14   14.44   14.88
            * DDM   ***** Updated *****

1493        KK     457
1494        KM   SUB-BASIN 457
1495        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1496        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1497        KM     L = 1.01  Kb = .045  Adj. Slope =  308.8
1498        BA    .190
1499        LG    .270    .330   3.950    .460   6.000
1500        UC    .237    .195
1501        UA       0       5      16      30      65      77      84      90      94      97
1502        UA     100
            * DDM   ***** Preserved *****

1503        KK    C101
1504        KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 50 AND 51
1505        HC       2
            * DDM   ***** Preserved *****

1506        KK    DIV3
1507        KM        RESERVOIR AT THE EDGE OF THE PROPERTY   FLOW FROM CHANNEL
1508        KM        DIVERTED  INTO OFFLINE BASIN A 25' WEIR SET AT ELEVATION 1808 FT
            *      1
1509        DT  BASIN2
1510        DI       0      36      70     110     180   313.5     402   500.9
1511        DQ       0       0       0       0       0    67.5     124   190.9
            * DDM   ***** Preserved *****
```



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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1512        KK  RTDIV3
1513        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1514        DR  BASIN2
            * DDM   ***** Preserved *****

1515        KK  RFDIV3
1516        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1517        KM     5.0 ACRE-FEETx43560/36x3600=1.7cfs
1518        RS       1    STOR       0
1519        SV       0     .01       5
1520        SQ       0     1.7     1.7
            * DDM   ***** Preserved *****

1521        KK   CDIV3
1522        KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1523        HC       2
            * DDM   ***** Preserved *****

1524        KK    R101
1525        KM        ROUTE FLOW FROM SUBBASIN C101 TO C103
1526        RS       1    FLOW      -1
1527        RC     .05    .035     .05    1450     .05
1528        RX    1000    1010    1020    1036    1041    1057    1067    1077
1529        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Updated *****

1530        KK     458
1531        KM   SUB-BASIN 458
1532        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1533        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1534        KM     L =  .76  Kb = .048  Adj. Slope =  299.0
1535        BA    .190
1536        LG    .290    .330   5.800    .190   6.000
1537        UC    .204    .131
1538        UA       0       5      16      30      65      77      84      90      94      97
1539        UA     100
            * DDM   ***** Preserved *****

1540        KK    C103
1541        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 55 AND C101
1542        HC       2
            * DDM   ***** Preserved *****

1543        KK    R103
1544        KM        ROUTE FLOW FROM SUBBASIN C103 TO C106
1545        RS       1    FLOW      -1
1546        RC     .05    .035     .05     900     .03
1547        RX    1000    1010    1020    1030    1050    1060    1070    1080
1548        RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1549        KK    RT30
1550        KM        RETRIEVE DIVERTED FLOW FOR WASH BELOW 30 INCH PIPE
1551        DR    WA30
            * DDM   ***** Preserved *****

1552        KK     R30
1553        KM        ROUTE FLOW FROM WASH DIVERSION TO COMBINE C52
1554        RS       1    FLOW      -1
1555        RC     .05    .035     .05    1630     .05
1556        RX    1000    1010    1020    1036    1041    1057    1067    1077
1557        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Preserved *****

1558        KK    RTB1
1559        KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
            *      1       2
```

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1560        DR  BASIN1
            * DDM   ***** Preserved *****

1561        KK      B1
1562        KM        ROUTE FLOW THROUGH OFFLINE DETENTION BASIN
1563        KM        FLOW OUTLETS THROUGH A 30 INCH OUTLET PIPE
            *      1       2
1564        RS       1    ELEV       0
1565        SV              .7     1.4     2.3     2.7     3.2
1566        SQ       0       5      16      28    32.5      37
1567        SE       0       1       2       3     3.5       4
            * DDM   ***** Preserved *****

1568        KK     RB1
1569        KM        ROUTE FLOW FROM BASIN DIVERSION TO COMBINE C52
1570        RS       2    FLOW      -1
1571        RC     .05    .035     .05    1720     .05
1572        RX    1000    1010    1020    1036    1041    1057    1067    1077
1573        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Preserved *****

1574        KK    CDIV
1575        KM        COMBINE FLOWS FROM WA30 AND BASIN 1
1576        HC       2     .12
            * DDM   ***** Updated *****

1577        KK     459
1578        KM   SUB-BASIN 459
1579        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1580        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1581        KM     L =  .35  Kb = .052  Adj. Slope =  251.6
1582        BA    .030
1583        LG    .220    .300   3.330    .710   8.000
1584        UC    .162    .157
1585        UA       0       5      16      30      65      77      84      90      94      97
1586        UA     100
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1587        KK     C52
1588        KM        COMBINE FLOWS FROM SUB-BASIN 52 WA30 AND BASIN 1
1589        HC       2
            * DDM   ***** Preserved *****

1590        KK     R52
1591        KM        ROUTE FLOW FROM SUBBASIN 52 TO C102
1592        RS       2    FLOW      -1
1593        RC     .05    .035     .05    2000     .05
1594        RX    1000    1010    1020    1036    1041    1057    1067    1077
1595        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Updated *****

1596        KK     460
1597        KM   SUB-BASIN 460
1598        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1599        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1600        KM     L =  .62  Kb = .058  Adj. Slope =  194.0
1601        BA    .140
1602        LG    .250    .260   3.740    .690  27.000
1603        UC    .242    .160
1604        UA       0       5      16      30      65      77      84      90      94      97
1605        UA     100
            * DDM   ***** Preserved *****

1606        KK    C102
1607        KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 52 AND 53
1608        HC       2
            * DDM   ***** Preserved *****

1609        KK  BASIN3
1610        KM        RESERVOIR AT CLUBHOUSE LOCATION 1-30 INCH PIPE AT OUTFALL
1611        KM        BOTTOM OF BASIN AT 6 FEET ABOVE 1795 ELEVATION
1612        RS       1    ELEV       0
1613        SA       0       0       0       0     .34    1.59    1.81    1.96    2.13     2.3
            *      0       0       0       0    1.14    3.25    5.52    9.23
1614        SQ       0      22      45    47.4      48      51      57      62      67      73
1615        SE    1795  1797.5    1800  1800.4  1800.5    1801    1802    1803    1804  1805.5
            * DDM   ***** Preserved *****

1616        KK      R3
1617        KM        ROUTE FLOW FROM C102 to C106
1618        RS       4    FLOW      -1
1619        RC     .05     .03     .05    2750   .0375
1620        RX    1000    1010    1020    1052    1086    1118    1128    1138
1621        RY    19.2    18.4      18      10      10      18    18.4    19.2
            * DDM   ***** Updated *****

1622        KK     461
1623        KM   SUB-BASIN 461
1624        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1625        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1626        KM     L =  .83  Kb = .052  Adj. Slope =  181.0
1627        BA    .120
```



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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1628        LG    .270    .250   4.250    .450  21.000
1629        UC    .271    .250
1630        UA       0       5      16      30      65      77      84      90      94      97
1631        UA     100
            * DDM   ***** Preserved *****

1632        KK    C104
1633        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 54 AND R102
1634        HC       2
            * DDM   ***** Preserved *****

1635        KK    C106
1636        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN C103 AND C104
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1637        HC        2
            * DDM    ***** Preserved *****

1638        KK     R106
1639        KM         ROUTE FLOW FROM C106 TO C49
1640        RS        2     FLOW       -1
1641        RC      .05     .035      .05     3950     .033
1642        RX     1000     1010     1020     1030     1050     1060     1070     1080
1643        RY    13.16    12.83     12.5       10       10     12.5    12.83    13.16
            * DDM    ***** Updated *****

1644        KK      462
1645        KM    SUB-BASIN 462
1646        KM    24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1647        KM    THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1648        KM      L =  .97  Kb = .045  Adj. Slope =  297.7
1649        BA     .301
1650        LG     .300     .330    5.300     .240   12.000
1651        UC     .225     .137
1652        UA        0        5       16       30       65       77       84       90       94       97
1653        UA      100
            * DDM    ***** Preserved *****

1654        KK      C56
1655        KM         COMBINE HYDROGRAPHS FROM SUB-BASIN 56 AND C106
            *       1        2
1656        HC        2
            * DDM    ***** Updated *****

1657        KK      480
1658        KM    SUB-BASIN 480
1659        KM    24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1660        KM    THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
1661        KM      L = 1.21  Kb = .042  Adj. Slope =  165.0
1662        BA     .731
1663        LG     .270     .270    3.580     .730   27.000
1664        UC     .325     .148
1665        UA        0        5       16       30       65       77       84       90       94       97
1666        UA      100
            * DDM    ***** Preserved *****
```



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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1667        KK     D480
1668        KM         DIVERT FLOW INTO ONLINE  DETENTION BASIN
1669        KM    DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1670        KM    FOR BASIN #: 18 & 26
1671        KM         MAXIMUM VOLUME DIVERSION = 16.5 acre-feet
            *       1
1672        DT    BS480     16.5
1673        DI        0    10000
1674        DQ        0    10000
            * DDM    ***** Preserved *****

1675        KK    RT480
1676        KM    RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1677        DR    BS480
            * DDM    ***** Preserved *****

1678        KK    SR480
1679        KM    RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1680        KM     16.5 ACRE-FEETx43560/36x3600=5.5cfs
1681        RS        1     STOR        0
1682        SV        0      .01     16.5
1683        SQ        0      5.6      5.6
            * DDM    ***** Preserved *****

1684        KK     C480
1685        KM    HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1686        HC        2
            * DDM    ***** Preserved *****

1687        KK     480C
1688        KM    HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1689        HC        3     2.09
            * DDM    ***** Preserved *****

1690        KK    RR480
1691        KM    ROUTE FLOW FROM SUB-BASIN 480 TO SUB-BASIN 500
1692        RS        1     FLOW       -1
1693        RC     .025     .025     .025     6500      .05
1694        RX        0        1        2       28       58       84       85       86
1695        RY     13.5     13.5     13.5        0        0     13.5     13.5     13.5
            * DDM    ***** Updated *****

1696        KK      500
1697        KM    SUB-BASIN 500
1698        KM    24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1699        KM    THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
1700        KM      L = 2.77  Kb = .042  Adj. Slope =  286.8
1701        BA     .930
1702        LG     .350     .400    6.000     .170    9.000
1703        UC     .421     .333
1704        UA        0        3        5        8       12       20       43       75       90       96
1705        UA      100
            * DDM    ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1706        KK     500C
1707        KM    HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1708        HC        2     3.02
1709        ZZ
```

SCHEMATIC DIAGRAM OF STREAM NETWORK

```
INPUT
 LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW
  NO.      (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

  56         10
             V
             V
  66        R10
             V
             V
  72        R12
             .
             .
  78         .          20
             .           .
             .           .
  88        C20............
             .
             .
  91         .          40
             .           .
             .           .
 101         .           .          60
             .           .           .
             .           .           .
 111        60C........................
             V
             V
 114       SR60
             V
             V
 123        R60
             V
             V
 129       RR60
             .
             .
 135         .          80
             .           .
             .           .
 145        80C............
             V
             V
 148        R80
             .
             .
 154         .         100
             .           .
             .           .
 164       100C............
             V
             V
 167       R100
             .
             .
 173         .         120
             .           .
             .           .
 183       120C............
             V
             V
 186       R120
             .
             .
 192         .         140
             .           .
             .           .
 202         .           .         150
             .           .           V
             .           .           V
 212         .           .        R150
             .           .           V
             .           .           V
 218         .           .        R152
             .           .           .
             .           .           .
 224         .           .           .         160
             .           .           .           .
             .           .           .           .
 234         .           .           .           .         180
             .           .           .           .           .
             .           .           .           .           .
 244       180C..............................................
             .
             .
 247         .         383
             .           V
             .           V
 257         .        R383
             .           .
             .           .
 266         .           .         393
             .           .           .
             .           .           .
 276         .        393C............
             .           V
             .           V
 279         .        R393
             .           .
             .           .
 286         .           .         365
             .           .           .
             .           .           .
 296         .        365C............
             .           V
             .           V
 299         .        R365
             .           V
             .           V
 306         .        365R
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```
              .          .
              .          .
315           .          .        353
              .          .          .
              .          .          .
325           .       353C...........
              .          V
              .          V
328           .       R353
              .          V
              .          V
337           .       353R
              .          .
              .          .
344           .          .        350
              .          .          V
              .          .          V
354           .          .       350R
              .          .          .
              .          .          .
361           .          .          .        310
              .          .          .          .
              .          .          .          .
371           .       C310......................
              .          V
              .          V
374           .       R310
              .          V
              .          V
381           .       R312
              .          .
              .          .
390           .          .        295
              .          .          .
              .          .          .
400           .       295C...........
              .          V
              .          V
403           .       295R
              .          .
              .          .
412           .          .        210
              .          .          V
              .          .          V
422           .          .       R210
              .          .          .
              .          .          .
428           .          .          .        240
              .          .          .          .
              .          .          .          .
438           .       240C......................
              .          V
              .          V
441           .      SR240
              .          .
              .          .
450           .          .        220
              .          .          .
              .          .          .
460           .       220C...........
              .          V
              .          V
463           .      SR220
              .          .
              .          .
472           .          .        190
              .          .          V
              .          .          V
482           .          .       R190
              .          .          V
              .          .          V
488           .          .       R192
              .          .          .
              .          .          .
494           .          .          .        200
              .          .          .          .
              .          .          .          .
504           .       200C......................
              .          V
              .          V
507           .      SR200
              .          V
              .          V
514           .      200SR
              .          .
              .          .
524        C180...........
              V
              V
527       SR180
              V
              V
536        R180
              .
              .
543           .        260
              .          .
              .          .
553        260C...........
              V
              V
556        R260
              .
              .
563           .        280
              .          .
              .          .
573        280C...........
              V
              V
576        R280
              .
              .
```

```
583          .         300
             .           .
             .           .
593       C300............
             .
             .
599          .-------->   DIV30
596       D300
             .
             .
604          .           .<-------   DIV30
602          .       RTDIV
             .           V
             .           V
605          .       SRDIV
             .           .
             .           .
612       300C............
             .
             .
615          .         305
             .           .
             .           .
628          .           .-------->    305D
625          .        D305
             .           .
             .           .
633          .           .           .<-------    305D
631          .           .       RT305
             .           .           V
             .           .           V
634          .           .       SR305
             .           .           .
             .           .           .
641       305C........................
             V
             V
644       R305
             V
             V
651      RR305
             .
             .
658          .         320
             .           .
             .           .
673          .           .-------->   BS320
668          .        D320
             .           .
             .           .
678          .           .           .<-------   BS320
676          .           .       RT320
             .           .           V
             .           .           V
679          .           .       SR320
             .           .           .
             .           .           .
685       C320........................
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688          .         340
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             .           .
703          .           .-------->   BS340
698          .        D340
             .           .
             .           .
708          .           .           .<-------   BS340
706          .           .       RT340
             .           .           V
             .           .           V
709          .           .       SR340
             .           .           .
             .           .           .
715       C340........................
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718          .         355
             .           V
             .           V
728          .        R355
             .           .
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735          .           .         360
             .           .           .
             .           .           .
749          .           .           .-------->   BS360
745          .           .        D360
             .           .           .
             .           .           .
754          .           .           .           .<-------   BS360
752          .           .           .       RT360
             .           .           .           V
             .           .           .           V
755          .           .           .       SR360
             .           .           .           .
             .           .           .           .
761       360C....................................
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             .
764          .         380
             .           .
             .           .
778          .           .-------->   BS380
774          .        D380
             .           .
             .           .
783          .           .           .<-------   BS380
781          .           .       RT380
             .           .           V
             .           .           V
784          .           .       SR380
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790     380C.......................
                .
793             400
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807             .-------> BS400
803           D400
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                .
812             .         .<-------  BS400
810             .      RT400
                .         V
                .         V
813             .      SR400
                .         .
                .         .
819           C400............
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                .
822     400C............
                .
825             420
                .
                .
839             .-------> BS420
835           D420
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844             .         .<-------  BS420
842             .      RT420
                .         V
                .         V
845             .      SR420
                .         .
                .         .
851     420C.......................
                .
854             370
                .
                .
867             .-------> BS370
864           D370
                .
                .
872             .         .<-------  BS370
870             .      RT370
                .         V
                .         V
873             .      SR370
                .         .
                .         .
879           370C............
                .
                .
882             .        395
                .         .
                .         .
895             .         .-------> BS395
892             .       D395
                .         .
                .         .
900             .         .         .<-------  BS395
898             .         .      RT395
                .         .         V
                .         .         V
901             .         .      SR395
                .         .         .
                .         .         .
907           395C.......................
                V
                V
910           R395
                .
                .
917             .        385
                .         .
                .         .
930             .         .-------> SF385
927             .       D385
                .         .
                .         .
935             .         .         .<-------  SF385
933             .         .      RT385
                .         .         V
                .         .         V
936             .         .      SR385
                .         .         .
                .         .         .
942             .       385C............
                .         .
                .         .
945             .         .        411
                .         .         .
                .         .         .
958             .         .         .-------> SF411
955             .         .       D411
                .         .         .
                .         .         .
963             .         .         .         .<-------  SF411
961             .         .         .      RT411
                .         .         .         V
                .         .         .         V
964             .         .         .      SR411
                .         .         .         .
                .         .         .         .
970             .       411C.......................
                .         V
                .         V
973             .       R411
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980                 390
                      .
994                   .-------> BS390
990               D390
                      .
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999                   .<-------  BS390
997                   .      RT390
                      .          V
                      .          V
1000                  .      SR390
                      .          .
                      .          .
1006          390C.....................
                 V
                 V
1009          RR390
                 .
                 .
1016             .      410
                 .        .
                 .        .
1026          410C...........
                 .
                 .
1029             .      440
                 .        V
                 .        V
1039             .      R70
                 .        .
                 .        .
1045             .        .      441
                 .        .        .
                 .        .        .
1055             .     C108...........
                 .        .
                 .        .
1060             .        .-------> SPLIT
1058             .     DIV4
                 .        V
                 .        V
1063             .     R108
                 .        .
                 .        .
1069             .        .      442
                 .        .        .
                 .        .        .
1079             .      C67...........
                 .        .
                 .        .
1085             .        .-------> BASIN4
1082             .     DIV6
                 .        .
                 .        .
1090             .        .        .<-------  BASIN4
1088             .        .   RTDIV6
                 .        .        V
                 .        .        V
1091             .        .   RFDIV6
                 .        .        .
                 .        .        .
1097             .    CDIV6...........
                 .        .
                 .        .
1100             .        .      443
                 .        .        .
                 .        .        .
1113             .        .        .-------> WSH66
1110             .        .    DIV66
                 .        .        V
                 .        .        V
1116             .        .     R113
                 .        .        .
                 .        .        .
1122             .     C114...........
                 .        .
                 .        .
1125             .        .      444
                 .        .        V
                 .        .        V
1135             .        .      R58
                 .        .        .
                 .        .        .
1141             .        .        .        445
                 .        .        .          .
                 .        .        .          .
1151             .        .     C107...........
                 .        .        V
                 .        .        V
1154             .        .     R107
                 .        .        .
                 .        .        .
1162             .        .        .          .<-------  SPLIT
1160             .        .        .      RTB2
                 .        .        .          V
                 .        .        .          V
1163             .        .        .    RSPLIT
                 .        .        .          .
                 .        .        .          .
1169             .        .        .          .        446
                 .        .        .          .          .
                 .        .        .          .          .
1179             .        .     C109......................
                 .        .        .
                 .        .        .
1185             .        .        .-------> WSH404
1182             .        .     DIV5
                 .        .        V
                 .        .        V
1188             .        .     R109
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1194                                447
                                     .
1206                                 .<-------  WSH404
1204                            RT404
                                    V
                                    V
1207                             R404
                                     .
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1213                   C110.......................
                          V
                          V
1216                   R110
                          .
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1222             C115............
                    V
                    V
1225             R115
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1232                   448
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1242                                449
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1252                 C6364............
                          V
                          V
1255                 R6364
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1261                                450
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                                     .
1271                                     451
                                         .
                                         .
1283                                         .<-------   WSH66
1281                                     RT66
                                             .
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1284                                         .         452
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1294                                     C6465............
                                             V
                                             V
1297                                     R6566
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1303                   C116.................................
                          V
                          V
1306                 BASIN5
                          V
                          V
1313                   R116
                          .
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1319                                453
                                     .
                                     .
1329                   C117............
                          .
                          .
1332             C118............
                    V
                    V
1335             R118
                    .
                    .
1344                .-------> BASIN6
1341             DIV7
                    .
                    .
1349                          .<-------  BASIN6
1347                 RTDIV7
                          V
                          V
1350                 RFDIV7
                          .
                          .
1356            CDIV7............
                    .
                    .
1359                   454
                          .
                          .
1369             C119............
                    V
                    V
1372             R454
                    .
                    .
1379                   415
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1389        415C........................
                .
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1395            .-------> BS415
1392        D415
                .
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1400                .<-------  BS415
1398            RT415
                    V
                    V
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1401          .           .       SR415
              .           .           .
              .           .           .
1407          .        C415............
              .           V
              .           V
1410          .        R415
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              .           .
1417          .           .         455
              .           .           .
              .           .           .
1432          .           .           .-------->   BS455
1427          .           .        D455
              .           .           .
              .           .           .
1437          .           .           .           .<--------   BS455
1435          .           .           .       RT455
              .           .           .           V
              .           .           .           V
1438          .           .           .       SR455
              .           .           .           .
              .           .           .           .
1444          .           .        C455............
              .           .           .
              .           .           .
1447       455C........................
              V
              V
1450      SR440
              V
              V
1459      RR455
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1465          .         456
              .           .
              .           .
1478          .           .-------->  BASIN1
1475          .        DIV1
              .           .
              .           .
1484          .           .-------->    WA30
1481          .        DIV2
              .           V
              .           V
1487          .        R456
              .           .
              .           .
1493          .           .         457
              .           .           .
              .           .           .
1503          .        C101............
              .           .
              .           .
1509          .           .-------->  BASIN2
1506          .        DIV3
              .           .
              .           .
1514          .           .           .<--------  BASIN2
1512          .           .      RTDIV3
              .           .           V
              .           .           V
1515          .           .      RFDIV3
              .           .           .
              .           .           .
1521          .       CDIV3............
              .           V
              .           V
1524          .        R101
              .           .
              .           .
1530          .           .         458
              .           .           .
              .           .           .
1540          .        C103............
              .           V
              .           V
1543          .        R103
              .           .
              .           .
1551          .           .           .<--------    WA30
1549          .           .        RT30
              .           .           V
              .           .           V
1552          .           .         R30
              .           .           .
              .           .           .
1560          .           .           .           .<--------  BASIN1
1558          .           .           .        RTB1
              .           .           .           V
              .           .           .           V
1561          .           .           .          B1
              .           .           .           V
              .           .           .           V
1568          .           .           .         RB1
              .           .           .           .
              .           .           .           .
1574          .           .        CDIV............
              .           .           .
              .           .           .
1577          .           .           .         459
              .           .           .           .
              .           .           .           .
1587          .           .         C52............
              .           .           V
              .           .           V
1590          .           .         R52
              .           .           .
              .           .           .
1596          .           .           .         460
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1606          .          .        C102............
              .          .           V
              .          .           V
1609          .          .      BASIN3
              .          .           V
              .          .           V
1616          .          .          R3
              .          .           .
              .          .           .
1622          .          .           .         461
              .          .           .           .
              .          .           .           .
1632          .          .        C104............
              .          .           .
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1635          .       C106............
              .          V
              .          V
1638          .       R106
              .          .
              .          .
1644          .          .         462
              .          .           .
              .          .           .
1654          .        C56............
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              .          .
1657          .          .         480
              .          .           .
              .          .           .
1672          .          .           .-------->   BS480
1667          .          .        D480
              .          .           .
              .          .           .
1677          .          .           .           .<-------   BS480
1675          .          .           .       RT480
              .          .           .           V
              .          .           .           V
1678          .          .           .       SR480
              .          .           .           .
              .          .           .           .
1684          .          .        C480............
              .          .           .
              .          .           .
1687       480C........................
              V
              V
1690      RR480
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              .
1696          .        500
              .          .
              .          .
1706       500C............
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(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
HYDROGRAPH AT	10	951.	12.27	114.	31.	15.	.70		
ROUTED TO	R10	882.	12.40	114.	31.	15.	.70		
ROUTED TO	R12	833.	12.60	114.	31.	15.	.70		
HYDROGRAPH AT	20	959.	12.43	128.	32.	16.	1.12		
2 COMBINED AT	C20	1663.	12.53	240.	63.	30.	1.82		
HYDROGRAPH AT	40	2582.	12.30	252.	66.	32.	2.23		
HYDROGRAPH AT	60	1553.	12.40	228.	61.	29.	1.75		
3 COMBINED AT	60C	5274.	12.37	708.	188.	90.	5.80		
ROUTED TO	SR60	92.	14.40	92.	89.	70.	5.80		
ROUTED TO	R60	92.	14.40	92.	89.	70.	5.80		
ROUTED TO	RR60	92.	14.53	92.	89.	70.	5.80		
HYDROGRAPH AT	80	1868.	12.27	179.	46.	22.	1.48		
2 COMBINED AT	80C	1942.	12.27	266.	134.	92.	1.48		
ROUTED TO	R80	1919.	12.27	266.	134.	92.	1.48		
HYDROGRAPH AT	100	404.	12.20	58.	15.	7.	.48		
2 COMBINED AT	100C	2300.	12.27	321.	148.	99.	1.96		
ROUTED TO	R100	2292.	12.30	321.	148.	99.	1.96		
HYDROGRAPH AT	120	3232.	12.27	326.	88.	42.	2.20		
2 COMBINED AT	120C	5469.	12.27	636.	229.	141.	4.16		
ROUTED TO	R120	5397.	12.30	636.	229.	140.	4.16		
HYDROGRAPH AT	140	632.	12.13	64.	17.	8.	.60		
HYDROGRAPH AT	150	135.	13.20	47.	13.	6.	.41		
ROUTED TO	R150	134.	13.30	47.	13.	6.	.41		
ROUTED TO	R152	133.	13.50	47.	13.	6.	.41		
HYDROGRAPH AT	160	217.	12.40	35.	9.	4.	.37		
HYDROGRAPH AT	180	785.	12.37	90.	23.	11.	1.00		
5 COMBINED AT	180C	6707.	12.30	857.	286.	168.	6.54		
HYDROGRAPH AT	383	642.	12.17	60.	17.	8.	.42		
ROUTED TO	R383	636.	12.17	60.	17.	8.	.42		
HYDROGRAPH AT	393	44.	12.13	4.	1.	0.	.04		
2 COMBINED AT	393C	677.	12.17	64.	18.	9.	.46		
ROUTED TO	R393	674.	12.20	64.	18.	9.	.46		
HYDROGRAPH AT	365	380.	12.27	45.	12.	6.	.41		
2 COMBINED AT	365C	1020.	12.20	108.	29.	14.	.87		
ROUTED TO	R365	1010.	12.23	108.	29.	14.	.87		

+	ROUTED TO 365R	964.	12.33	108.	29.	14.	.87
+	HYDROGRAPH AT 353	401.	12.30	49.	12.	6.	.50
+	2 COMBINED AT 353C	1343.	12.33	155.	41.	20.	1.38
+	ROUTED TO R353	1303.	12.40	155.	41.	20.	1.38
+	ROUTED TO 353R	1286.	12.43	155.	41.	20.	1.38
+	HYDROGRAPH AT 350	1151.	12.20	102.	27.	13.	.94
+	ROUTED TO 350R	962.	12.47	102.	27.	13.	.94
+	HYDROGRAPH AT 310	376.	12.33	49.	12.	6.	.56
+	3 COMBINED AT C310	2523.	12.43	300.	79.	38.	2.87
+	ROUTED TO R310	2502.	12.47	300.	79.	38.	2.87
+	ROUTED TO R312	2453.	12.57	300.	79.	38.	2.87
+	HYDROGRAPH AT 295	364.	12.30	40.	10.	5.	.38
+	2 COMBINED AT 295C	2646.	12.57	339.	88.	43.	3.25
+	ROUTED TO 295R	2614.	12.60	339.	88.	43.	3.25
+	HYDROGRAPH AT 210	873.	12.20	82.	22.	10.	.58
+	ROUTED TO R210	818.	12.27	82.	22.	10.	.58
+	HYDROGRAPH AT 240	1405.	12.30	155.	39.	19.	1.40
+	3 COMBINED AT 240C	3735.	12.50	567.	147.	71.	5.23
	ROUTED TO SR240	1710.	12.93	502.	131.	63.	5.23
+	HYDROGRAPH AT 220	1126.	12.17	98.	25.	12.	.73
+	2 COMBINED AT 220C	1760.	12.90	592.	155.	74.	5.95
+	ROUTED TO SR220	1679.	13.07	581.	152.	73.	5.95
+	HYDROGRAPH AT 190	1403.	12.17	116.	31.	15.	.92
+	ROUTED TO R190	1348.	12.23	116.	31.	15.	.92
+	ROUTED TO R192	1267.	12.30	116.	31.	15.	.92
+	HYDROGRAPH AT 200	703.	12.20	69.	19.	9.	.54
+	3 COMBINED AT 200C	2635.	12.30	753.	198.	96.	7.40
+	ROUTED TO SR200	2495.	12.40	748.	195.	94.	7.40
+	ROUTED TO 200SR	1896.	12.67	628.	165.	79.	7.40
+	2 COMBINED AT C180	6707.	12.30	1479.	451.	247.	13.94
+	ROUTED TO SR180	143.	19.37	142.	142.	114.	13.94
+	ROUTED TO R180	143.	19.43	142.	142.	114.	13.94
+	HYDROGRAPH AT 260	418.	12.10	43.	12.	6.	.27
+	2 COMBINED AT 260C	527.	12.10	179.	153.	121.	.27
	ROUTED TO R260	514.	12.20	178.	153.	121.	.27
+	HYDROGRAPH AT 280	478.	12.10	42.	12.	6.	.30
+	2 COMBINED AT 280C	945.	12.13	218.	163.	126.	.57
+	ROUTED TO R280	909.	12.20	217.	163.	126.	.57

+	HYDROGRAPH AT	300	407.	12.10	34.	9.	5.	.30
+	2 COMBINED AT	C300	1243.	12.17	249.	171.	130.	.87
	DIVERSION TO	DIV30	943.	12.17	68.	17.	8.	.87
+	HYDROGRAPH AT	D300	300.	11.87	180.	154.	122.	.87
+	HYDROGRAPH AT	RTDIV	943.	12.17	68.	17.	8.	.87
+	ROUTED TO	SRDIV	141.	12.60	62.	17.	8.	.87
+	2 COMBINED AT	300C	441.	12.60	242.	171.	130.	.87
+	HYDROGRAPH AT	305	409.	12.27	42.	11.	6.	.38
+	DIVERSION TO	305D	409.	12.27	42.	11.	6.	.38
+	HYDROGRAPH AT	D305	0.	.00	0.	0.	0.	.38
+	HYDROGRAPH AT	RT305	409.	12.27	42.	11.	6.	.38
+	ROUTED TO	SR305	62.	12.93	36.	11.	6.	.38
+	3 COMBINED AT	305C	498.	12.67	276.	181.	135.	1.25
+	ROUTED TO	R305	497.	12.73	275.	181.	135.	1.25
+	ROUTED TO	RR305	494.	12.77	275.	181.	134.	1.25
+	HYDROGRAPH AT	320	1040.	12.17	111.	31.	15.	.87
+	DIVERSION TO	BS320	409.	11.93	21.	6.	3.	.87
+	HYDROGRAPH AT	D320	1040.	12.17	96.	25.	12.	.87
	HYDROGRAPH AT	RT320	409.	11.93	21.	6.	3.	.87
+	ROUTED TO	SR320	4.	4.17	4.	4.	3.	.87
+	3 COMBINED AT	C320	1351.	12.17	373.	210.	149.	2.12
+	HYDROGRAPH AT	340	1471.	12.17	186.	55.	26.	1.45
+	DIVERSION TO	BS340	1471.	12.17	104.	28.	14.	1.45
+	HYDROGRAPH AT	D340	1199.	12.33	97.	27.	13.	1.45
+	HYDROGRAPH AT	RT340	1471.	12.17	104.	28.	14.	1.45
+	ROUTED TO	SR340	19.	9.00	19.	19.	14.	1.45
+	3 COMBINED AT	C340	2305.	12.33	484.	254.	175.	3.56
+	HYDROGRAPH AT	355	235.	12.10	22.	6.	3.	.17
+	ROUTED TO	R355	201.	12.37	22.	6.	3.	.17
+	HYDROGRAPH AT	360	504.	12.23	84.	25.	12.	.67
+	DIVERSION TO	BS360	504.	12.23	53.	14.	7.	.67
+	HYDROGRAPH AT	D360	306.	12.63	38.	11.	5.	.67
+	HYDROGRAPH AT	RT360	504.	12.23	53.	14.	7.	.67
+	ROUTED TO	SR360	10.	9.83	10.	10.	7.	.67
	4 COMBINED AT	360C	2496.	12.33	547.	279.	189.	4.41
+	HYDROGRAPH AT	380	666.	12.27	98.	26.	13.	.97
+	DIVERSION TO	BS380	666.	12.27	56.	14.	7.	.97
+	HYDROGRAPH AT	D380	472.	12.57	46.	12.	6.	.97

+	HYDROGRAPH AT	RT380	666.	12.27	56.	14.	7.	.97
+	ROUTED TO	SR380	10.	11.33	10.	10.	7.	.97
	3 COMBINED AT	380C	2499.	12.33	598.	299.	201.	5.38
+	HYDROGRAPH AT	400	351.	12.23	47.	13.	6.	.62
+	DIVERSION TO	BS400	262.	12.10	10.	3.	1.	.62
+	HYDROGRAPH AT	D400	351.	12.23	39.	10.	5.	.62
+	HYDROGRAPH AT	RT400	262.	12.10	10.	3.	1.	.62
+	ROUTED TO	SR400	2.	8.70	2.	2.	1.	.62
+	2 COMBINED AT	C400	353.	12.23	41.	12.	6.	.62
+	2 COMBINED AT	400C	2813.	12.33	636.	310.	207.	6.00
+	HYDROGRAPH AT	420	562.	12.17	77.	22.	11.	.59
+	DIVERSION TO	BS420	206.	11.93	14.	4.	2.	.59
+	HYDROGRAPH AT	D420	562.	12.17	69.	18.	9.	.59
+	HYDROGRAPH AT	RT420	206.	11.93	14.	4.	2.	.59
+	ROUTED TO	SR420	13.	10.83	12.	4.	2.	.59
+	3 COMBINED AT	420C	3167.	12.33	698.	326.	216.	10.87
+	HYDROGRAPH AT	370	406.	12.07	34.	10.	5.	.26
+	DIVERSION TO	BS370	356.	12.07	21.	5.	3.	.26
	HYDROGRAPH AT	D370	50.	11.70	13.	4.	2.	.26
+	HYDROGRAPH AT	RT370	356.	12.07	21.	5.	3.	.26
+	ROUTED TO	SR370	4.	11.73	4.	4.	3.	.26
+	2 COMBINED AT	370C	54.	11.73	16.	7.	5.	.26
+	HYDROGRAPH AT	395	204.	12.10	21.	6.	3.	.16
+	DIVERSION TO	BS395	179.	12.10	13.	3.	2.	.16
+	HYDROGRAPH AT	D395	25.	11.73	8.	2.	1.	.16
+	HYDROGRAPH AT	RT395	179.	12.10	13.	3.	2.	.16
+	ROUTED TO	SR395	2.	11.77	2.	2.	2.	.16
+	3 COMBINED AT	395C	81.	11.77	25.	11.	7.	.42
+	ROUTED TO	R395	81.	11.93	25.	11.	7.	.42
+	HYDROGRAPH AT	385	389.	12.07	28.	8.	4.	.23
+	DIVERSION TO	SF385	339.	12.07	18.	5.	2.	.23
+	HYDROGRAPH AT	D385	50.	11.73	10.	3.	2.	.23
+	HYDROGRAPH AT	RT385	339.	12.07	18.	5.	2.	.23
+	ROUTED TO	SR385	3.	11.77	3.	3.	2.	.23
	2 COMBINED AT	385C	53.	11.77	13.	6.	4.	.23
+	HYDROGRAPH AT	411	329.	12.07	25.	7.	3.	.20
+	DIVERSION TO	SF411	304.	12.07	19.	5.	2.	.20
+	HYDROGRAPH AT	D411	25.	11.67	6.	2.	1.	.20

+	HYDROGRAPH AT	RT411	304.	12.07	19.	5.	2.	.20
+	ROUTED TO	SR411	3.	11.70	3.	3.	2.	.20
+	3 COMBINED AT	411C	81.	11.77	21.	10.	7.	.44
+	ROUTED TO	R411	81.	11.83	21.	10.	7.	.44
+	HYDROGRAPH AT	390	463.	12.03	33.	10.	5.	.24
+	DIVERSION TO	BS390	95.	11.73	6.	2.	1.	.24
+	HYDROGRAPH AT	D390	463.	12.03	30.	8.	4.	.24
+	HYDROGRAPH AT	RT390	95.	11.73	6.	2.	1.	.24
+	ROUTED TO	SR390	1.	.90	1.	1.	1.	.24
+	4 COMBINED AT	390C	617.	12.03	77.	31.	19.	1.10
+	ROUTED TO	RR390	536.	12.23	77.	31.	19.	1.10
+	HYDROGRAPH AT	410	336.	12.10	32.	9.	4.	.27
+	2 COMBINED AT	410C	787.	12.20	107.	39.	23.	1.37
+	HYDROGRAPH AT	440	180.	12.03	12.	3.	2.	.08
+	ROUTED TO	R70	176.	12.07	12.	3.	2.	.08
+	HYDROGRAPH AT	441	16.	12.03	1.	0.	0.	.01
+	2 COMBINED AT	C108	191.	12.07	14.	4.	2.	.09
+	DIVERSION TO	SPLIT	96.	12.07	7.	2.	1.	.09
+	HYDROGRAPH AT	DIV4	96.	12.07	7.	2.	1.	.09
+	ROUTED TO	R108	88.	12.13	7.	2.	1.	.09
+	HYDROGRAPH AT	442	102.	12.10	9.	2.	1.	.10
+	2 COMBINED AT	C67	187.	12.10	15.	4.	2.	.19
+	DIVERSION TO	BASIN4	115.	12.10	6.	1.	1.	.19
+	HYDROGRAPH AT	DIV6	72.	12.10	10.	3.	1.	.19
+	HYDROGRAPH AT	RTDIV6	115.	12.10	6.	1.	1.	.19
+	ROUTED TO	RFDIV6	1.	11.90	1.	1.	1.	.19
+	2 COMBINED AT	CDIV6	74.	12.10	10.	4.	2.	.19
+	HYDROGRAPH AT	443	148.	12.07	14.	4.	2.	.08
+	DIVERSION TO	WSH66	78.	11.90	12.	3.	2.	.08
+	HYDROGRAPH AT	DIV66	70.	12.07	3.	1.	0.	.08
+	ROUTED TO	R113	69.	12.07	3.	1.	0.	.08
+	2 COMBINED AT	C114	140.	12.07	13.	4.	2.	.27
+	HYDROGRAPH AT	444	82.	12.03	5.	1.	1.	.04
+	ROUTED TO	R58	75.	12.07	5.	1.	1.	.04
+	HYDROGRAPH AT	445	296.	12.03	18.	5.	2.	.19
+	2 COMBINED AT	C107	365.	12.03	22.	6.	3.	.23
+	ROUTED TO	R107	365.	12.07	22.	6.	3.	.23
+	HYDROGRAPH AT	RTB2	96.	12.07	7.	2.	1.	.09

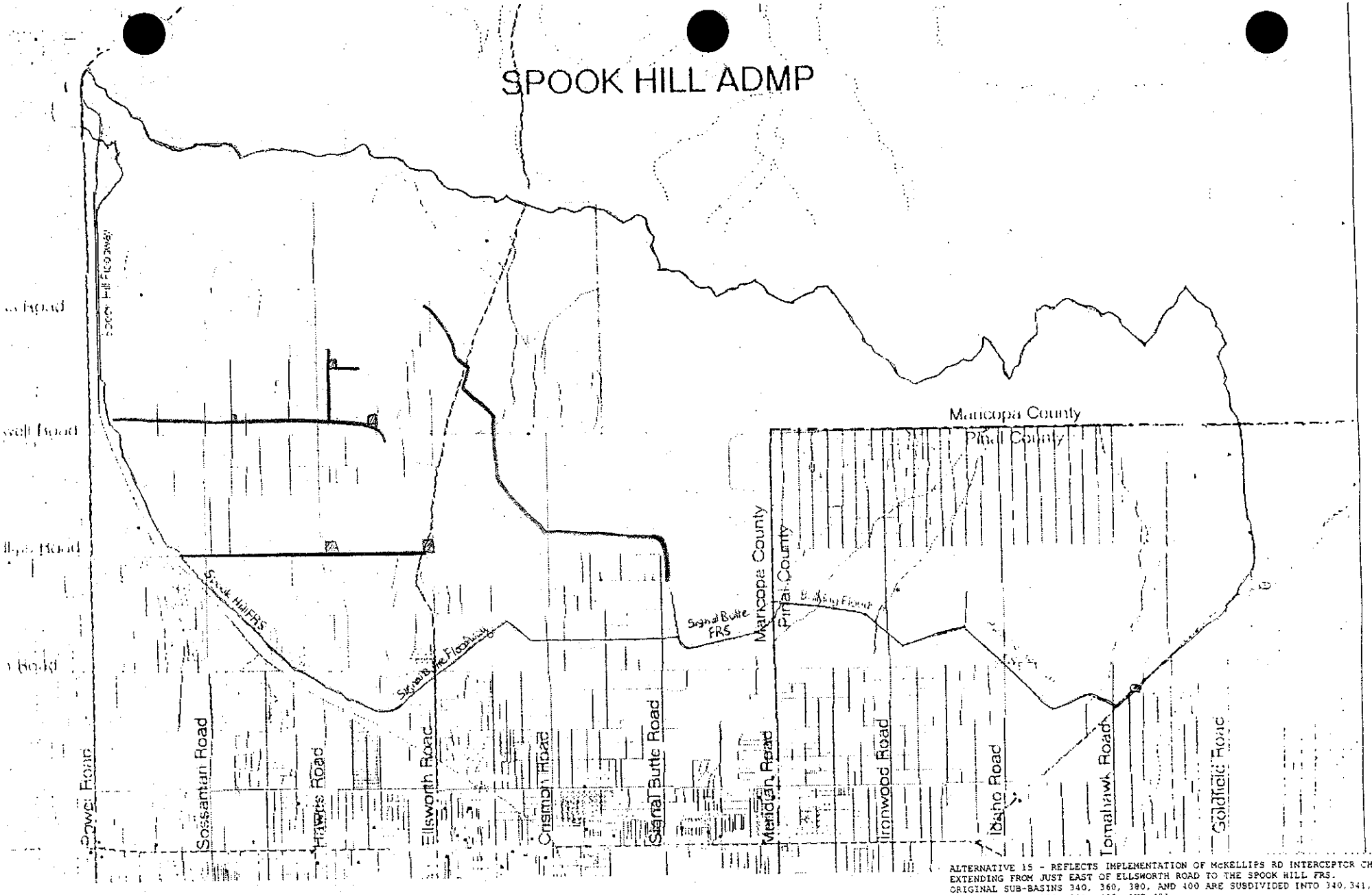
+	ROUTED TO	RSPLIT	95.	12.07	7.	2.	1.	.09
+	HYDROGRAPH AT	446	65.	12.03	6.	2.	1.	.04
+	3 COMBINED AT	C109	520.	12.07	35.	9.	4.	.27
+	DIVERSION TO	WSH404	35.	11.73	8.	2.	1.	.27
+	HYDROGRAPH AT	DIV5	485.	12.07	27.	7.	3.	.27
+	ROUTED TO	R109	469.	12.10	27.	7.	3.	.27
+	HYDROGRAPH AT	447	138.	12.07	12.	4.	2.	.09
+	HYDROGRAPH AT	RT404	35.	11.73	8.	2.	1.	.27
+	ROUTED TO	R404	35.	11.90	8.	2.	1.	.27
+	3 COMBINED AT	C110	635.	12.07	46.	13.	6.	.36
+	ROUTED TO	R110	632.	12.10	46.	13.	6.	.36
+	2 COMBINED AT	C115	764.	12.10	59.	17.	8.	.63
+	ROUTED TO	R115	767.	12.10	59.	17.	8.	.63
+	HYDROGRAPH AT	448	88.	12.03	6.	2.	1.	.05
+	HYDROGRAPH AT	449	80.	12.03	5.	1.	1.	.05
+	2 COMBINED AT	C6364	166.	12.03	11.	3.	1.	.09
+	ROUTED TO	R6364	137.	12.17	11.	3.	1.	.09
+	HYDROGRAPH AT	450	61.	12.20	6.	2.	1.	.07
+	HYDROGRAPH AT	451	18.	12.17	2.	1.	0.	.03
+	HYDROGRAPH AT	RT66	78.	11.90	12.	3.	2.	.08
+	HYDROGRAPH AT	452	62.	12.03	4.	1.	1.	.04
+	2 COMBINED AT	C6465	140.	12.03	16.	4.	2.	.04
+	ROUTED TO	R6566	135.	12.10	16.	4.	2.	.04
+	4 COMBINED AT	C116	341.	12.17	35.	9.	4.	.23
+	ROUTED TO	BASIN5	152.	12.47	35.	9.	4.	.23
+	ROUTED TO	R116	150.	12.53	35.	9.	4.	.23
+	HYDROGRAPH AT	453	62.	12.10	7.	2.	1.	.06
+	2 COMBINED AT	C117	169.	12.50	41.	11.	5.	.29
+	2 COMBINED AT	C118	852.	12.10	99.	28.	14.	.92
+	ROUTED TO	R118	842.	12.10	99.	28.	14.	.92
+	DIVERSION TO	BASIN6	243.	12.10	10.	2.	1.	.92
+	HYDROGRAPH AT	DIV7	599.	12.10	89.	25.	13.	.92
+	HYDROGRAPH AT	RTDIV7	243.	12.10	10.	2.	1.	.92
+	ROUTED TO	RFDIV7	1.	11.97	1.	1.	1.	.92
+	2 COMBINED AT	CDIV7	600.	12.10	90.	26.	13.	.92
+	HYDROGRAPH AT	454	157.	12.17	21.	6.	3.	.18
+	2 COMBINED AT	C119	748.	12.13	110.	32.	16.	1.10
+	ROUTED TO	R454	731.	12.20	110.	32.	16.	1.10

HYDROGRAPH AT	415	294.	12.13	31.	9.	4.	.28
3 COMBINED AT	415C	1761.	12.20	244.	77.	43.	2.75
DIVERSION TO	BS415	661.	12.20	28.	7.	3.	2.75
HYDROGRAPH AT	D415	1100.	12.03	215.	70.	39.	2.75
HYDROGRAPH AT	RT415	661.	12.20	28.	7.	3.	2.75
ROUTED TO	SR415	5.	12.03	5.	5.	3.	2.75
2 COMBINED AT	C415	1105.	12.03	220.	74.	43.	2.75
ROUTED TO	R415	1109.	12.13	220.	74.	43.	2.75
HYDROGRAPH AT	455	1346.	12.13	142.	43.	21.	1.11
DIVERSION TO	BS455	1346.	12.13	137.	37.	18.	1.11
HYDROGRAPH AT	D455	55.	12.77	16.	6.	3.	1.11
HYDROGRAPH AT	RT455	1346.	12.13	137.	37.	18.	1.11
ROUTED TO	SR455	25.	10.47	25.	25.	18.	1.11
2 COMBINED AT	C455	80.	12.77	41.	31.	21.	1.11
3 COMBINED AT	455C	4160.	12.37	927.	423.	274.	14.73
ROUTED TO	SR440	753.	13.63	738.	423.	274.	14.73
ROUTED TO	RR455	753.	13.97	738.	423.	271.	14.73
HYDROGRAPH AT	456	468.	12.07	35.	10.	5.	.26
DIVERSION TO	BASIN1	184.	12.07	8.	2.	1.	.26
HYDROGRAPH AT	DIV1	284.	12.07	27.	8.	4.	.26
DIVERSION TO	WA30	58.	12.07	10.	3.	2.	.26
HYDROGRAPH AT	DIV2	226.	12.07	18.	4.	2.	.26
ROUTED TO	R456	213.	12.13	18.	4.	2.	.26
HYDROGRAPH AT	457	264.	12.07	20.	5.	3.	.19
2 COMBINED AT	C101	462.	12.10	38.	10.	5.	.45
DIVERSION TO	BASIN2	165.	12.10	7.	2.	1.	.45
HYDROGRAPH AT	DIV3	297.	12.10	30.	8.	4.	.45
HYDROGRAPH AT	RTDIV3	165.	12.10	7.	2.	1.	.45
ROUTED TO	RFDIV3	2.	11.90	2.	2.	1.	.45
2 COMBINED AT	CDIV3	299.	12.10	32.	9.	5.	.45
ROUTED TO	R101	297.	12.10	32.	9.	5.	.45
HYDROGRAPH AT	458	356.	12.03	25.	7.	3.	.19
2 COMBINED AT	C103	635.	12.07	56.	16.	8.	.64
ROUTED TO	R103	630.	12.07	56.	16.	8.	.64
HYDROGRAPH AT	RT30	58.	12.07	10.	3.	2.	.26
ROUTED TO	R30	57.	12.10	10.	3.	2.	.26
HYDROGRAPH AT	RTB1	184.	12.07	8.	2.	1.	.26
ROUTED TO	B1	37.	12.23	8.	2.	1.	.26

+	ROUTED TO	RB1	37.	12.30	8.	2.	1.	.26
+	2 COMBINED AT	CDIV	86.	12.20	17.	5.	3.	.12
	HYDROGRAPH AT	459	44.	12.03	3.	1.	0.	.03
+	2 COMBINED AT	C52	113.	12.10	20.	6.	3.	.15
+	ROUTED TO	R52	112.	12.17	20.	6.	3.	.15
+	HYDROGRAPH AT	460	214.	12.07	19.	6.	3.	.14
+	2 COMBINED AT	C102	313.	12.07	39.	12.	6.	.29
+	ROUTED TO	BASIN3	71.	12.63	39.	12.	6.	.29
+	ROUTED TO	R3	71.	12.77	39.	12.	6.	.29
+	HYDROGRAPH AT	461	161.	12.10	17.	5.	2.	.12
+	2 COMBINED AT	C104	213.	12.10	55.	17.	8.	.41
+	2 COMBINED AT	C106	835.	12.07	110.	32.	16.	1.05
+	ROUTED TO	R106	797.	12.13	110.	32.	16.	1.05
+	HYDROGRAPH AT	462	538.	12.07	40.	11.	5.	.30
+	2 COMBINED AT	C56	1254.	12.10	149.	42.	21.	1.35
+	HYDROGRAPH AT	480	1050.	12.10	96.	29.	14.	.73
+	DIVERSION TO	BS480	455.	11.90	27.	8.	4.	.73
+	HYDROGRAPH AT	D480	1050.	12.10	78.	21.	10.	.73
	HYDROGRAPH AT	RT480	455.	11.90	27.	8.	4.	.73
+	ROUTED TO	SR480	6.	3.90	6.	6.	4.	.73
+	2 COMBINED AT	C480	1056.	12.10	84.	27.	14.	.73
+	3 COMBINED AT	480C	2508.	12.10	923.	502.	314.	2.09
+	ROUTED TO	RR480	2345.	12.13	921.	502.	314.	2.09
+	HYDROGRAPH AT	500	1073.	12.27	122.	33.	16.	.93
+	2 COMBINED AT	500C	3234.	12.17	1032.	530.	328.	3.02

*** NORMAL END OF HEC-1 ***

SPOOK HILL ADMP



ALTERNATIVE 15 - REFLECTS IMPLEMENTATION OF McKELLIPS RD INTERCEPTOR CHANNEL EXTENDING FROM JUST EAST OF ELLSWORTH ROAD TO THE SPOOK HILL FRS. ORIGINAL SUB-BASINS 340, 360, 380, AND 400 ARE SUBDIVIDED INTO 340,341, 342, 360, 361, 380, 381, 400, AND 401. CONCEPTUAL DETENTION BASINS ARE ALSO INCLUDED AT THE INTERSECTIONS OF McKELLIPS/HAWES AND McKELLIPS/ELLSWORTH.

UPDATE TO PASS MOUNTAIN DIVERSION ALTERNATIVE. ADDITIONAL DIVERSIONS PLACED UPSTREAM OF ORIGINAL LEVEE EXTENSION AT PASS MOUNTAIN DIVERSION CREATING NEW DRAINAGE BASIN BOUNDARIES: 383 FROM 385; 393 FROM 395; 365 FROM 370; AND 353 FROM 355. 383, 393, 365, AND 353 WILL NOW BE ROUTED TO THE PASS MOUNTAIN DIVERSION AND ULTIMATELY INTO SIGNAL BUTTE FRS. SUB-BASINS: 385, 395, 370, AND 355 WILL REMAIN WITH REDUCED AREAS AND CONTINUE TO BE ROUTED ON THEIR ORIGINAL WATERCOURSES.

UPDATE BASED ON IMPROVED NATURAL CHANNELS ALONG MCDOWELL BETWEEN POWER & ELLSWORTH, ALONG OAK ST. BETWEEN HAWES & THUNDER MTN. , ALONG HAWES NORTH OF OAK ST. TO MCDOWELL RD. THIS WILL GENERATE NEW SUB-BASINS 410, AND 411 FROM SUB-BASINS 415 AND 420. DETENTION BASINS WILL BE ADDED OFF-LINE TO SUB-BASINS 370 & 395, 385 & 411, AND 455.

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1*************************************
*                                   *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*            JUN  1998              *
*          VERSION 4.1              *
*                                   *
*  RUN DATE   13JUN00  TIME  13:21:22  *
*                                   *
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*                                   *
*    U.S. ARMY CORPS OF ENGINEERS   *
*    HYDROLOGIC ENGINEERING CENTER  *
*          609 SECOND STREET        *
*       DAVIS, CALIFORNIA 95616     *
*           (916) 756-1104          *
*                                   *
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X     X  XXXXXXX   XXXXX          X
X     X  X        X     X        XX
X     X  X        X               X
XXXXXXX  XXXX     X        XXXXX  X
X     X  X        X               X
X     X  X        X     X         X
X     X  XXXXXXX   XXXXX         XXX
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THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

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1                                        HEC-1 INPUT                                                    PAGE  1

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  1           ID   EXISTING LAND USE CALCULATIONS WERE BASED ON 1 YR. FROM 11/5/99
  2           ID   FOR LAS SENDAS       AND LANDISCOR JAN.1999 AERIAL PHOTOGPRAPHS
  3           ID
  4           ID   ALL DAMS WERE ANALYZED WITH NO STORAGE BELOW PRINCIPLE SPILLWAY ELEVATIONS
  5           ID
  6           ID   A CONSERVATIVE ESTIMATE WAS USED FOR THE LOCATION OF THE CENTROID FOR
  7           ID   PRECIPITATION VALUES
  8           ID
  9           ID   ALL CHANNEL ROUTING INFORMATION WAS OBTAINED FROM MCFCD SPOOK HILL   SIGNAL
 10           ID   BUTTE        AND BULLDOG FLOODWAY PLANS
 11           ID
 12           ID   MODEL UPDATE BASED ON COMBINATION OF THREE PREVIOUS MODEL RUNS:
 13           ID   S24CE15.DAT, S24CE18.DAT.  OVERVIEW OF EACH WILL FOLLOW RESPECTIVELY.
 14           ID
 15           ID  ***********************************************************************
 16           ID   ALTERNATIVE 15 - REFLECTS IMPLEMENTATION OF McKELLIPS RD INTERCEPTOR CHANNEL
 17           ID   EXTENDING FROM JUST EAST OF ELLSWORTH ROAD TO THE SPOOK HILL FRS.
 18           ID   ORIGINAL SUB-BASINS 340, 360, 380, AND 400 ARE SUBDIVIDED INTO 340,341,
 19           ID   342, 360, 361, 380, 381, 400, AND 401.
 20           ID   CONCEPTUAL DETENTION BASINS ARE ALSO INCLUDED AT THE INTERSECTIONS OF
 21           ID   McKELLIPS/HAWES AND McKELLIPS/ELLSWORTH.
 22           ID   MODEL IS CREATED FROM THE BASE EXISTING MODEL S24CE10.DAT
 23           ID   GENERATED BY SC ON 05/24/00          FILE: S24CE15.DAT
 24           ID  ***********************************************************************
 25           ID   UPDATE TO PASS MOUNTAIN DIVERSION ALTERNATIVE.  ADDITIONAL DIVERSIONS
 26           ID   PLACED UPSTREAM OF ORIGINAL LEVEE EXTENSION AT PASS MOUNTAIN DIVERSION
 27           ID   CREATING NEW DRAINAGE BASIN BOUNDARIES: 383 FROM 385; 393 FROM 395;
 28           ID   365 FROM 370; AND 353 FROM 355.  383, 393, 365, AND 353 WILL NOW BE ROUTED
 29           ID   TO THE PASS MOUNTAIN DIVERSION AND ULTIMATELY INTO SIGNAL BUTTE FRS.
 30           ID   SUB-BASINS: 385, 395, 370, AND 355 WILL REMAIN WITH REDUCED AREAS AND
 31           ID   CONTINUE TO BE ROUTED ON THEIR ORIGINAL WATERCOURSES.
 32           ID
 33           ID   UPDATE BASED ON IMPROVED NATURAL CHANNELS ALONG MCDOWELL BETWEEN
 34           ID   POWER & ELLSWORTH, ALONG OAK ST. BETWEEN HAWES & THUNDER MTN. , ALONG
 35           ID   HAWES NORTH OF OAK ST. TO MCDOWELL RD.  THIS WILL GENERATE NEW SUB-BASINS
 36           ID   410, AND 411 FROM SUB-BASINS 415 AND 420.  DETENTION BASINS WILL BE
 37           ID   ADDED OFF-LINE TO SUB-BASINS 370 & 395, 385 & 411, AND 455.
 38           ID  ***********************************************************************
 39           ID   ANALYSIS FOR CURRENT ALTERNATIVE PERFORMED BY: WOOD/PATEL,  MW,  06/07/2000
 40           ID   FILE:   S24CE19.DAT
 41           ID
 42           ID
 43           ID   DDM MCUHP1 SPOOK HILL AMDP - EXISTING CONDITIONS MODEL - 100YR, 24HR STORM
              *DIAGRAM
 44           IT       2                    1500
 45           IO       3
 46           IN      15
 47           JD    3.81    0.01
 48           PC    .000    .002    .005    .008    .011    .014    .017    .020    .023    .026
 49           PC    .029    .032    .035    .038    .041    .044    .048    .052    .056    .060
 50           PC    .064    .068    .072    .076    .080    .085    .090    .095    .100    .105
 51           PC    .110    .115    .120    .126    .133    .140    .147    .155    .163    .172
 52           PC    .181    .191    .203    .218    .236    .257    .283    .387    .663    .707
 53           PC    .735    .758    .776    .791    .804    .815    .825    .834    .842    .849
 54           PC    .856    .863    .869    .875    .881    .887    .893    .898    .903    .908
1                                        HEC-1 INPUT                                                    PAGE  2

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 55           PC    .913    .918    .922    .926    .930    .934    .938    .942    .946    .950
 56           PC    .953    .956    .959    .962    .965    .968    .971    .974    .977    .980
 57           PC    .983    .986    .989    .992    .995    .998   1.000
 58           JD    3.58   10.00
 59           JD    3.43   30.00
 60           JD    3.28   60.00
 61           JD    3.22   90.00
 62           JD    3.18  120.00
 63           JD    3.14  150.00
 64           JD    3.05  300.00
 65           JD    2.97  500.00
              * DDM   ***** Updated *****

 66           KK      10
 67           KM   SUB-BASIN 10
 68           KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
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 69          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
 70          KM     L = 2.00  Kb = .044  Adj. Slope =  165.0
 71          BA    .702
 72          LG    .350    .320   7.600    .090  15.000
 73          UC    .421    .302
 74          UA       0       3       5       8      12      20      43      75      90      96
 75          UA     100
             * DDM   ***** Preserved *****

 76          KK     R10
 77          KM   ROUTING OF FLOW FROM SUB-BASIN 10 TO R12
 78          RS       4    FLOW      -1
 79          RC    .045     .03    .045    8700    .021
 80          RX       0       1       2      17      27      42      43      44
 81          RY       5       5       5       0       0       5       5       5
             * DDM   ***** Preserved *****

 82          KK     R12
 83          KM   ROUTING OF FLOW FROM R12 TO SUB-BASIN 20
 84          RS       6    FLOW      -1
 85          RC    .045     .03    .045    4500     .01
 86          RX       0       1      30    37.5    57.5      65      94      95
 87          RY       3     2.5     2.5       0       0     2.5     2.5       3
             * DDM   ***** Updated *****

 88          KK      20
 89          KM   SUB-BASIN 20
 90          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 91          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
 92          KM     L = 2.50  Kb = .041  Adj. Slope =   88.0
 93          BA   1.120
 94          LG    .350    .390   5.800    .190   1.000
 95          UC    .658    .454
 96          UA       0       3       5       8      12      20      43      75      90      96
 97          UA     100
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE  3

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


 98          KK     C20
 99          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 10 AND 20
100          HC       2
             * DDM   ***** Updated *****

101          KK      40
102          KM   SUB-BASIN 40
103          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
104          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
105          KM     L = 3.08  Kb = .036  Adj. Slope =  189.0
106          BA   2.233
107          LG    .340    .340   4.900    .280   5.000
108          UC    .496    .264
109          UA       0       3       5       8      12      20      43      75      90      96
110          UA     100
             * DDM   ***** Updated *****

111          KK      60
112          KM   SUB-BASIN 60
113          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
114          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .990
115          KM     L = 4.19  Kb = .038  Adj. Slope =  209.6
116          BA   1.746
117          LG    .330    .350   5.800    .190   9.000
118          UC    .596    .477
119          UA       0       3       5       8      12      20      43      75      90      96
120          UA     100
             * DDM   ***** Preserved *****

121          KK     60C
122          KM   HYDROGRAPH COMBINATION FOR APACHE JUNCTION FRS
             *      1       2
123          HC       3
             * DDM   ***** Preserved *****

124          KK    SR60
125          KM   APACHE JUNCTION FRS AS-BUILT PLANS 12/19/88
126          KM   OUTLET PIPE=30"RCP; L=136.6'; INLET INV.=1783.5; OUTLET INV.=1783
127          KM   EMERGENCY SPILLWAY ELEV.=1799.77'; PRINCIPLE SPILLWAY ELEV.=1793.5'
128          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 100 ACRE-FEET
129          RS       1    STOR       0
130          SV       0       1     100     200     300     400
131          SQ       0      71      81      87    91.5      94
132          SE    83.5    93.5      96    97.7      99   99.77
             * DDM   ***** Preserved *****

133          KK     R60
134          KM        ROUTE FLOW THROUGH BULLDOG FLOODWAY FROM APACHE JUNCTION FRS
135          RS       1    FLOW      -1
136          RC    .016    .016    .016    2850    .012
137          RX       0       1       2     2.1     5.6     5.7       6       7
138          RY     3.5     3.5     3.5       0       0     3.5     3.5     3.5
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE  4

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


139          KK    RR60
140          KM   ROUTE FLOW FROM BULLDOG FLOODWAY TO SUB-BASIN 80
141          RS       4    FLOW      -1
142          RC    .016    .016    .016    3500    .005
143          RX       0       1       2     2.1     7.1     7.2       8       9
144          RY     3.5     3.5     3.5       0       0     3.5     3.5     3.5
             * DDM   ***** Updated *****

145          KK      80
146          KM   SUB-BASIN 80
147          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
148          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .991
149          KM     L = 2.69  Kb = .039  Adj. Slope =  229.8
150          BA   1.475
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151          LG    .330    .330   5.600    .210   4.000
152          UC    .433    .259
153          UA       0       3       5       8      12      20      43      75      90      96
154          UA     100
             * DDM   ***** Preserved *****

155          KK     80C
156          KM   HYDROGRAPH COMBINATION FOR FLOW FROM APACHE JUNCTION FRS & SUB-BASIN 80
157          HC       2   1.475
             * DDM   ***** Preserved *****

158          KK     R80
159          KM   ROUTE FLOW FROM SUB-BASIN 80 TO SUB-BASIN 100
160          RS       1    FLOW      -1
161          RC    .025    .016    .025    1200    .003
162          RX       0       2       6     6.1    41.1    41.2    56.2    58.2
163          RY     5.5     4.5     4.5       0       0     4.5     4.5     5.5
             * DDM   ***** Updated *****

164          KK     100
165          KM   SUB-BASIN 100
166          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
167          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
168          KM     L = 1.94  Kb = .046  Adj. Slope =  108.0
169          BA    .484
170          LG    .320    .290   5.100    .260   3.000
171          UC    .533    .473
172          UA       0       5      16      30      65      77      84      90      94      97
173          UA     100
             * DDM   ***** Preserved *****

174          KK    100C
175          KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 80 & 100
176          HC       2
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

177          KK    R100
178          KM   ROUTE FLOW FROM SUB-BASIN 100 TO SUB-BASIN 120
179          RS       1    FLOW      -1
180          RC    .016    .016    .016     940    .005
181          RX       0       1       2     2.1    52.1    52.2      53      54
182          RY     4.5     4.5     4.5       0       0     4.5     4.5     4.5
             * DDM   ***** Updated *****

183          KK     120
184          KM   SUB-BASIN 120
185          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
186          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
187          KM     L = 3.07  Kb = .037  Adj. Slope =  239.0
188          BA   2.202
189          LG    .330    .280   6.800    .130  11.000
190          UC    .429    .226
191          UA       0       3       5       8      12      20      43      75      90      96
192          UA     100
             * DDM   ***** Preserved *****

193          KK    120C
194          KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 100 & 120
195          HC       2
             * DDM   ***** Preserved *****

196          KK    R120
197          KM   ROUTE FLOW FROM SUB-BASIN 120 TO SIGNAL BUTTE FRS
198          RS       1    FLOW      -1
199          RC    .025    .016    .025    2100    .005
200          RX       0       6      10    10.1    60.1    60.2    74.2    80.2
201          RY       8       5       5       0       0       5       5       8
             * DDM   ***** Updated *****

202          KK     140
203          KM   SUB-BASIN 140
204          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
205          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
206          KM     L = 1.61  Kb = .044  Adj. Slope =  149.0
207          BA    .598
208          LG    .310    .280   4.200    .440   5.000
209          UC    .421    .278
210          UA       0       5      16      30      65      77      84      90      94      97
211          UA     100
             * DDM   ***** Updated *****

212          KK     150
213          KM   SUB-BASIN 150
214          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
215          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
216          KM     L = 1.50  Kb = .047  Adj. Slope =  315.0
217          BA    .408
218          LG    .350    .360   5.100    .260   7.000
219          UC   1.579   1.417
220          UA       0       3       5       8      12      20      43      75      90      96
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

221          UA     100
             * DDM   ***** Preserved *****

222          KK    R150
223          KM   ROUTING OF FLOW FROM SUB-BASIN 150 TO R152
224          RS       3    FLOW      -1
225          RC    .045     .04    .045    3100    .032
226          RX       0       1       2      23      33      54      55      56
227          RY       7       7       7       0       0       7       7       7
             * DDM   ***** Preserved *****

228          KK    R152
229          KM   ROUTING OF FLOW FROM R152 TO SUB-BASIN 160
230          RS       6    FLOW      -1
231          RC    .045     .03    .045    5900    .019
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232          RX       0       1       2       8      33      39      40      41
233          RY       2       2       2       0       0       2       2       2
             * DDM   ***** Updated *****

234          KK     160
235          KM   SUB-BASIN 160
236          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
237          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
238          KM     L = 2.10  Kb = .047  Adj. Slope =  129.0
239          BA    .369
240          LG    .340    .330   4.150    .440   1.000
241          UC    .587    .655
242          UA       0       3       5       8      12      20      43      75      90      96
243          UA     100
             * DDM   ***** Updated *****

244          KK     180
245          KM   SUB-BASIN 180
246          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
247          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
248          KM     L = 2.42  Kb = .041  Adj. Slope =  140.0
249          BA   1.000
250          LG    .350    .350   4.150    .430    .000
251          UC    .571    .403
252          UA       0       3       5       8      12      20      43      75      90      96
253          UA     100
             * DDM   ***** Preserved *****

254          KK    180C
255          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
             *      1       2
256          HC       5
             * DDM   ***** Updated *****

257          KK     383
258          KM   SUB-BASIN 383
259          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
260          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
261          KM     L = 1.50  Kb = .047  Adj. Slope =  315.0
262          BA    .419
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

263          LG    .350    .400   6.000    .170  16.000
264          UC    .292    .214
265          UA       0       3       5       8      12      20      43      75      90      96
266          UA     100
             * DDM   ***** Preserved *****

267          KK    R383
268          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
269          KM   ROUTING OF FLOW FROM SUB-BASIN 383 TO SUB-BASIN 393
270          KM   OVERBANK MANNINGS INCREASED TO ACCOUNT FOR SKEWED FLOW TO NATURAL
271          KM   WATERCOURSE FLOW PATH
272          RS       2    FLOW      -1
273          RC     .07     .03     .07    1115    .045
274          RX       0       1       3       9      39      45      46      47
275          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

276          KK     393
277          KM   SUB-BASIN 393
278          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
279          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
280          KM     L =  .61  Kb = .061  Adj. Slope =  246.2
281          BA    .040
282          LG    .350    .350   4.200    .420    .000
283          UC    .233    .310
284          UA       0       3       5       8      12      20      43      75      90      96
285          UA     100
             * DDM   ***** Preserved *****

286          KK    393C
287          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 383 & 393
288          HC       2
             * DDM   ***** Preserved *****

289          KK    R393
290          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
291          KM   ROUTING OF FLOW FROM SUB-BASIN 393 TO SUB-BASIN 365
292          RS       1    FLOW      -1
293          RC    .055     .03    .055    1115    .045
294          RX       0       1       3       9      39      45      46      47
295          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

296          KK     365
297          KM   SUB-BASIN 365
298          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
299          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
300          KM     L = 2.20  Kb = .047  Adj. Slope =  299.5
301          BA    .415
302          LG    .350    .350   4.600    .330   4.000
303          UC    .400    .415
304          UA       0       3       5       8      12      20      43      75      90      96
305          UA     100
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

306          KK    365C
307          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 393 & 365
308          HC       2
             * DDM   ***** Preserved *****

309          KK    R365
310          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
311          KM   ROUTING OF FLOW FROM SUB-BASIN 365 TO ROUTING 365R
312          RS       2    FLOW      -1
313          RC    .045     .03    .045    1000    .025
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314          RX       0       1      50      56      76      82     131     132
315          RY     2.5       2       2       0       0       2       2     2.5
             * DDM   ***** Preserved *****

316          KK    365R
317          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
318          KM   ROUTING OF FLOW FROM 365R TO SUB-BASIN 353
319          KM   OVERBANK MANNINGS INCREASED TO ACCOUNT FOR SKEWED FLOW TO NATURAL
320          KM   WATERCOURSE FLOW PATH
321          RS       3    FLOW      -1
322          RC     .07     .03     .07    1300    .008
323          RX       0       3       5      11      41      47     147     247
324          RY       3     2.5       2       0       0       2     2.5       3
             * DDM   ***** Updated *****

325          KK     353
326          KM   SUB-BASIN 353
327          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
328          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
329          KM     L = 2.50  Kb = .046  Adj. Slope =  297.9
330          BA    .502
331          LG    .350    .350   4.350    .380   1.000
332          UC    .442    .460
333          UA       0       3       5       8      12      20      43      75      90      96
334          UA     100
             * DDM   ***** Preserved *****

335          KK    353C
336          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 365 & 353
337          HC       2
             * DDM   ***** Preserved *****

338          KK    R353
339          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
340          KM   ROUTING OF FLOW FROM SUB-BASIN 353 TO ROUTING 353R
341          KM   OVERBANK MANNINGS INCREASED TO ACCOUNT FOR SKEWED FLOW TO NATURAL
342          KM   WATERCOURSE FLOW PATH
343          RS       2    FLOW      -1
344          RC     .07     .03     .07    1100    .009
345          RX       0       3       5      11      41      47     172     302
346          RY     3.5     2.5       2       0       0       2     2.5     3.5
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

347          KK    353R
348          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
349          KM   ROUTING OF FLOW FROM 353R TO SUB-BASIN 310
350          RS       1    FLOW      -1
351          RC    .045     .03    .045    1692     .03
352          RX       0       1      25      31      51      57      81      82
353          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

354          KK     350
355          KM   SUB-BASIN 350
356          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
357          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
358          KM     L = 2.22  Kb = .042  Adj. Slope =  311.0
359          BA    .935
360          LG    .350    .350   4.600    .330   5.000
361          UC    .367    .239
362          UA       0       3       5       8      12      20      43      75      90      96
363          UA     100
             * DDM   ***** Preserved *****

364          KK    350R
365          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
366          KM   ROUTING OF MAIN FLOW FROM DIVERSION OF SUB-BASIN 350 TO SUB-BASIN 310
367          RS       6    FLOW      -1
368          RC    .045    .035    .045    7650    .025
369          RX       0       1      50      56      86      92     141     142
370          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

371          KK     310
372          KM   SUB-BASIN 310
373          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
374          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
375          KM     L = 2.70  Kb = .045  Adj. Slope =  283.5
376          BA    .555
377          LG    .350    .350   3.910    .480    .000
378          UC    .483    .511
379          UA       0       3       5       8      12      20      43      75      90      96
380          UA     100
             * DDM   ***** Preserved *****

381          KK    C310
382          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 350 & 310
383          HC       3
             * DDM   ***** Preserved *****

384          KK    R310
385          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
386          KM   ROUTING OF FLOW FROM SUB-BASIN 310 TO R312
387          RS       2    FLOW      -1
388          RC    .045     .03    .045    1500    .021
389          RX       0       1     100     106     126     132     231     232
390          RY     3.5       2       2       0       0       2       2     3.5
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

391          KK    R312
392          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
393          KM   ROUTING OF FLOW FROM R312 TO SUB-BASIN 295
394          KM   OVERBANK MANNINGS INCREASED TO ACCOUNT FOR SKEWED FLOW TO NATURAL
395          KM   WATERCOURSE FLOW PATH
396          RS       4    FLOW      -1
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397          RC     .07     .03     .07    2100   .0124
398          RX       0       3       5      11      61      67     200     395
399          RY       4     2.5       2       0       0       2     2.5       4
             * DDM   ***** Updated *****

400          KK     295
401          KM   SUB-BASIN 295
402          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
403          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
404          KM     L = 1.60  Kb = .047  Adj. Slope =  131.0
405          BA    .380
406          LG    .350    .350   4.900    .280    .000
407          UC    .450    .386
408          UA       0       3       5       8      12      20      43      75      90      96
409          UA     100
             * DDM   ***** Preserved *****

410          KK    295C
411          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 310 & 295
412          HC       2
             * DDM   ***** Preserved *****

413          KK    295R
414          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
415          KM   ROUTING OF FLOW FROM SUB-BASIN 295 TO BEGINNING OF PASS MTN. DIVERSION.
416          KM   OVERBANK MANNINGS INCREASED TO ACCOUNT FOR SKEWED FLOW TO NATURAL
417          KM   WATERCOURSE FLOW PATH
418          RS       2    FLOW      -1
419          RC     .07     .03     .07    1100    .013
420          RX       0       3       5      11      51      57     200     400
421          RY       4     2.5       2       0       0       2     2.5       4
             * DDM   ***** Updated *****

422          KK     210
423          KM   SUB-BASIN 210
424          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
425          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
426          KM     L = 1.84  Kb = .045  Adj. Slope =  315.0
427          BA    .583
428          LG    .350    .350   7.000    .120   7.000
429          UC    .321    .232
430          UA       0       3       5       8      12      20      43      75      90      96
431          UA     100
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

432          KK    R210
433          KM   ROUTING OF FLOW FROM SUB-BASIN 210 TO SUB-BASIN 220
434          RS       2    FLOW      -1
435          RC    .045     .03    .045    5100    .022
436          RX       0       1       2      14      34      46      47      48
437          RY       4       4       4       0       0       4       4       4
             * DDM   ***** Updated *****

438          KK     240
439          KM   SUB-BASIN 240
440          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
441          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .992
442          KM     L = 3.50  Kb = .039  Adj. Slope =  298.6
443          BA   1.398
444          LG    .350    .370   5.200    .240   2.000
445          UC    .471    .361
446          UA       0       3       5       8      12      20      43      75      90      96
447          UA     100
             * DDM   ***** Preserved *****

448          KK    240C
449          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
450          HC       3
             * DDM   ***** Preserved *****

451          KK   SR240
452          KM   DIGITAL MAPPING SHOWS SEDIMENTATION.  FOR SIMPLICITY NO ADDITIONAL
453          KM   SEDIMENTATION WILL BE CONSIDERED FOR STORAGE ROUTING ANALYSIS. 5/11/00
454          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
455          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
456          RS       1    STOR       0
457          SA    1.38    14.2    36.5
458          SE       0       5      11
459          SS       5      42       3     1.5
             * DDM   ***** Updated *****

460          KK     220
461          KM   SUB-BASIN 220
462          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
463          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
464          KM     L = 1.92  Kb = .043  Adj. Slope =  315.0
465          BA    .725
466          LG    .350    .350   7.000    .120   4.000
467          UC    .317    .209
468          UA       0       3       5       8      12      20      43      75      90      96
469          UA     100
             * DDM   ***** Preserved *****

470          KK    220C
471          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
472          HC       2
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

473          KK   SR220
474          KM   DIGITAL MAPPING SHOWS SEDIMENTATION.  FOR SIMPLICITY NO ADDITIONAL
475          KM   SEDIMENTATION WILL BE CONSIDERED FOR STORAGE ROUTING ANALYSIS. 5/11/00
476          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
477          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
478          RS       1    STOR       0
479          SA     .78     4.1    13.7
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480          SE       0       3      10
481          SS       3      65       3     1.5
             * DDM   ***** Updated *****

482          KK     190
483          KM   SUB-BASIN 190
484          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
485          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
486          KM     L = 1.91  Kb = .042  Adj. Slope =  315.0
487          BA    .918
488          LG    .350    .390   5.800    .190   8.000
489          UC    .321    .185
490          UA       0       3       5       8      12      20      43      75      90      96
491          UA     100
             * DDM   ***** Preserved *****

492          KK    R190
493          KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
494          RS       2    FLOW      -1
495          RC    .045     .03    .045    4740     .03
496          RX       0       1       2      17      37      52      53      54
497          RY       5       5       5       0       0       5       5       5
             * DDM   ***** Preserved *****

498          KK    R192
499          KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
500          RS       2    FLOW      -1
501          RC    .045    .035    .045    2200    .018
502          RX       0       1      50      59      79      88     137     138
503          RY     3.5       3       3       0       0       3       3     3.5
             * DDM   ***** Updated *****

504          KK     200
505          KM   SUB-BASIN 200
506          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
507          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
508          KM     L = 1.92  Kb = .045  Adj. Slope =  315.0
509          BA    .535
510          LG    .350    .390   5.700    .200  10.000
511          UC    .338    .267
512          UA       0       3       5       8      12      20      43      75      90      96
513          UA     100
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

514          KK    200C
515          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 220 & 200
516          HC       3
             * DDM   ***** Preserved *****

517          KK   SR200
518          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
519          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
520          RS       1    STOR       0
521          SA    2.56     3.1     9.4
522          SE       0       3      10
523          SS       3     112       3     1.5
             * DDM   ***** Preserved *****

524          KK   200SR
525          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
526          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
             *      1       2
527          RS       1    STOR       0
528          SA       8     9.2     9.2
529          SE       0       7      10
530          SS       7     251       3     1.5
531          KM   ******************************************************************
532          KM   ************* END OF PASS MOUNTAIN ALTERNATIVE UPDATE. **************
533          KM
             * DDM   ***** Preserved *****

534          KK    C180
535          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
             *      1       2
536          HC       2
             * DDM   ***** Preserved *****

537          KK   SR180
538          KM   SIGNAL BUTTE FRS DATED 1/28/85
539          KM   OUTLET PIPE=36"RCP; L= 147';  INLET INV.=1690; OUTLET INV.=1687
540          KM   EMERGENCY SPILLWAY ELEV.=1712.4; PRINCIPLE SPILLWAY ELEV.=1701
541          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 250 ACRE-FEET
542          RS       1    STOR       0
543          SV       0       1     250     500     750    1060
544          SQ       0   106.5   125.5   137.5     146     160
545          SE      90     101   104.5     107     109   112.4
             * DDM   ***** Preserved *****

546          KK    R180
547          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
548          KM   ROUTE FLOW FROM SIGNAL BUTTE FRS TO SUB-BASIN 260
549          RS       2    FLOW      -1
550          RC    .035    .025    .035    1500    .003
551          RX       0       1       2    22.6    38.6    59.2      60      61
552          RY     9.3     9.3     9.3       0       0     9.3     9.3     9.3
             * DDM   ***** Updated *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

553          KK     260
554          KM   SUB-BASIN 260
555          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
556          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
557          KM     L =  .81  Kb = .049  Adj. Slope =   68.0
558          BA    .267
559          LG    .300    .170   6.800    .160  15.000
560          UC    .363    .215
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561          UA       0       5      16      30      65      77      84      90      94      97
562          UA     100
             * DDM   ***** Preserved *****

563          KK    260C
564          KM   HYDROGRAPH COMBINATION FOR OUTFLOW OF SIGNAL BUTTE FRS & SUB-BASIN 260
565          HC       2    .267
             * DDM   ***** Preserved *****

566          KK    R260
567          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
568          KM   ROUTE FLOW FROM SUB-BASIN 260 TO SUB-BASIN 280
569          RS       3    FLOW      -1
570          RC    .035    .025    .035    2300    .003
571          RX       0       1       2    23.4    43.4    64.8      65      66
572          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Updated *****

573          KK     280
574          KM   SUB-BASIN 280
575          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
576          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
577          KM     L =  .77  Kb = .049  Adj. Slope =   84.0
578          BA    .304
579          LG    .300    .250   5.300    .290  15.000
580          UC    .333    .175
581          UA       0       5      16      30      65      77      84      90      94      97
582          UA     100
             * DDM   ***** Preserved *****

583          KK    280C
584          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 260 & SUB-BASIN 280
585          HC       2
             * DDM   ***** Preserved *****

586          KK    R280
587          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
588          KM   ROUTE FLOW FROM SUB-BASIN 280 TO SUB-BASIN 300
589          RS       2    FLOW      -1
590          RC    .035    .025    .035    2500    .003
591          RX       0       1       2    23.4    43.4    64.8      65      66
592          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Updated *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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593          KK     300
594          KM   SUB-BASIN 300
595          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
596          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
597          KM     L =  .80  Kb = .049  Adj. Slope =  100.0
598          BA    .297
599          LG    .320    .280   4.200    .480  11.000
600          UC    .333    .183
601          UA       0       5      16      30      65      77      84      90      94      97
602          UA     100
             * DDM   ***** Preserved *****

603          KK    C300
604          KM   HYDROGRAPH COMBINATION OF DIVERTED FLOW
605          HC       2
             * DDM   ***** Preserved *****

606          KK    D300
607          KM   DIVERT FLOW INTO OFFLINE BASIN AT SIGNAL BUTTE FLOODWAY TO BE COMBINED
608          KM   LATER WITH BASIN 305 AT END OF SIGNAL BUTTE FLOODWAY
609          DT   DIV300
610          DI       0     300    5000
611          DQ       0       0    4700
             * DDM   ***** Preserved *****

612          KK   RTDIV300
613          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
614          DR   DIV300
             * DDM   ***** Preserved *****

615          KK   SRDIV300
616          KM   RETRIEVE FLOW INTO BASIN AND BLEED OFF WITHIN 36 HOURS
617          KM
618          RS       1    STOR       0
619          SV       0      60
620          SE       0      12
621          SQ       0     300
             * DDM   ***** Preserved *****

622          KK    300C
623          KM   HYDROGRAPH COMBINATION OF DIVERTED FLOW
624          HC       2
             * DDM   ***** Updated *****

625          KK     305
626          KM   SUB-BASIN 305
627          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
628          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
629          KM     L = 1.20  Kb = .047  Adj. Slope =   92.0
630          BA    .377
631          LG    .340    .330   4.450    .380   8.000
632          UC    .438    .298
633          UA       0       3       5       8      12      20      43      75      90      96
634          UA     100
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

635          KK    D305
636          KM   DIVERT FLOW INTO OFFLINE BASIN TO BE COMBINED LATER WITH PASS MOUNTAIN
637          KM   DIVERSION FLOW AT END OF SIGNAL BUTTE FLOODWAY
638          DT    305D
639          DI       0    1000
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640          DQ       0    1000
             * DDM   ***** Preserved *****

641          KK   RT305D
642          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
643          DR    305D
             * DDM   ***** Preserved *****

644          KK   SR305D
645          KM   RETRIEVE FLOW INTO BASIN AND BLEED OFF WITHIN 36 HOURS
646          KM
647          RS       1    STOR       0
648          SV       0      25
649          SE       0       6
650          SQ       0     100
             * DDM   ***** Preserved *****

651          KK    305C
652          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 280 & 300
653          HC       3
             * DDM   ***** Preserved *****

654          KK    R305
655          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
656          KM   ROUTE FLOW FROM SUB-BASIN 300 TO START OF FLOODWAY CONCRETE CHANNEL
657          RS       2    FLOW      -1
658          RC    .035    .025    .035    2200    .003
659          RX       0       1       2    23.4    55.4    76.8      77      78
660          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Preserved *****

661          KK   RR305
662          KM   CHANNEL GEOMETRY FOR SPOOK HILL FRS OBTAINED FROM AS-BUILTS PLANS.
663          KM   CONTINUE TO ROUTE FLOW WITHIN CONCRETE CHANNEL TO SPOOK HILL FRS
664          RS       1    FLOW      -1
665          RC    .016    .016    .016    6050   .0146
666          RX       0       1       2     2.1    16.1    16.2      17      18
667          RY     7.5     7.5     7.5       0       0     7.5     7.5     7.5
             *      1       2
             * DDM   ***** Updated *****

668          KK     320
669          KM   SUB-BASIN 320
670          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
671          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .995
672          KM     L = 1.60  Kb = .042  Adj. Slope =  106.0
673          BA    .870
674          LG    .310    .290   4.500    .380  15.000
675          UC    .450    .240
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

676          UA       0       5      16      30      65      77      84      90      94      97
677          UA     100
             * DDM   ***** Preserved *****

678          KK    D320
679          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
680          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
681          KM   SIERRA HEIGHTS        FALCON RIDGE    & MARBLE CREEK
682          KM        MAXIMUM VOLUME DIVERSION = 12.27acre-feet
             *      1
683          DT   BS320   12.27
684          DI       0   10000
685          DQ       0   10000
             * DDM   ***** Preserved *****

686          KK   RT320
687          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
688          DR   BS320
             * DDM   ***** Preserved *****

689          KK   SR320
690          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
691          KM   12.27 ACRE-FEETx43560/36x3600=4.1cfs
             *      1
692          RS       1    STOR       0
693          SV       0     .01    12.3
694          SQ       0     4.2     4.2
             * DDM   ***** Preserved *****

695          KK    C320
696          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
697          HC       3
             *
             * BEGINNING OF ALTERNATIVE 15 REVISIONS WHICH INCLUDE AN INTERCEPTOR CHANNEL
             * ALONG McKELLIPS RD.
             *
             *
             * DDM   ***** Updated *****

698          KK     340
699          KM   SUB-BASIN 340
700          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
701          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
702          KM     L = 1.78  Kb = .047  Adj. Slope =   99.0
703          BA   1.024
704          LG    .250    .250   4.200    .540  26.000
705          UC    .546    .296
706          UA       0       5      16      30      65      77      84      90      94      97
707          UA     100
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

708          KK    D340
709          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
710          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
711          KM   GRANDVIEW ESTATES    BOULDER MOUNTAIN & 33% OF MESA HIGHLANDS
712          KM        MAXIMUM VOLUME DIVERSION =39.2 acre feet
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```
*      1
DT   BS340    39.2
DI       0   10000
DQ       0   10000
* DDM   ***** Preserved *****

KK   RT340
KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
DR   BS340
* DDM   ***** Preserved *****

KK   SR340
KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
KM    39.2 ACRE-FEETx43560\36x3600=13.2cfs
*      1
RS       1    STOR       0
SV       0     .01    39.2
SQ       0    13.2    13.2
* DDM   ***** Preserved *****

KK    C340
KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
HC       3
* DDM   ***** Updated *****

KK     360
KM   SUB-BASIN 360
KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
KM     L = 1.21  Kb = .062  Adj. Slope =  104.0
BA    .315
LG    .220    .250   4.100    .640  29.000
UC    .504    .389
UA       0       5      16      30      65      77      84      90      94      97
UA     100
* DDM   ***** Preserved *****

KK    D360
KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
KM        MAXIMUM VOLUME DIVERSION = 15.7 acre-feet
*      1
DT   BS360    15.7
DI       0   10000
DQ       0   10000
* DDM   ***** Preserved *****
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

KK   RT360
KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
DR   BS360
* DDM   ***** Preserved *****

KK   SR360
KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
KM    15.7 ACRE-FEETx43560/36x3600=5.3 cfs
RS       1    STOR       0
SV       0     .01    15.7
SQ       0     5.3     5.3
* DDM   ***** Preserved *****

KK    360C
KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
HC       3
* DDM   ***** Updated *****

KK     380
KM   SUB-BASIN 380
KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
KM     L =  .67  Kb = .078  Adj. Slope =  119.0
BA    .268
LG    .180    .250   4.100    .710  19.000
UC    .392    .201
UA       0       5      16      30      65      77      84      90      94      97
UA     100
* DDM   ***** Preserved *****

KK    D380
KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
KM        MAXIMUM VOLUME DIVERSION  = 7.1 acre-feet
*      1
DT   BS380     7.1
DI       0   10000
DQ       0   10000
* DDM   ***** Preserved *****

KK   RT380
KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
DR   BS380
* DDM   ***** Preserved *****

KK   SR380
KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
KM    7.1  ACRE-FEETx43560\36x3600=2.4 cfs
RS       1    STOR       0
SV       0     .01     7.1
SQ       0     2.4     2.4
* DDM   ***** Preserved *****
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

KK    380C
KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
HC       3
* DDM   ***** Updated *****
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786          KK     400
787          KM   SUB-BASIN 400
788          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
789          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
790          KM     L =  .30  Kb = .112  Adj. Slope =  107.0
791          BA    .053
792          LG    .200    .250   4.000    .740    .000
793          UC    .321    .213
794          UA       0       5      16      30      65      77      84      90      94      97
795          UA     100
             * DDM   ***** Preserved *****

796          KK    D400
797          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
798          KM   DETENTION/RETENTION BASIN LOCATED WITHIN SAGUARO VISTA SUBDIVISION
799          KM        MAXIMUM VOLUME DIVERSION = 1.6 ACRE-FEET
             *      1
800          DT   BS400     1.6
801          DI       0   10000
802          DQ       0   10000
             * DDM   ***** Preserved *****

803          KK   RT400
804          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
805          DR   BS400
             * DDM   ***** Preserved *****

806          KK   SR400
807          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
808          KM     1.6 ACRE-FEETx43560/36x3600 = 0.5 cfs
809          RS       1    STOR       0
810          SV       0     .01     1.6
811          SQ       0     0.5     0.5
             * DDM   ***** Preserved *****

812          KK    C400
813          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
814          HC       2
             * DDM   ***** Updated *****

815          KK    400C
816          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
817          HC       2
             * DDM   ***** Updated *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

818          KK     355
819          KM   SUB-BASIN 355
820          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
821          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
822          KM     L =  .80  Kb = .052  Adj. Slope =  125.0
823          BA    .174
824          LG    .320    .300   4.550    .360  12.000
825          UC    .308    .227
826          UA       0       5      16      30      65      77      84      90      94      97
827          UA     100
             * DDM   ***** Preserved *****

828          KK    R355
829          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
830          KM   ROUTING OF FLOW FROM SUB-BASIN 355 TO SUB-BASIN 361
831          RS       5    FLOW      -1
832          RC    .045    .035    .045    5868   0.021
833          RX       0       1      40      46      56      62     102     103
834          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

835          KK     361
836          KM   SUB-BASIN 361
837          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
838          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
839          KM     L = 1.03  Kb = .047  Adj. Slope =  142.0
840          BA    .359
841          LG    .270    .250   4.100    .540  24.000
842          UC    .329    .198
843          UA       0       5      16      30      65      77      84      90      94      97
844          UA     100
             * DDM   ***** Preserved *****

845          KK    D361
846          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
847          KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
848          KM        MAXIMUM VOLUME DIVERSION = 12.9 acre-feet
             *      1
849          DT   BS361    12.9
850          DI       0   10000
851          DQ       0   10000
             * DDM   ***** Preserved *****

852          KK   RT361
853          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
854          DR   BS361
             * DDM   ***** Preserved *****

855          KK   SR361
856          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
857          KM    12.9 ACRE-FEETx43560/36x3600=4.3 cfs
858          RS       1    STOR       0
859          SV       0     .01    12.9
860          SQ       0     4.3     4.3
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

861          KK    361C
862          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
863          HC       3
             * DDM   ***** Updated *****
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 864          KK     342
 865          KM   SUB-BASIN 342
 866          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 867          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
 868          KM     L = 1.01  Kb = .048  Adj. Slope =  213.1
 869          BA    .298
 870          LG    .310    .280   3.950    .530  16.000
 871          UC    .279    .180
 872          UA       0       5      16      30      65      77      84      90      94      97
 873          UA     100
              *

 874          KK   D3421
 875          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
 876          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
 877          KM   GRANDVIEW ESTATES    BOULDER MOUNTAIN & 33% OF MESA HIGHLANDS
 878          KM        MAXIMUM VOLUME DIVERSION  =8.4 Acre feet
              *      1
 879          DT  BS3421     8.4
 880          DI       0   10000
 881          DQ       0   10000
              * DDM   ***** Preserved *****

 882          KK  RT3421
 883          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
 884          DR  BS3421
              * DDM   ***** Preserved *****

 885          KK  SR3421
 886          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
 887          KM     8.4 ACRE-FEETx43560\36x3600=2.8 cfs
              *      1
 888          RS       1    STOR       0
 889          SV       0     .01     8.4
 890          SQ       0     2.8     2.8
              * DDM   ***** Preserved *****

 891          KK    C342
 892          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
 893          HC       2
              *

 894          KK   D3422
 895          KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN AT NE CORNER OF ELLSWORTH
 896          KM   AND  McKELLIPS ROAD
 897          KM   MAXIMUM VOLUME OF DIVERSION IS 15 ACRE FEET
 898          DT  BS3422      15
 899          DI       0   10000
 900          DQ       0   10000
              *
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 901          KK  RT3422
 902          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
 903          DR  BS3422
              *

 904          KK  SR3422
 905          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS
 906          KM      15 ACRE-FEETx43560/36x3600 =5.0 cfs
 907          RS       1    STOR       0
 908          SV       0     .01      15
 909          SQ       0     5.0     5.0
              *

 910          KK   CC342
 911          KM   HYDROGRAPH COMBINATION AT McKELLIPS RD CHANNEL
 912          HC       2
              *

 913          KK    R342
 914          KM   ROUTING OF FLOW FROM SUB-BASIN 342 TO 341
 915          RS       9    FLOW      -1
 916          RC    0.05    0.03    0.05    2198  0.0118
 917          RX       0     0.1     0.2       4       9      13     213   213.1
 918          RY     3.0     1.5     1.0       0       0     1.0     2.0     3.0
              *

 919          KK     341
 920          KM   SUB-BASIN 341
 921          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 922          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
 923          KM     L = 1.01  Kb = .048  Adj. Slope =  123.0
 924          BA    .229
 925          LG    .250    .250   3.910    .600  34.000
 926          UC    .346    .266
 927          UA       0       5      16      30      65      77      84      90      94      97
 928          UA     100
              *
              * DDM   ***** Preserved *****

 929          KK    D341
 930          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
 931          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
 932          KM   GRANDVIEW ESTATES    BOULDER MOUNTAIN & 33% OF MESA HIGHLANDS
 933          KM        MAXIMUM VOLUME DIVERSION  =8.4 Acre feet
              *
 934          DT   BS341     8.4
 935          DI       0   10000
 936          DQ       0   10000
              * DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 937          KK   RT341
 938          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
 939          DR   BS341
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            * DDM   ***** Preserved *****

 940        KK   SR341
 941        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
 942        KM     8.4 ACRE-FEETx43560\36x3600=2.8 cfs
            *
 943        RS       1    STOR       0
 944        SV       0     .01     8.4
 945        SQ       0     2.8     2.8
            * DDM   ***** Preserved *****

 946        KK    C341
 947        KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
 948        HC       3
            * DDM   ***** Preserved *****

 949        KK   RR341
 950        KM   ROUTING OF FLOW FROM SUB-BASIN 341 TO 361
 951        KM   ARTIFICIALLY HIGH VALUE FOR NSTPS IS USED TO PRESERVE PEAK INFLOW
 952        RS      15    FLOW      -1
 953        RC   0.050   0.030   0.050    4143  0.0126
 954        RX       0     0.1     0.2       4       9      13     213   213.1
 955        RY     3.0     1.5     1.0       0       0     1.0     2.0     3.0
            * DDM   ***** Preserved *****

 956        KK   361CC
 957        KM   HYDROGRAPH COMBINATION AT McKELLIPS ROAD INTERCEPTOR CHANNEL
 958        HC       2
            *

 959        KK   D3612
 960        KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN AT NE CORNER OF ELLSWORTH
 961        KM   AND  McKELLIPS ROAD
 962        KM   MAXIMUM VOLUME OF DIVERSION IS 50 ACRE FEET
 963        DT  BS3612      50
 964        DI       0   10000
 965        DQ       0   10000
            *

 966        KK  RT3612
 967        KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
 968        DR  BS3612
            *

 969        KK  SR3612
 970        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS
 971        KM    50.0 ACRE-FEETx43560/36x3600=16.8 cfs
 972        RS       1    STOR       0
 973        SV       0     .01      50
 974        SQ       0    16.8    16.8
            *
1                                   HEC-1 INPUT                                          PAGE 25

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


 975        KK   C3612
 976        KM   HYDROGRAPH COMBINATION AT McKELLIPS RD CHANNEL
 977        HC       2
            * DDM   ***** Preserved *****

 978        KK   RR361
 979        KM   ROUTING OF FLOW FROM SUB-BASIN 361 TO 381
 980        RS       9    FLOW      -1
 981        RC   0.050   0.030   0.050    3854  0.0156
 982        RX       0     0.1     0.2       8      28      36     236   236.1
 983        RY     3.5     2.5       2       0       0       2       3     3.5
            * DDM   ***** Updated *****

 984        KK     381
 985        KM   SUB-BASIN 381
 986        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 987        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
 988        KM     L = 1.65  Kb = .043  Adj. Slope =  119.0
 989        BA    .726
 990        LG    .310    .280   4.200    .490  13.000
 991        UC    .463    .282
 992        UA       0       5      16      30      65      77      84      90      94      97
 993        UA     100
            * DDM   ***** Preserved *****

 994        KK    D381
 995        KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
 996        KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
 997        KM        MAXIMUM VOLUME DIVERSION  =21.5 acre-feet
            *      1
 998        DT   BS381    21.5
 999        DI       0   10000
1000        DQ       0   10000
            * DDM   ***** Preserved *****

1001        KK   RT381
1002        KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1003        DR   BS381
            * DDM   ***** Preserved *****

1004        KK   SR381
1005        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1006        KM   21.5  ACRE-FEETx43560/36x3600=7.2 cfs
1007        RS       1    STOR       0
1008        SV       0     .01    21.5
1009        SQ       0     7.2     7.2
            * DDM   ***** Preserved *****

1010        KK    381C
1011        KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1012        HC       3
            *
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 26

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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1013        KK   RR381
1014        KM   ROUTING OF FLOW FROM SUB-BASIN 381 TO 401
1015        RS       4    FLOW      -1
1016        RC    0.05    0.03    0.05    2992  0.0134
1017        RX       0     0.1     0.2       8      33      41     241   241.1
1018        RY     3.5     2.5       2       0       0       2       3     3.5
            * DDM   ***** Updated *****

1019        KK     401
1020        KM   SUB-BASIN 401
1021        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1022        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
1023        KM     L = 1.71  Kb = .051  Adj. Slope =   97.0
1024        BA    .605
1025        LG    .280    .250   4.150    .570  12.000
1026        UC    .604    .433
1027        UA       0       5      16      30      65      77      84      90      94      97
1028        UA     100
            * DDM   ***** Preserved *****

1029        KK    D401
1030        KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1031        KM   DETENTION/RETENTION BASIN LOCATED WITHIN SAGUARO VISTA SUBDIVISION
1032        KM        MAXIMUM VOLUME DIVERSION = 4.0 ACRE-FEET
            *      1
1033        DT   BS401     4.0
1034        DI       0   10000
1035        DQ       0   10000
            * DDM   ***** Preserved *****

1036        KK   RT401
1037        KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1038        DR   BS401
            * DDM   ***** Preserved *****

1039        KK   SR401
1040        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1041        KM     4.0 ACRE-FEETx43560/36x3600= 1.3 cfs
1042        RS       1    STOR       0
1043        SV       0     .01     4.0
1044        SQ       0     1.3     1.3
            * DDM   ***** Preserved *****

1045        KK    C401
1046        KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1047        HC       4
            *
            *
            * END OF ALTERNATIVE 15 REVISIONS
            *
            * DDM   ***** Updated *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1048        KK     420
1049        KM   SUB-BASIN 420
1050        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1051        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
1052        KM     L = 1.69  Kb = .043  Adj. Slope =  101.0
1053        BA    .588
1054        LG    .290    .250   4.250    .510  20.000
1055        UC    .492    .347
1056        UA       0       5      16      30      65      77      84      90      94      97
1057        UA     100
            * DDM   ***** Preserved *****

1058        KK    D420
1059        KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1060        KM   DETENTION/RETENTION BASINS LOCATED WITHIN GRAY FOX SUBDIVISION
1061        KM        MAXIMUM VOLUME DIVERSION = 8.65 acre-feet
            *      1
1062        DT   BS420    8.65
1063        DI       0   10000
1064        DQ       0   10000
            * DDM   ***** Preserved *****

1065        KK   RT420
1066        KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1067        DR   BS420
            * DDM   ***** Preserved *****

1068        KK   SR420
1069        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1070        KM   38.55 ACRE-FEETx43560/36x3600=13cfs
1071        RS       1    STOR       0
1072        SV       0     .01   38.55
1073        SQ       0      13      13
            * DDM   ***** Preserved *****

1074        KK    420C
1075        KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1076        HC       3   10.87
            * DDM   ***** Updated *****

1077        KK     370
1078        KM   SUB-BASIN 370
1079        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1080        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1081        KM     L =  .90  Kb = .050  Adj. Slope =  189.0
1082        BA    .257
1083        LG    .310    .280   4.800    .340  16.000
1084        UC    .271    .173
1085        UA       0       5      16      30      65      77      84      90      94      97
1086        UA     100
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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1087        KK    D370
1088        KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN LOCATED WITHIN SUB-BASINS
1089        KM   370 AND 395.
            *      1
1090        DT   BS370
1091        DI       0       50     5000
1092        DQ       0        0     4950
            * DDM   ***** Preserved *****

1093        KK   RT370
1094        KM   RETRIEVE FLOW FROM DIVERSION
1095        DR   BS370
            * DDM   ***** Preserved *****

1096        KK   SR370
1097        KM   RETRIEVE FLOW INTO OFFLINE BASIN AND BLEED OFF WITHIN 36 HOURS.
1098        KM      11 ACRE-FEETx43560/36x3600 = 4 cfs
1099        RS       1    STOR        0
1100        SV       0     .01       11
1101        SQ       0       4        4
            * DDM   ***** Preserved *****

1102        KK    370C
1103        KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1104        HC       2
            * DDM   ***** Updated *****

1105        KK     395
1106        KM   SUB-BASIN 395
1107        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1108        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1109        KM     L = 1.00  Kb = .052  Adj. Slope =  188.0
1110        BA    .160
1111        LG    .330    .320   5.100    .280  12.000
1112        UC    .300    .276
1113        UA       0       5      16      30      65      77      84      90      94      97
1114        UA     100
            * DDM   ***** Preserved *****

1115        KK    D395
1116        KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN LOCATED WITHIN SUB-BASINS
1117        KM   370 AND 395.
            *      1
1118        DT   BS395
1119        DI       0       25     5000
1120        DQ       0        0     4975
            * DDM   ***** Preserved *****

1121        KK   RT395
1122        KM   RETRIEVE FLOW FROM DIVERSION
1123        DR   BS395
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1124        KK   SR395
1125        KM   RETRIEVE FLOW INTO OFFLINE BASIN AND BLEED OFF WITHIN 36 HOURS.
1126        KM       7 ACRE-FEETx43560/36x3600 = 2 cfs
1127        RS       1    STOR        0
1128        SV       0     .01        7
1129        SQ       0       2        2
            * DDM   ***** Preserved *****

1130        KK    395C
1131        KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1132        HC       3
            * DDM   ***** Preserved *****

1133        KK    R395
1134        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1135        KM   ROUTING OF FLOW FROM SUB-BASINS 370 AND 395 TO SUB-BASIN 390
1136        RS       6    FLOW       -1
1137        RC    .045    .035    .045    2600    .023
1138        RX       0       1      40      46      56      62     102     103
1139        RY       3       2       2       0       0       2       2       3
            * DDM   ***** Updated *****

1140        KK     385
1141        KM   SUB-BASIN 385
1142        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1143        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1144        KM     L =  .90  Kb = .050  Adj. Slope =  309.5
1145        BA    .235
1146        LG    .340    .320   4.700    .320   9.000
1147        UC    .229    .151
1148        UA       0       5      16      30      65      77      84      90      94      97
1149        UA     100
            * DDM   ***** Preserved *****

1150        KK    D385
1151        KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN LOCATED WITHIN SUB-BASINS
1152        KM   385 AND 411.
1153        DT   SF385
1154        DI       0       50     5000
1155        DQ       0        0     4950
            * DDM   ***** Preserved *****

1156        KK   RT385
1157        KM   RETRIEVE FLOW FROM DIVERSION OF SUB-BASIN 385
1158        DR   SF385
            * DDM   ***** Preserved *****

1159        KK   SR385
1160        KM   RETRIEVE FLOW INTO OFFLINE BASIN AND BLEED OFF WITHIN 36 HOURS.
1161        KM       9 ACRE-FEETx43560/36x3600 = 3 cfs
1162        RS       1    STOR        0
1163        SV       0     .01        9
1164        SQ       0       3        3
            * DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1165          KK    385C
1166          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 385 AND DIVERTED 385 FLOW
1167          HC       2
              * DDM   ***** Updated *****

1168          KK     411
1169          KM   SUB-BASIN 411
1170          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1171          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1172          KM     L =  .90  Kb = .051  Adj. Slope =  309.5
1173          BA    .202
1174          LG    .340    .350   5.100    .260   9.000
1175          UC    .233    .168
1176          UA       0       5      16      30      65      77      84      90      94      97
1177          UA     100
              * DDM   ***** Preserved *****

1178          KK    D411
1179          KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN LOCATED WITHIN SUB-BASINS
1180          KM   385 AND 411.
1181          DT   SF411
1182          DI       0      25    5000
1183          DQ       0       0    4975
              * DDM   ***** Preserved *****

1184          KK   RT411
1185          KM   RETRIEVE FLOW FROM DIVERSION OF SUB-BASIN 411.
1186          DR   SF411
              * DDM   ***** Preserved *****

1187          KK   SR411
1188          KM   RETRIEVE FLOW INTO OFFLINE BASIN AND BLEED OFF WITHIN 36 HOURS.
1189          KM       9 ACRE-FEETx43560/36x3600 = 3 cfs
1190          RS       1    STOR       0
1191          SV       0     .01       9
1192          SQ       0       3       3
              * DDM   ***** Preserved *****

1193          KK    411C
1194          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 411
1195          HC       3
              * DDM   ***** Preserved *****

1196          KK    R411
1197          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1198          KM   ROUTING OF SPLIT FLOW FROM SUB-BASIN 385 AND SUB-BASIN 411 TO SUB-BASIN 390.
1199          RS       3    FLOW      -1
1200          RC    .045    .035    .045    1300    .038
1201          RX       0       1      40      46      56      62     102     103
1202          RY       3       2       2       0       0       2       2       3
              * DDM   ***** Updated *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1203          KK     390
1204          KM   SUB-BASIN 390
1205          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1206          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1207          KM     L =  .70  Kb = .050  Adj. Slope =  299.4
1208          BA    .244
1209          LG    .300    .250   4.700    .380  18.000
1210          UC    .204    .107
1211          UA       0       5      16      30      65      77      84      90      94      97
1212          UA     100
              * DDM   ***** Preserved *****

1213          KK    D390
1214          KM       DIVERT FLOW INTO ONLINE  DETENTION BASIN
1215          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THUNDER MOUNTAIN ESTATES
1216          KM       MAXIMUM VOLUME DIVERSION  = 3.5 acre-feet
              *      1
1217          DT   BS390     3.5
1218          DI       0    5000
1219          DQ       0    5000
              * DDM   ***** Preserved *****

1220          KK   RT390
1221          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1222          DR   BS390
              * DDM   ***** Preserved *****

1223          KK   SR390
1224          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1225          KM     3.5 ACRE-FEETx43560/36x3600=1.2cfs
1226          RS       1    STOR       0
1227          SV       0     .01     3.5
1228          SQ       0     1.2     1.2
              * DDM   ***** Preserved *****

1229          KK    390C
1230          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1231          HC       4
              * DDM   ***** Preserved *****

1232          KK   RR390
1233          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1234          KM   FROM SUB-BASIN 390 TO SUB-BASIN 410.
1235          RS       6    FLOW      -1
1236          RC    .045    .035    .045    5500    .020
1237          RX       0       1      40      46      56      62     102     103
1238          RY       3       2       2       0       0       2       2       3
              * DDM   ***** Updated *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1239          KK     410
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1240        KM   SUB-BASIN 410
1241        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1242        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1243        KM     L = 1.00  Kb = .049  Adj. Slope =  150.0
1244        BA    .273
1245        LG    .300    .250   3.910    .590  15.000
1246        UC    .329    .226
1247        UA       0       5      16      30      65      77      84      90      94      97
1248        UA     100
            * DDM   ***** Preserved *****

1249        KK    410C
1250        KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1251        HC       2
            * DDM   ***** Updated *****

1252        KK     440
1253        KM   SUB-BASIN 440
1254        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1255        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1256        KM     L =  .40  Kb = .039  Adj. Slope =  315.0
1257        BA    .080
1258        LG    .190    .380   6.400    .140  13.000
1259        UC    .129    .077
1260        UA       0       3       5       8      12      20      43      75      90      96
1261        UA     100
            * DDM   ***** Preserved *****

1262        KK     R70
1263        KM   ROUTE FLOW FROM SUB-BASIN 440 TO C108
1264        RS       1    FLOW      -1
1265        RC     .05    .035     .05    2250     .08
1266        RX    1000    1025    1050    1070    1075    1095    1120    1145
1267        RY      30    22.9    15.7      10      10    15.7    22.9      30
            * DDM   ***** Updated *****

1268        KK     441
1269        KM   SUB-BASIN 441
1270        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1271        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1272        KM     L =  .28  Kb = .069  Adj. Slope =  315.0
1273        BA    .010
1274        LG    .300    .250   5.600    .220   5.000
1275        UC    .150    .225
1276        UA       0       5      16      30      65      77      84      90      94      97
1277        UA     100
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1278        KK    C108
1279        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 440 & 441
1280        HC       2
            * DDM   ***** Preserved *****

1281        KK    DIV4
1282        KM        SPLIT FLOW WITH TWO 42 INCH PIPES TO WEST AND SOUTH
            *      1
1283        DT   SPLIT
1284        DI       0      14      40      82     120     154     180
1285        DQ       0       7      20      41      60      77      90
            * DDM   ***** Preserved *****

1286        KK    R108
1287        KM        ROUTE FLOW FROM SUB-BASIN C108 TO C67
1288        RS       2    FLOW      -1
1289        RC     .05    .035     .05    3200      .1
1290        RX    1000    1025    1050    1070    1075    1095    1120    1145
1291        RY      30    22.9    15.7      10      10    15.7    22.9      30
            * DDM   ***** Updated *****

1292        KK     442
1293        KM   SUB-BASIN 442
1294        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1295        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1296        KM     L =  .83  Kb = .055  Adj. Slope =  274.2
1297        BA    .100
1298        LG    .300    .270   3.290    .770   5.000
1299        UC    .258    .264
1300        UA       0       5      16      30      65      77      84      90      94      97
1301        UA     100
            * DDM   ***** Preserved *****

1302        KK     C67
1303        KM   COMBINE FLOW FROM SUB-BASIN 442 & DIV4
1304        HC       2
            * DDM   ***** Preserved *****

1305        KK    DIV6
1306        KM        OFFLINE BASIN WITH 25 FOOT WEIR SET AT 2.5 FEET ABOVE BOTTOM OF CHANNEL
1307        KM        FLOW CONTINUES BEYOND BASIN THROUGH 2-30" PIPES
            *      1
1308        DT  BASIN4
1309        DI       0      10      32      44    79.9   132.5     198   272.9   356.8
1310        DQ       0       0       0       0    23.9    67.5     124   190.9   266.8
            * DDM   ***** Preserved *****

1311        KK  RTDIV6
1312        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1313        DR  BASIN4
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1314        KK  RFDIV6
1315        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1316        KM     3.3 ACRE-FEETx43560/36x3600=1.1cfs
            *      1
1317        RS       1    STOR       0
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1318          SV       0     .01     3.3
1319          SQ       0     1.1     1.1
              * DDM   ***** Preserved *****

1320          KK   CDIV6
1321          KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1322          HC       2
              * DDM   ***** Updated *****

1323          KK     443
1324          KM   SUB-BASIN 443
1325          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1326          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1327          KM     L =  .71  Kb = .050  Adj. Slope =  315.0
1328          BA    .080
1329          LG    .250    .190   8.000    .080  10.000
1330          UC    .196    .194
1331          UA       0       5      16      30      65      77      84      90      94      97
1332          UA     100
              * DDM   ***** Preserved *****

1333          KK   DIV66
1334          KM        DIVERT FLOW INTO 3 NATURAL WASHES WITH ONE 24" PIPE IN EACH WASH.
1335          KM        EACH PIPE CAPACITY BASED ON 4 FEET OF HEAD
1336          DT   WSH66
1337          DI       0      78     100     200
1338          DQ       0      78      78      78
              * DDM   ***** Preserved *****

1339          KK    R113
1340          KM        ROUTE FLOW FROM C113 TO C114
1341          RS       1    FLOW      -1
1342          RC    .019    .019    .019    1300    .029
1343          RX    1000    1004    1008    1012    1018    1022    1026    1030
1344          RY      17   15.33   12.67      10      10   12.67   15.33      17
              * DDM   ***** Preserved *****

1345          KK    C114
1346          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 67 AND C113
1347          HC       2
              * DDM   ***** Updated *****

1348          KK     444
1349          KM   SUB-BASIN 444
1350          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1351          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1352          KM     L =  .33  Kb = .034  Adj. Slope =  315.0
1353          BA    .040
1354          LG    .130    .350   4.450    .320   1.000
1                                   HEC-1 INPUT                                                    PAGE 35

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1355          UC    .112    .084
1356          UA       0       3       5       8      12      20      43      75      90      96
1357          UA     100
              * DDM   ***** Preserved *****

1358          KK     R58
1359          KM   ROUTE FLOW FROM SUB-BASIN 444 TO C107
1360          RS       1    FLOW      -1
1361          RC     .05    .035     .05    2370   .0516
1362          RX    1000    1010    1020    1050    1055    1085    1095    1105
1363          RY      19      18      17      10      10      17      18      19
              * DDM   ***** Updated *****

1364          KK     445
1365          KM   SUB-BASIN 445
1366          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1367          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1368          KM     L =  .82  Kb = .036  Adj. Slope =  315.0
1369          BA    .190
1370          LG    .170    .320   3.470    .590   3.000
1371          UC    .192    .130
1372          UA       0       5      16      30      65      77      84      90      94      97
1373          UA     100
              * DDM   ***** Preserved *****

1374          KK    C107
1375          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 444 & 445
1376          HC       2
              * DDM   ***** Preserved *****

1377          KK    R107
1378          KM        ROUTE FLOW FROM C107 TO C109
1379          RS       1    FLOW      -1
1380          RC     .05    .035     .05     700   .0516
1381          RX    1000    1010    1020    1050    1055    1085    1095    1105
1382          RY      19      18      17      10      10      17      18      19
              * DDM   ***** Preserved *****

1383          KK    RTB2
1384          KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
              *      1
1385          DR   SPLIT
              * DDM   ***** Preserved *****

1386          KK  RSPLIT
1387          KM        ROUTE FLOW FROM SPLIT TO C109
1388          RS       1    FLOW      -1
1389          RC     .05    .035     .05     800     .05
1390          RX    1000    1025    1050    1070    1075    1095    1120    1145
1391          RY      30    22.9    15.7      10      10    15.7    22.9      30
              * DDM   ***** Updated *****
                                    HEC-1 INPUT                                                    PAGE 36

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1392          KK     446
1393          KM   SUB-BASIN 446
1394          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1395          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
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1396        KM     L =  .46  Kb = .061  Adj. Slope =  303.9
1397        BA    .040
1398        LG    .270    .250   4.500    .400  19.000
1399        UC    .183    .189
1400        UA       0       5      16      30      65      77      84      90      94      97
1401        UA     100
            * DDM   ***** Preserved *****

1402        KK    C109
1403        KM        COMBINE HYDROGRAPHS FROM COMBINES C107 AND C108
1404        HC       3
            * DDM   ***** Preserved *****

1405        KK    DIV5
1406        KM        DIVERT FLOW INTO WASHES TOWARDS WEST
1407        KM        DIVERSION THROUGH 36" PIPE WITH 3 FEET OF HEAD
            *      1
1408        DT  WSH404
1409        DI       0    40.7    71.2   121.6     190     276   379.4   500.6
1410        DQ       0      35      35      35      35      35      35      35
            * DDM   ***** Preserved *****

1411        KK    R109
1412        KM        ROUTE FLOW FROM C109 TO C110
1413        RS       1    FLOW      -1
1414        RC    .019    .019    .019    3080     .05
1415        RX    1000    1005    1010    1015    1025    1030    1035    1040
1416        RY   13.75    12.5   11.25      10      10   11.25    12.5   13.75
            * DDM   ***** Updated *****

1417        KK     447
1418        KM   SUB-BASIN 447
1419        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1420        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1421        KM     L =  .49  Kb = .056  Adj. Slope =  221.0
1422        BA    .090
1423        LG    .250    .270   3.350    .870  30.000
1424        UC    .208    .145
1425        UA       0       5      16      30      65      77      84      90      94      97
1426        UA     100
            * DDM   ***** Preserved *****

1427        KK   RT404
1428        KM        RETRIEVE DIVERTED FLOW FOR WASH 109
1429        DR  WSH404
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1430        KK    R404
1431        KM        ROUTE FLOW FROM C110 TO C110
1432        RS       5    FLOW      -1
1433        RC    .019    .019    .019    3540     .03
1434        RX    1000    1012    1016    1020    1025    1029    1033    1045
1435        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Preserved *****

1436        KK    C110
1437        KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 447 AND R404
1438        HC       3
            * DDM   ***** Preserved *****

1439        KK    R110
1440        KM        ROUTE FLOW FROM C110 TO C115
1441        RS       1    FLOW      -1
1442        RC    .019    .019    .019     580   .0291
1443        RX    1000    1012    1016    1020    1035    1039    1043    1055
1444        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Preserved *****

1445        KK    C115
1446        KM        COMBINE HYDROGRAPHS FROM C114 AND C110
1447        HC       2
            * DDM   ***** Preserved *****

1448        KK    R115
1449        KM        ROUTE FLOW FROM C115 TO C119
1450        RS       1    FLOW      -1
1451        RC    .019    .019    .019    2125     .029
1452        RC    .019    .019    .019     580   .0291
1453        RX    1000    1012    1016    1020    1035    1039    1043    1055
1454        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Updated *****

1455        KK     448
1456        KM   SUB-BASIN 448
1457        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1458        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1459        KM     L =  .36  Kb = .042  Adj. Slope =  315.0
1460        BA    .045
1461        LG    .170    .310   4.200    .390  11.000
1462        UC    .133    .102
1463        UA       0       5      16      30      65      77      84      90      94      97
1464        UA     100
            * DDM   ***** Updated *****

1465        KK     449
1466        KM   SUB-BASIN 449
1467        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1468        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1469        KM     L =  .40  Kb = .054  Adj. Slope =  315.0
1470        BA    .050
1471        LG    .260    .280   3.500    .640   6.000
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1472        UC    .167    .134
1473        UA       0       5      16      30      65      77      84      90      94      97
1474        UA     100
            * DDM   ***** Preserved *****
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1475          KK   C6364
1476          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 448 & 449
1477          HC       2
              * DDM   ***** Preserved *****

1478          KK   R6364
1479          KM   ROUTE FLOW FROM C116 AND SUB-BASINS 448 AND 449
1480          RS       4    FLOW      -1
1481          RC     .05    .035     .05    4375   .0333
1482          RX    1000    1027    1053    1080    1090    1117    1143    1170
1483          RY      15   13.33   11.67      10      10   11.67   13.33      15
              * DDM   ***** Updated *****

1484          KK     450
1485          KM   SUB-BASIN 450
1486          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1487          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1488          KM     L =  .85  Kb = .057  Adj. Slope =  210.5
1489          BA    .070
1490          LG    .340    .350   3.630    .570   4.000
1491          UC    .296    .383
1492          UA       0       3       5       8      12      20      43      75      90      96
1493          UA     100
              * DDM   ***** Updated *****

1494          KK     451
1495          KM   SUB-BASIN 451
1496          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1497          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1498          KM     L =  .57  Kb = .063  Adj. Slope =  175.0
1499          BA    .025
1500          LG    .340    .340   3.290    .750   3.000
1501          UC    .271    .453
1502          UA       0       3       5       8      12      20      43      75      90      96
1503          UA     100
              * DDM   ***** Preserved *****

1504          KK    RT66
1505          KM        RETRIEVE DIVERTED FLOW FROM SUB-BASIN 66
1506          DR   WSH66
              * DDM   ***** Updated *****

1507          KK     452
1508          KM   SUB-BASIN 452
1509          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1510          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1511          KM     L =  .43  Kb = .055  Adj. Slope =  315.0
1512          BA    .040
1513          LG    .260    .280   3.700    .550   9.000
1514          UC    .171    .166
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1515          UA       0       5      16      30      65      77      84      90      94      97
1516          UA     100
              * DDM   ***** Preserved *****

1517          KK   C6465
1518          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 443 AND 452
1519          HC       2
              * DDM   ***** Preserved *****

1520          KK   R6566
1521          KM        ROUTE FLOW FROM DIVERSIONS 65 AND 66 TO C116
1522          RS       2    FLOW      -1
1523          RC     .05    .035     .05    2435   .0282
1524          RX    1000    1045    1090    1150    1160    1220    1265    1310
1525          RY      25      23      20      10      10      20      23      25
              * DDM   ***** Preserved *****

1526          KK    C116
1527          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 450 & 451 AND R6364 & R6465
1528          HC       4
              * DDM   ***** Preserved *****

1529          KK  BASIN5
1530          KM        RESERVOIR WITHIN PARCEL 31      2-48 INCH PIPES AT OUTFALL
1531          KM        BASIN 5 FEET DEEP
1532          RS       1    ELEV       0
1533          SV       0     4.5     9.9
1534          SQ       0      69     190
1535          SE       0     2.5       5
              * DDM   ***** Preserved *****

1536          KK    R116
1537          KM   ROUTE FLOW FROM C116 TO C117
1538          RS       2    FLOW      -1
1539          RC     .05    .035     .05    1300   .0333
1540          RX    1000    1100    1200    1300    1320    1420    1520    1620
1541          RY      13      12      11      10      10      11      12      13
              * DDM   ***** Updated *****

1542          KK     453
1543          KM   SUB-BASIN 453
1544          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1545          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1546          KM     L =  .58  Kb = .058  Adj. Slope =  138.0
1547          BA    .060
1548          LG    .290    .300   3.290    .820  18.000
1549          UC    .275    .284
1550          UA       0       5      16      30      65      77      84      90      94      97
1551          UA     100
              * DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1552          KK    C117
1553          KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 453 AND R116
1554          HC       2
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            * DDM   ***** Preserved *****

1555        KK    C118
1556        KM   COMBINE HYDROGRAPHS FROM R115 AND C117
1557        HC       2
            * DDM   ***** Preserved *****

1558        KK    R118
1559        KM        ROUTE FLOW FROM C118 TO  DIV7
1560        RS       1    FLOW      -1
1561        RC    .019    .019    .019    1500    .024
1562        RX    1000    1012    1016    1020    1035    1039    1043    1055
1563        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Preserved *****

1564        KK    DIV7
1565        KM        OFFLINE BASIN AT NORTH MOUNTAIN RIDGE   FLOWS ENTER BASIN OVER
1566        KM        30' WEIR SET AT 5.3' ABOVE THE CHANNEL BOTTOM
            *      1
1567        DT  BASIN6
1568        DI       0     363     487     563     645     844
1569        DQ       0       3      47      83     125     244
            * DDM   ***** Preserved *****

1570        KK  RTDIV7
1571        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1572        DR  BASIN6
            * DDM   ***** Preserved *****

1573        KK  RFDIV7
1574        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1575        KM     3.6 ACRE-FEETx43560/36x3600=1.2cfs
1576        RS       1    STOR       0
1577        SV       0     .01     3.6
1578        SQ       0     1.2     1.2
            * DDM   ***** Preserved *****

1579        KK   CDIV7
1580        KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1581        HC       2
            * DDM   ***** Updated *****

1582        KK     454
1583        KM   SUB-BASIN 454
1584        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1585        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1586        KM     L = 1.23  Kb = .051  Adj. Slope =  163.0
1587        BA    .180
1588        LG    .300    .310   3.780    .560  14.000
1589        UC    .379    .395
1590        UA       0       5      16      30      65      77      84      90      94      97
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1591        UA     100
            * DDM   ***** Preserved *****

1592        KK    C119
1593        KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 454 AND DIV7.
            *      1       2
1594        HC       2
            * DDM   ***** Preserved *****

1595        KK    R454
1596        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1597        KM   ROUTING OF FLOW FROM LAS SENDAS AND R413 TO SUB-BASIN 415.
1598        RS       2    FLOW      -1
1599        RC    .045    .035    .045    2500    .012
1600        RX       0      .5       1      33      42      67    67.5      68
1601        RY       5       4       4       0       0       6       6       6
            * DDM   ***** Updated *****

1602        KK     415
1603        KM   SUB-BASIN 415
1604        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1605        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1606        KM     L = 1.10  Kb = .049  Adj. Slope =  155.0
1607        BA    .281
1608        LG    .300    .260   3.630    .710  15.000
1609        UC    .358    .264
1610        UA       0       5      16      30      65      77      84      90      94      97
1611        UA     100
            * DDM   ***** Preserved *****

1612        KK    415C
1613        KM   HYDROGRAPH COMBINATION OF R454, SUB-BASIN 415, R410.
1614        HC       3
            * DDM   ***** Preserved *****

1615        KK    D415
1616        KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN
1617        KM   MAXIMUM STORAGE VOLUME FOR DIVERSION = 45 AC-FT @ 5' DEPTH.
            *      1
1618        DT   BS415
1619        DI       0    1100    5000
1620        DQ       0       0    3900
            * DDM   ***** Preserved *****

1621        KK   RT415
1622        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1623        DR   BS415
            * DDM   ***** Preserved *****

1624        KK   SR415
1625        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1626        KM      15 ACRE-FEETx43560/36x3600 = 5 cfs
1627        RS       1    STOR       0
1628        SV       0     .01      15
1629        SQ       0       5       5
            * DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1630          KK    C415
1631          KM   HYDROGRAPH COMBINATION OF 415 DIVERSION.
1632          HC       2
              * DDM   ***** Preserved *****

1633          KK    R415
1634          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1635          KM   ROUTING OF FLOW FROM 415C TO 455C
1636          RS       4    FLOW      -1
1637          RC    .045     .03    .045    4100    .024
1638          RX       0      .5       1       8      16      23    23.5      24
1639          RY       8       8       8       0       0       8       8       8
              * DDM   ***** Updated *****

1640          KK     455
1641          KM   SUB-BASIN 455
1642          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1643          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
1644          KM     L = 1.70  Kb = .041  Adj. Slope =  146.0
1645          BA   1.111
1646          LG    .270    .280   3.700    .640  24.000
1647          UC    .421    .204
1648          UA       0       5      16      30      65      77      84      90      94      97
1649          UA     100
              * DDM   ***** Preserved *****

1650          KK    D455
1651          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1652          KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1653          KM   FOR BASIN #: 30      34      43      47&58
1654          KM        MAXIMUM VOLUME DIVERSION = 74.1 acre-feet
              *      1
1655          DT   BS455    74.1
1656          DI       0   10000
1657          DQ       0   10000
              * DDM   ***** Preserved *****

1658          KK   RT455
1659          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1660          DR   BS455
              * DDM   ***** Preserved *****

1661          KK   SR455
1662          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1663          KM    74.1 ACRE-FEETx43560/36x3600=25cfs
1664          RS       1    STOR       0
1665          SV       0     .01    74.1
1666          SQ       0      25      25
              * DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1667          KK    C455
1668          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 455 AND DIVERTED BASIN STORAGE OF 455
1669          HC       2
              * DDM   ***** Preserved *****

1670          KK    455C
1671          KM  HYDROGRAPH COMBINATION OF 420C, R415 AND C455
              *      1       2
1672          HC       3
              * DDM   ***** Preserved *****

1673          KK   SR440
1674          KM   SPOOK HILL FRS PLANS DATED 6/15/77
1675          KM   OUTLET PIPE=7'x7.5'RCBC; L=70 INLET INV.=1566; OUTLET INV.=1566
1676          KM   EMERGENCY SPILLWAY ELEV.=1582; PRINCIPLE SPILLWAY ELEV.=1577.5
1677          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 200 ACRE-FEET
1678          RS       1    STOR       0
1679          SV       0      10     100     300     500     680
1680          SQ       0     640     720     780     825     860
1681          SE      66    77.5      79    80.2    81.2      82
              * DDM   ***** Preserved *****

1682          KK   RR455
1683          KM   ROUTE FLOW FROM SPOOK HILL FRS TO SUB-BASIN 462
1684          RS      10    FLOW      -1
1685          RC    .035    .025    .035    9200    .002
1686          RX       0       1       2      28      58      84      85      86
1687          RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
              * DDM   ***** Updated *****

1688          KK     456
1689          KM   SUB-BASIN 456
1690          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1691          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1692          KM     L =  .94  Kb = .045  Adj. Slope =  315.0
1693          BA    .260
1694          LG    .300    .380   5.600    .200  12.000
1695          UC    .217    .139
1696          UA       0       5      16      30      65      77      84      90      94      97
1697          UA     100
              * DDM   ***** Preserved *****

1698          KK    DIV1
1699          KM        DIVERT FLOW INTO OFFLINE DETENTION BASIN
1700          KM        WEIR FOR BASIN SET AT 4 FEET ABOVE CHANNEL BOTTOM
              *      1
1701          DT  BASIN1
1702          DI       0    11.1   127.9   234.4   577.7   789.9  1025.5  1280.9  1555.7
1703          DQ       0       0       0    47.7     248   381.8   533.6   701.5     884
              * DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1704          KK    DIV2
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1705          KM        SPLIT OUT FLOW FOR WASHES THAT FLOW TO THE SOUTH FROM
1706          KM        WASHES THAT DRAIN TO THE WES, SOUTHERN WASHES FED BY 30" & 24" PIPE
1707          DT    WA30
1708          DI       0    11.1   127.9   189.6   329.7     408   491.9   579.4   671.7
1709          DQ       0    11.1    38.4    48.2      63    69.5      76      81      86
              * DDM   ***** Preserved *****

1710          KK    R456
1711          KM        ROUTE FLOW FROM SUB-BASIN 51 TO C101
1712          RS       2    FLOW      -1
1713          RC     .05    .035     .05    3800    .044
1714          RX    1000    1010    1020    1036    1041    1057    1067    1077
1715          RY   14.88   14.44      14      10      10      14   14.44   14.88
              * DDM   ***** Updated *****

1716          KK     457
1717          KM   SUB-BASIN 457
1718          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1719          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1720          KM     L = 1.01  Kb = .045  Adj. Slope =  308.8
1721          BA    .190
1722          LG    .270    .330   3.950    .460   6.000
1723          UC    .237    .195
1724          UA       0       5      16      30      65      77      84      90      94      97
1725          UA     100
              * DDM   ***** Preserved *****

1726          KK    C101
1727          KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 50 AND 51
1728          HC       2
              * DDM   ***** Preserved *****

1729          KK    DIV3
1730          KM        RESERVOIR AT THE EDGE OF THE PROPERTY   FLOW FROM CHANNEL
1731          KM        DIVERTED  INTO OFFLINE BASIN A 25' WEIR SET AT ELEVATION 1808 FT
              *      1
1732          DT  BASIN2
1733          DI       0      36      70     110     180   313.5     402   500.9
1734          DQ       0       0       0       0       0    67.5     124   190.9
              * DDM   ***** Preserved *****

1735          KK  RTDIV3
1736          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1737          DR  BASIN2
              * DDM   ***** Preserved *****

1738          KK  RFDIV3
1739          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1740          KM     5.0 ACRE-FEETx43560/36x3600=1.7cfs
1741          RS       1    STOR       0
1742          SV       0     .01       5
1743          SQ       0     1.7     1.7
              * DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1744          KK   CDIV3
1745          KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1746          HC       2
              * DDM   ***** Preserved *****

1747          KK    R101
1748          KM        ROUTE FLOW FROM SUBBASIN C101 TO C103
1749          RS       1    FLOW      -1
1750          RC     .05    .035     .05    1450     .05
1751          RX    1000    1010    1020    1036    1041    1057    1067    1077
1752          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Updated *****

1753          KK     458
1754          KM   SUB-BASIN 458
1755          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1756          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1757          KM     L =  .76  Kb = .048  Adj. Slope =  299.0
1758          BA    .190
1759          LG    .290    .330   5.800    .190   6.000
1760          UC    .204    .131
1761          UA       0       5      16      30      65      77      84      90      94      97
1762          UA     100
              * DDM   ***** Preserved *****

1763          KK    C103
1764          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 55 AND C101
1765          HC       2
              * DDM   ***** Preserved *****

1766          KK    R103
1767          KM        ROUTE FLOW FROM SUBBASIN C103 TO C106
1768          RS       1    FLOW      -1
1769          RC     .05    .035     .05     900     .03
1770          RX    1000    1010    1020    1030    1050    1060    1070    1080
1771          RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
              * DDM   ***** Preserved *****

1772          KK    RT30
1773          KM        RETRIEVE DIVERTED FLOW FOR WASH BELOW 30 INCH PIPE
1774          DR    WA30
              * DDM   ***** Preserved *****

1775          KK     R30
1776          KM        ROUTE FLOW FROM WASH DIVERSION TO COMBINE C52
1777          RS       1    FLOW      -1
1778          RC     .05    .035     .05    1630     .05
1779          RX    1000    1010    1020    1036    1041    1057    1067    1077
1780          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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1781          KK    RTB1
1782          KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
              *      1        2
1783          DR  BASIN1
              * DDM   ***** Preserved *****

1784          KK      B1
1785          KM        ROUTE FLOW THROUGH OFFLINE DETENTION BASIN
1786          KM        FLOW OUTLETS THROUGH A 30 INCH OUTLET PIPE
              *      1        2
1787          RS       1    ELEV       0
1788          SV              .7     1.4     2.3     2.7     3.2
1789          SQ       0       5      16      28    32.5      37
1790          SE       0       1       2       3     3.5       4
              * DDM   ***** Preserved *****

1791          KK     RB1
1792          KM        ROUTE FLOW FROM BASIN DIVERSION TO COMBINE C52
1793          RS       2    FLOW      -1
1794          RC     .05    .035     .05    1720     .05
1795          RX    1000    1010    1020    1036    1041    1057    1067    1077
1796          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Preserved *****

1797          KK    CDIV
1798          KM        COMBINE FLOWS FROM WA30 AND BASIN 1
1799          HC       2     .12
              * DDM   ***** Updated *****

1800          KK     459
1801          KM   SUB-BASIN 459
1802          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1803          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1804          KM     L =  .35  Kb = .052  Adj. Slope =  251.6
1805          BA    .030
1806          LG    .220    .300   3.330    .710   8.000
1807          UC    .162    .157
1808          UA       0       5      16      30      65      77      84      90      94      97
1809          UA     100
              * DDM   ***** Preserved *****

1810          KK     C52
1811          KM        COMBINE FLOWS FROM SUB-BASIN 52 WA30 AND BASIN 1
1812          HC       2
              * DDM   ***** Preserved *****

1813          KK     R52
1814          KM        ROUTE FLOW FROM SUBBASIN 52 TO C102
1815          RS       2    FLOW      -1
1816          RC     .05    .035     .05    2000     .05
1817          RX    1000    1010    1020    1036    1041    1057    1067    1077
1818          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Updated *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1819          KK     460
1820          KM   SUB-BASIN 460
1821          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1822          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1823          KM     L =  .62  Kb = .058  Adj. Slope =  194.0
1824          BA    .140
1825          LG    .250    .260   3.740    .690  27.000
1826          UC    .242    .160
1827          UA       0       5      16      30      65      77      84      90      94      97
1828          UA     100
              * DDM   ***** Preserved *****

1829          KK    C102
1830          KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 52 AND 53
1831          HC       2
              * DDM   ***** Preserved *****

1832          KK  BASIN3
1833          KM        RESERVOIR AT CLUBHOUSE LOCATION 1-30 INCH PIPE AT OUTFALL
1834          KM        BOTTOM OF BASIN AT 6 FEET ABOVE 1795 ELEVATION
1835          RS       1    ELEV       0
1836          SA       0       0       0       0     .34    1.59    1.81    1.96    2.13     2.3
              *      0       0       0       0    1.14    3.25    5.52    9.23
1837          SQ       0      22      45    47.4      48      51      57      62      67      73
1838          SE    1795  1797.5    1800  1800.4  1800.5    1801    1802    1803    1804  1805.5
              * DDM   ***** Preserved *****

1839          KK      R3
1840          KM        ROUTE FLOW FROM C102 to C106
1841          RS       4    FLOW      -1
1842          RC     .05     .03     .05    2750   .0375
1843          RX    1000    1010    1020    1052    1086    1118    1128    1138
1844          RY    19.2    18.4      18      10      10      18    18.4    19.2
              * DDM   ***** Updated *****

1845          KK     461
1846          KM   SUB-BASIN 461
1847          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1848          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1849          KM     L =  .83  Kb = .052  Adj. Slope =  181.0
1850          BA    .120
1851          LG    .270    .250   4.250    .450  21.000
1852          UC    .271    .250
1853          UA       0       5      16      30      65      77      84      90      94      97
1854          UA     100
              * DDM   ***** Preserved *****

1855          KK    C104
1856          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 54 AND R102
1857          HC       2
              * DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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1858          KK    C106
1859          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN C103 AND C104
1860          HC       2
              * DDM   ***** Preserved *****

1861          KK    R106
1862          KM        ROUTE FLOW FROM C106 TO C49
1863          RS       2    FLOW      -1
1864          RC     .05    .035     .05    3950    .033
1865          RX    1000    1010    1020    1030    1050    1060    1070    1080
1866          RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
              * DDM   ***** Updated *****

1867          KK     462
1868          KM   SUB-BASIN 462
1869          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1870          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1871          KM     L =  .97  Kb = .045  Adj. Slope =  297.7
1872          BA    .301
1873          LG    .300    .330   5.300    .240  12.000
1874          UC    .225    .137
1875          UA       0       5      16      30      65      77      84      90      94      97
1876          UA     100
              * DDM   ***** Preserved *****

1877          KK     C56
1878          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 56 AND C106
              *      1       2
1879          HC       2
              * DDM   ***** Updated *****

1880          KK     480
1881          KM   SUB-BASIN 480
1882          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1883          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
1884          KM     L = 1.21  Kb = .042  Adj. Slope =  165.0
1885          BA    .731
1886          LG    .270    .270   3.580    .730  27.000
1887          UC    .325    .148
1888          UA       0       5      16      30      65      77      84      90      94      97
1889          UA     100
              * DDM   ***** Preserved *****

1890          KK    D480
1891          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1892          KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1893          KM   FOR BASIN #: 18 & 26
1894          KM        MAXIMUM VOLUME DIVERSION = 16.5 acre-feet
              *      1
1895          DT   BS480    16.5
1896          DI       0   10000
1897          DQ       0   10000
              * DDM   ***** Preserved *****
                                        HEC-1 INPUT                                          PAGE 49

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1898          KK   RT480
1899          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1900          DR   BS480
              * DDM   ***** Preserved *****

1901          KK   SR480
1902          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1903          KM    16.5 ACRE-FEETx43560/36x3600=5.5cfs
1904          RS       1    STOR       0
1905          SV       0     .01    16.5
1906          SQ       0     5.6     5.6
              * DDM   ***** Preserved *****

1907          KK    C480
1908          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1909          HC       2
              * DDM   ***** Preserved *****

1910          KK    480C
1911          KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1912          HC       3    2.09
              * DDM   ***** Preserved *****

1913          KK   RR480
1914          KM   ROUTE FLOW FROM SUB-BASIN 480 TO SUB-BASIN 500
1915          RS       1    FLOW      -1
1916          RC    .025    .025    .025    6500     .05
1917          RX       0       1       2      28      58      84      85      86
1918          RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
              * DDM   ***** Updated *****

1919          KK     500
1920          KM   SUB-BASIN 500
1921          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1922          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
1923          KM     L = 2.77  Kb = .042  Adj. Slope =  286.8
1924          BA    .930
1925          LG    .350    .400   6.000    .170   9.000
1926          UC    .421    .333
1927          UA       0       3       5       8      12      20      43      75      90      96
1928          UA     100
              * DDM   ***** Preserved *****

1929          KK    500C
1930          KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1931          HC       2    3.02
1932          ZZ
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SCHEMATIC DIAGRAM OF STREAM NETWORK

```
INPUT
 LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

  NO.      (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

  66          10
               V
               V
  76         R10
               V
               V
  82         R12
               .
               .
  88           .          20
               .           .
               .           .
  98         C20............
               .
               .
 101           .          40
               .           .
               .           .
 111           .           .          60
               .           .           .
               .           .           .
 121         60C........................
               V
               V
 124        SR60
               V
               V
 133         R60
               V
               V
 139        RR60
               .
               .
 145           .          80
               .           .
               .           .
 155         80C............
               V
               V
 158         R80
               .
               .
 164           .         100
               .           .
               .           .
 174        100C............
               V
               V
 177        R100
               .
               .
 183           .         120
               .           .
               .           .
 193        120C............
               V
               V
 196        R120
               .
               .
 202           .         140
               .           .
               .           .
 212           .           .         150
               .           .           V
               .           .           V
 222           .           .        R150
               .           .           V
               .           .           V
 228           .           .        R152
               .           .           .
               .           .           .
 234           .           .           .         160
               .           .           .           .
               .           .           .           .
 244           .           .           .           .         180
               .           .           .           .           .
               .           .           .           .           .
 254        180C...............................................
               .
               .
 257           .         383
               .           V
               .           V
 267           .        R383
               .           .
               .           .
 276           .           .         393
               .           .           .
               .           .           .
 286           .        393C............
               .           V
               .           V
 289           .        R393
               .           .
               .           .
 296           .           .         365
               .           .           .
               .           .           .
 306           .        365C............
               .           V
               .           V
 309           .        R365
               .           V
               .           V
 316           .        365R
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```
325                 353
                      .
                      .
335           353C............
                 V
                 V
338           R353
                 V
                 V
347           353R
                 .
                 .
354                 350
                      V
                      V
364                 350R
                      .
                      .
371                 .          310
                    .            .
                    .            .
381           C310......................
                 V
                 V
384           R310
                 V
                 V
391           R312
                 .
                 .
400                 295
                      .
                      .
410           295C............
                 V
                 V
413           295R
                 .
                 .
422                 210
                      V
                      V
432                 R210
                      .
                      .
438                 .          240
                    .            .
                    .            .
448           240C......................
                 V
                 V
451           SR240
                 .
                 .
460                 220
                      .
                      .
470           220C............
                 V
                 V
473           SR220
                 .
                 .
482                 190
                      V
                      V
492                 R190
                      V
                      V
498                 R192
                      .
                      .
504                 .          200
                    .            .
                    .            .
514           200C......................
                 V
                 V
517           SR200
                 V
                 V
524           200SR
                 .
                 .
534        C180............
              V
              V
537       SR180
              V
              V
546        R180
              .
              .
553              260
                 .
                 .
563        260C............
              V
              V
566        R260
              .
              .
573              280
                 .
                 .
583        280C............
              V
              V
586        R280
              .
              .
```

```
593          .         300
             .           .
             .           .
603       C300............
             .
             .
609          .------->   DIV30
606       D300
             .
             .
614          .           .<-------   DIV30
612          .      RTDIV
             .          V
             .          V
615          .      SRDIV
             .           .
             .           .
622       300C............
             .
             .
625          .         305
             .           .
             .           .
638          .           .------->    305D
635          .       D305
             .           .
             .           .
643          .           .           .<-------    305D
641          .           .      RT305
             .           .          V
             .           .          V
644          .           .      SR305
             .           .           .
             .           .           .
651       305C........................
             V
             V
654       R305
             V
             V
661      RR305
             .
             .
668          .         320
             .           .
             .           .
683          .           .------->   BS320
678          .       D320
             .           .
             .           .
688          .           .           .<-------   BS320
686          .           .      RT320
             .           .          V
             .           .          V
689          .           .      SR320
             .           .           .
             .           .           .
695       C320........................
             .
             .
698          .         340
             .           .
             .           .
713          .           .------->   BS340
708          .       D340
             .           .
             .           .
718          .           .           .<-------   BS340
716          .           .      RT340
             .           .          V
             .           .          V
719          .           .      SR340
             .           .           .
             .           .           .
725       C340........................
             .
             .
728          .         360
             .           .
             .           .
742          .           .------->   BS360
738          .       D360
             .           .
             .           .
747          .           .           .<-------   BS360
745          .           .      RT360
             .           .          V
             .           .          V
748          .           .      SR360
             .           .           .
             .           .           .
754       360C........................
             .
             .
757          .         380
             .           .
             .           .
771          .           .------->   BS380
767          .       D380
             .           .
             .           .
776          .           .           .<-------   BS380
774          .           .      RT380
             .           .          V
             .           .          V
777          .           .      SR380
             .           .           .
             .           .           .
783       380C........................
             .
             .
786          .         400
             .           .
```

```
800                 .-------> BS400
796             D400
                    .
                    .
805                 .<-------  BS400
803                 .      RT400
                    .          V
                    .          V
806                 .      SR400
                    .          .
                    .          .
812             C400............
                    .
                    .
815         400C............
                    .
818              355
                   V
                   V
828             R355
                    .
                    .
835                 .       361
                    .          .
                    .          .
849                 .-------> BS361
845                 .      D361
                    .          .
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854                 .          .<-------  BS361
852                 .          .      RT361
                    .          .          V
                    .          .          V
855                 .          .      SR361
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                    .          .          .
861             361C........................
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864                 .       342
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879                 .-------> BS3421
874                 .      D3421
                    .          .
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884                 .          .<-------  BS3421
882                 .          .      RT3421
                    .          .          V
                    .          .          V
885                 .          .      SR3421
                    .          .          .
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891                 .      C342............
                    .          .
                    .          .
898                 .-------> BS3422
894                 .      D3422
                    .          .
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903                 .          .<-------  BS3422
901                 .          .      RT3422
                    .          .          V
                    .          .          V
904                 .          .      SR3422
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910                 .      CC342............
                    .          V
                    .          V
913                 .      R342
                    .          .
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919                 .          .       341
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934                 .          .          .-------> BS341
929                 .          .       D341
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939                 .          .          .          .<-------  BS341
937                 .          .          .      RT341
                    .          .          .          V
                    .          .          .          V
940                 .          .          .      SR341
                    .          .          .          .
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946                 .      C341........................
                    .          V
                    .          V
949                 .      RR341
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956             361CC............
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963                 .-------> BS3612
959             D3612
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968                 .<-------  BS3612
966                 .     RT3612
                    .          V
                    .          V
969                 .     SR3612
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975             C3612............
                    V
                    V
978             RR361
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 984            .          .        381
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 998            .          .          .-------->   BS381
 994            .          .       D381
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1003            .          .          .          .<-------   BS381
1001            .          .          .      RT381
                .          .          .          V
                .          .          .          V
1004            .          .          .      SR381
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1010            .       381C.......................
                .          V
                .          V
1013            .      RR381
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1019            .          .        401
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1033            .          .          .-------->   BS401
1029            .          .       D401
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1038            .          .          .          .<-------   BS401
1036            .          .          .      RT401
                .          .          .          V
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1039            .          .          .      SR401
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1045         C401...................................
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1048            .        420
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1062            .          .-------->   BS420
1058            .       D420
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1067            .          .          .<-------   BS420
1065            .          .      RT420
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                .          .          V
1068            .          .      SR420
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1074         420C......................
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1077            .        370
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1090            .          .-------->   BS370
1087            .       D370
                .          .
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1095            .          .          .<-------   BS370
1093            .          .      RT370
                .          .          V
                .          .          V
1096            .          .      SR370
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1102            .       370C............
                .          .
                .          .
1105            .          .        395
                .          .          .
                .          .          .
1118            .          .          .-------->   BS395
1115            .          .       D395
                .          .          .
                .          .          .
1123            .          .          .          .<-------   BS395
1121            .          .          .      RT395
                .          .          .          V
                .          .          .          V
1124            .          .          .      SR395
                .          .          .          .
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1130            .       395C.......................
                .          V
                .          V
1133            .       R395
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1140            .          .        385
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1153            .          .          .-------->   SF385
1150            .          .       D385
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1158            .          .          .          .<-------   SF385
1156            .          .          .      RT385
                .          .          .          V
                .          .          .          V
1159            .          .          .      SR385
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1165            .          .       385C............
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1168            .          .          .        411
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1181                                  .-------> SF411
1178                            D411
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1186                              .          .<-------  SF411
1184                              .       RT411
                                  .          V
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1187                              .       SR411
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1193                        411C.......................
                               V
                               V
1196                        R411
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1203                              390
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1217                              .-------> BS390
1213                            D390
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1222                              .          .<-------  BS390
1220                              .       RT390
                                  .          V
                                  .          V
1223                              .       SR390
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1229                   390C...................................
                          V
                          V
1232                   RR390
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1239                          410
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1249                   410C............
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1252                          440
                               V
                               V
1262                          R70
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1268                              441
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1278                        C108............
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                                .
1283                            .-------> SPLIT
1281                        DIV4
                               V
                               V
1286                        R108
                                .
                                .
1292                              442
                                  .
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1302                          C67............
                                .
                                .
1308                            .-------> BASIN4
1305                        DIV6
                                .
                                .
1313                              .<-------  BASIN4
1311                            .     RTDIV6
                                .        V
                                .        V
1314                            .     RFDIV6
                                .        .
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1320                      CDIV6............
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1323                              443
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1336                              .-------> WSH66
1333                            .      DIV66
                                .        V
                                .        V
1339                            .      R113
                                .        .
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1345                        C114............
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1348                              444
                                  V
                                  V
1358                              R58
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1364                              .          445
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1374                            .      C107............
                                .        V
                                .        V
1377                            .      R107
                                .        .
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1385                            .        .<-------  SPLIT
1383                            .      RTB2
                                .        V
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1386                                    V
                                   RSPLIT
1392                                                446
1402                          C109.......................
1408                                  -------> WSH404
1405                          DIV5
                                 V
                                 V
1411                          R109
1417                                        447
1429                                                  .<-------  WSH404
1427                                              RT404
                                                     V
                                                     V
1430                                              R404
1436                          C110.......................
                                 V
                                 V
1439                          R110
1445                    C115............
                           V
                           V
1448                    R115
1455                            448
1465                                        449
1475                        C6364............
                                 V
                                 V
1478                        R6364
1484                                        450
1494                                                451
1506                                                        .<-------   WSH66
1504                                                    RT66
1507                                                                    452
1517                                                    C6465............
                                                           V
                                                           V
1520                                                    R6566
1526                          C116...................................
                                 V
                                 V
1529                        BASIN5
                                 V
                                 V
1536                          R116
1542                                        453
1552                          C117............
1555                    C118............
                           V
                           V
1558                    R118
1567                    -------> BASIN6
1564                    DIV7
1572                                  .<-------  BASIN6
1570                        RTDIV7
                                 V
                                 V
1573                        RFDIV7
1579                    CDIV7............
1582                            454
1592                    C119............
                           V
                           V
1595                    R454
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1602          .          .          .
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1612          .      415C.......................
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1618          .          .-------->   BS415
1615          .      D415
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1623          .          .          .<-------   BS415
1621          .          .      RT415
              .          .          V
              .          .          V
1624          .          .      SR415
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1630          .      C415............
              .          V
              .          V
1633          .      R415
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1640          .          .        455
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1655          .          .          .-------->   BS455
1650          .          .      D455
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1660          .          .          .          .<-------   BS455
1658          .          .          .      RT455
              .          .          .          V
              .          .          .          V
1661          .          .          .      SR455
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1667          .          .      C455............
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1670       455C.......................
              V
              V
1673      SR440
              V
              V
1682      RR455
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1688          .       456
              .          .
              .          .
1701          .          .-------->  BASIN1
1698          .      DIV1
              .          .
              .          .
1707          .          .-------->    WA30
1704          .      DIV2
              .          V
              .          V
1710          .      R456
              .          .
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1716          .          .        457
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1726          .      C101............
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              .          .
1732          .          .-------->  BASIN2
1729          .      DIV3
              .          .
              .          .
1737          .          .          .<-------  BASIN2
1735          .          .     RTDIV3
              .          .          V
              .          .          V
1738          .          .     RFDIV3
              .          .          .
              .          .          .
1744          .     CDIV3............
              .          V
              .          V
1747          .      R101
              .          .
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1753          .          .        458
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1763          .      C103............
              .          V
              .          V
1766          .      R103
              .          .
              .          .
1774          .          .          .<-------    WA30
1772          .          .       RT30
              .          .          V
              .          .          V
1775          .          .        R30
              .          .          .
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1783          .          .          .          .<-------  BASIN1
1781          .          .          .       RTB1
              .          .          .          V
              .          .          .          V
1784          .          .          .         B1
              .          .          .          V
              .          .          .          V
1791          .          .          .        RB1
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1797          .           .        CDIV............
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1800          .           .           .         459
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1810          .           .         C52............
              .           .           V
              .           .           V
1813          .           .         R52
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1819          .           .           .         460
              .           .           .           .
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1829          .           .        C102............
              .           .           V
              .           .           V
1832          .           .      BASIN3
              .           .           V
              .           .           V
1839          .           .          R3
              .           .           .
              .           .           .
1845          .           .           .         461
              .           .           .           .
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1855          .           .        C104............
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1858          .        C106............
              .           V
              .           V
1861          .        R106
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1867          .           .         462
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1877          .         C56............
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1880          .           .         480
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1895          .           .           .-------->   BS480
1890          .           .        D480
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1900          .           .           .          .<--------   BS480
1898          .           .           .       RT480
              .           .           .           V
              .           .           .           V
1901          .           .           .       SR480
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1907          .           .        C480............
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1910       480C........................
              V
              V
1913      RR480
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1919          .         500
              .           .
              .           .
1929       500C............
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(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+ HYDROGRAPH AT	10	951.	12.27	114.	31.	15.	.70		
+ ROUTED TO	R10	882.	12.40	114.	31.	15.	.70		
+ ROUTED TO	R12	833.	12.60	114.	31.	15.	.70		
+ HYDROGRAPH AT	20	959.	12.43	128.	32.	16.	1.12		
+ 2 COMBINED AT	C20	1663.	12.53	240.	63.	30.	1.82		
+ HYDROGRAPH AT	40	2582.	12.30	252.	66.	32.	2.23		
+ HYDROGRAPH AT	60	1553.	12.40	228.	61.	29.	1.75		
+ 3 COMBINED AT	60C	5274.	12.37	708.	188.	90.	5.80		
+ ROUTED TO	SR60	92.	14.40	92.	89.	70.	5.80		
+ ROUTED TO	R60	92.	14.40	92.	89.	70.	5.80		
+ ROUTED TO	RR60	92.	14.53	92.	89.	70.	5.80		
+ HYDROGRAPH AT	80	1868.	12.27	179.	46.	22.	1.48		
+ 2 COMBINED AT	80C	1942.	12.27	266.	134.	92.	1.48		
+ ROUTED TO	R80	1919.	12.27	266.	134.	92.	1.48		
+ HYDROGRAPH AT	100	404.	12.20	58.	15.	7.	.48		
2 COMBINED AT	100C	2300.	12.27	321.	148.	99.	1.96		
+ ROUTED TO	R100	2292.	12.30	321.	148.	99.	1.96		
+ HYDROGRAPH AT	120	3232.	12.27	326.	88.	42.	2.20		
+ 2 COMBINED AT	120C	5469.	12.27	636.	229.	141.	4.16		
+ ROUTED TO	R120	5397.	12.30	636.	229.	140.	4.16		
+ HYDROGRAPH AT	140	632.	12.13	64.	17.	8.	.60		
+ HYDROGRAPH AT	150	135.	13.20	47.	13.	6.	.41		
+ ROUTED TO	R150	134.	13.30	47.	13.	6.	.41		
+ ROUTED TO	R152	133.	13.50	47.	13.	6.	.41		
+ HYDROGRAPH AT	160	217.	12.40	35.	9.	4.	.37		
+ HYDROGRAPH AT	180	785.	12.37	90.	23.	11.	1.00		
+ 5 COMBINED AT	180C	6707.	12.30	857.	286.	168.	6.54		
+ HYDROGRAPH AT	383	642.	12.17	60.	17.	8.	.42		
+ ROUTED TO	R383	636.	12.17	60.	17.	8.	.42		
+ HYDROGRAPH AT	393	44.	12.13	4.	1.	0.	.04		
+ 2 COMBINED AT	393C	677.	12.17	64.	18.	9.	.46		
ROUTED TO	R393	674.	12.20	64.	18.	9.	.46		
+ HYDROGRAPH AT	365	380.	12.27	45.	12.	6.	.41		
+ 2 COMBINED AT	365C	1020.	12.20	108.	29.	14.	.87		
+ ROUTED TO	R365	1010.	12.23	108.	29.	14.	.87		

+	ROUTED TO	365R	964.	12.33	108.	29.	14.	.87
+	HYDROGRAPH AT	353	401.	12.30	49.	12.	6.	.50
+	2 COMBINED AT	353C	1343.	12.33	155.	41.	20.	1.38
+	ROUTED TO	R353	1303.	12.40	155.	41.	20.	1.38
+	ROUTED TO	353R	1286.	12.43	155.	41.	20.	1.38
+	HYDROGRAPH AT	350	1151.	12.20	102.	27.	13.	.94
+	ROUTED TO	350R	962.	12.47	102.	27.	13.	.94
+	HYDROGRAPH AT	310	376.	12.33	49.	12.	6.	.56
+	3 COMBINED AT	C310	2523.	12.43	300.	79.	38.	2.87
+	ROUTED TO	R310	2502.	12.47	300.	79.	38.	2.87
+	ROUTED TO	R312	2453.	12.57	300.	79.	38.	2.87
+	HYDROGRAPH AT	295	364.	12.30	40.	10.	5.	.38
+	2 COMBINED AT	295C	2646.	12.57	339.	88.	43.	3.25
+	ROUTED TO	295R	2614.	12.60	339.	88.	43.	3.25
+	HYDROGRAPH AT	210	873.	12.20	82.	22.	10.	.58
+	ROUTED TO	R210	818.	12.27	82.	22.	10.	.58
+	HYDROGRAPH AT	240	1405.	12.30	155.	39.	19.	1.40
+	3 COMBINED AT	240C	3735.	12.50	567.	147.	71.	5.23
+	ROUTED TO	SR240	1710.	12.93	502.	131.	63.	5.23
+	HYDROGRAPH AT	220	1126.	12.17	98.	25.	12.	.73
+	2 COMBINED AT	220C	1760.	12.90	592.	155.	74.	5.95
+	ROUTED TO	SR220	1679.	13.07	581.	152.	73.	5.95
+	HYDROGRAPH AT	190	1403.	12.17	116.	31.	15.	.92
+	ROUTED TO	R190	1348.	12.23	116.	31.	15.	.92
+	ROUTED TO	R192	1267.	12.30	116.	31.	15.	.92
+	HYDROGRAPH AT	200	703.	12.20	69.	19.	9.	.54
+	3 COMBINED AT	200C	2635.	12.30	753.	198.	96.	7.40
+	ROUTED TO	SR200	2495.	12.40	748.	195.	94.	7.40
+	ROUTED TO	200SR	1896.	12.67	628.	165.	79.	7.40
+	2 COMBINED AT	C180	6707.	12.30	1479.	451.	247.	13.94
+	ROUTED TO	SR180	143.	19.37	142.	142.	114.	13.94
+	ROUTED TO	R180	143.	19.43	142.	142.	114.	13.94
+	HYDROGRAPH AT	260	418.	12.10	43.	12.	6.	.27
+	2 COMBINED AT	260C	527.	12.10	179.	153.	121.	.27
+	ROUTED TO	R260	514.	12.20	178.	153.	121.	.27
+	HYDROGRAPH AT	280	478.	12.10	42.	12.	6.	.30
+	2 COMBINED AT	280C	945.	12.13	218.	163.	126.	.57
+	ROUTED TO	R280	909.	12.20	217.	163.	126.	.57

+	HYDROGRAPH AT 300	407.	12.10	34.	9.	5.	.30
+	2 COMBINED AT C300	1243.	12.17	249.	171.	130.	.87
+	DIVERSION TO DIV30	943.	12.17	68.	17.	8.	.87
+	HYDROGRAPH AT D300	300.	11.87	180.	154.	122.	.87
+	HYDROGRAPH AT RTDIV	943.	12.17	68.	17.	8.	.87
+	ROUTED TO SRDIV	141.	12.60	62.	17.	8.	.87
+	2 COMBINED AT 300C	441.	12.60	242.	171.	130.	.87
+	HYDROGRAPH AT 305	409.	12.27	42.	11.	6.	.38
+	DIVERSION TO 305D	409.	12.27	42.	11.	6.	.38
+	HYDROGRAPH AT D305	0.	.00	0.	0.	0.	.38
+	HYDROGRAPH AT RT305	409.	12.27	42.	11.	6.	.38
+	ROUTED TO SR305	62.	12.93	36.	11.	6.	.38
+	3 COMBINED AT 305C	498.	12.67	276.	181.	135.	1.25
+	ROUTED TO R305	497.	12.73	275.	181.	135.	1.25
+	ROUTED TO RR305	494.	12.77	275.	181.	134.	1.25
+	HYDROGRAPH AT 320	1040.	12.17	111.	31.	15.	.87
+	DIVERSION TO BS320	409.	11.93	21.	6.	3.	.87
+	HYDROGRAPH AT D320	1040.	12.17	96.	25.	12.	.87
+	HYDROGRAPH AT RT320	409.	11.93	21.	6.	3.	.87
+	ROUTED TO SR320	4.	4.17	4.	4.	3.	.87
+	3 COMBINED AT C320	1351.	12.17	373.	210.	149.	2.12
+	HYDROGRAPH AT 340	1056.	12.20	143.	43.	21.	1.02
+	DIVERSION TO BS340	1056.	12.20	71.	20.	9.	1.02
+	HYDROGRAPH AT D340	945.	12.30	85.	23.	11.	1.02
+	HYDROGRAPH AT RT340	1056.	12.20	71.	20.	9.	1.02
+	ROUTED TO SR340	13.	8.37	13.	13.	9.	1.02
+	3 COMBINED AT C340	2103.	12.30	467.	245.	169.	3.14
+	HYDROGRAPH AT 360	283.	12.20	45.	14.	7.	.31
+	DIVERSION TO BS360	283.	12.20	29.	8.	4.	.31
+	HYDROGRAPH AT D360	173.	12.53	20.	6.	3.	.31
+	HYDROGRAPH AT RT360	283.	12.20	29.	8.	4.	.31
+	ROUTED TO SR360	5.	8.80	5.	5.	4.	.31
+	3 COMBINED AT 360C	2106.	12.30	490.	256.	175.	3.45
+	HYDROGRAPH AT 380	321.	12.13	32.	9.	5.	.27
+	DIVERSION TO BS380	276.	12.07	13.	4.	2.	.27
+	HYDROGRAPH AT D380	321.	12.13	21.	6.	3.	.27
+	HYDROGRAPH AT RT380	276.	12.07	13.	4.	2.	.27
+	ROUTED TO SR380	2.	8.20	2.	2.	2.	.27

+	3 COMBINED AT	380C	2309.	12.30	512.	264.	180.	3.72
+	HYDROGRAPH AT	400	58.	12.10	4.	1.	1.	.05
	DIVERSION TO	BS400	58.	12.10	3.	1.	0.	.05
+	HYDROGRAPH AT	D400	21.	12.33	1.	0.	0.	.05
+	HYDROGRAPH AT	RT400	58.	12.10	3.	1.	0.	.05
+	ROUTED TO	SR400	1.	11.87	1.	1.	0.	.05
+	2 COMBINED AT	C400	22.	12.33	2.	1.	1.	.05
+	2 COMBINED AT	400C	2311.	12.30	513.	264.	180.	3.78
+	HYDROGRAPH AT	355	235.	12.10	22.	6.	3.	.17
+	ROUTED TO	R355	212.	12.27	22.	6.	3.	.17
+	HYDROGRAPH AT	361	499.	12.10	49.	15.	7.	.36
+	DIVERSION TO	BS361	475.	12.07	23.	7.	3.	.36
+	HYDROGRAPH AT	D361	486.	12.13	30.	8.	4.	.36
+	HYDROGRAPH AT	RT361	475.	12.07	23.	7.	3.	.36
+	ROUTED TO	SR361	4.	8.30	4.	4.	3.	.36
+	3 COMBINED AT	361C	634.	12.13	56.	18.	10.	.53
+	HYDROGRAPH AT	342	420.	12.07	36.	10.	5.	.30
+	DIVERSION TO	BS3421	358.	12.00	15.	4.	2.	.30
	HYDROGRAPH AT	D3421	418.	12.10	23.	6.	3.	.30
+	HYDROGRAPH AT	RT3421	358.	12.00	15.	4.	2.	.30
+	ROUTED TO	SR3421	3.	8.57	3.	3.	2.	.30
+	2 COMBINED AT	C342	420.	12.10	26.	9.	5.	.30
+	DIVERSION TO	BS3422	420.	12.10	25.	8.	4.	.30
+	HYDROGRAPH AT	D3422	4.	21.33	3.	3.	1.	.30
+	HYDROGRAPH AT	RT3422	420.	12.10	25.	8.	4.	.30
+	ROUTED TO	SR3422	5.	12.07	5.	5.	4.	.30
+	2 COMBINED AT	CC342	9.	21.33	8.	8.	5.	.30
+	ROUTED TO	R342	9.	21.63	8.	8.	5.	.30
+	HYDROGRAPH AT	341	284.	12.13	35.	11.	5.	.23
+	DIVERSION TO	BS341	246.	12.03	15.	4.	2.	.23
+	HYDROGRAPH AT	D341	284.	12.13	25.	7.	3.	.23
+	HYDROGRAPH AT	RT341	246.	12.03	15.	4.	2.	.23
+	ROUTED TO	SR341	3.	4.57	3.	3.	2.	.23
+	3 COMBINED AT	C341	287.	12.13	33.	17.	10.	.53
	ROUTED TO	RR341	209.	12.60	33.	17.	10.	.53
+	2 COMBINED AT	361CC	634.	12.13	87.	34.	20.	1.06
+	DIVERSION TO	BS3612	633.	12.13	83.	25.	12.	1.06
+	HYDROGRAPH AT	D3612	21.	22.03	20.	15.	8.	1.06

+	HYDROGRAPH AT	RT3612	633.	12.13	83.	25.	12.	1.06
+	ROUTED TO	SR3612	17.	11.90	17.	17.	12.	1.06
	2 COMBINED AT	C3612	38.	22.03	37.	32.	20.	1.06
+	ROUTED TO	RR361	38.	22.30	37.	32.	20.	1.06
+	HYDROGRAPH AT	381	749.	12.17	84.	24.	11.	.73
+	DIVERSION TO	BS381	749.	12.17	41.	11.	5.	.73
+	HYDROGRAPH AT	D381	658.	12.27	48.	13.	6.	.73
+	HYDROGRAPH AT	RT381	749.	12.17	41.	11.	5.	.73
+	ROUTED TO	SR381	7.	9.87	7.	7.	5.	.73
+	3 COMBINED AT	381C	673.	12.27	74.	50.	31.	1.79
+	ROUTED TO	RR381	588.	12.40	74.	50.	31.	1.79
+	HYDROGRAPH AT	401	448.	12.23	67.	19.	9.	.61
+	DIVERSION TO	BS401	44.	11.80	6.	2.	1.	.61
+	HYDROGRAPH AT	D401	448.	12.23	65.	17.	8.	.61
+	HYDROGRAPH AT	RT401	44.	11.80	6.	2.	1.	.61
+	ROUTED TO	SR401	1.	.93	1.	1.	1.	.61
+	4 COMBINED AT	C401	2983.	12.37	642.	329.	219.	6.17
+	HYDROGRAPH AT	420	562.	12.17	77.	22.	11.	.59
	DIVERSION TO	BS420	206.	11.93	14.	4.	2.	.59
+	HYDROGRAPH AT	D420	562.	12.17	69.	18.	9.	.59
+	HYDROGRAPH AT	RT420	206.	11.93	14.	4.	2.	.59
+	ROUTED TO	SR420	13.	10.83	12.	4.	2.	.59
+	3 COMBINED AT	420C	3384.	12.33	705.	345.	228.	10.87
+	HYDROGRAPH AT	370	406.	12.07	34.	10.	5.	.26
+	DIVERSION TO	BS370	356.	12.07	21.	5.	3.	.26
+	HYDROGRAPH AT	D370	50.	11.70	13.	4.	2.	.26
+	HYDROGRAPH AT	RT370	356.	12.07	21.	5.	3.	.26
+	ROUTED TO	SR370	4.	11.73	4.	4.	3.	.26
+	2 COMBINED AT	370C	54.	11.73	16.	7.	5.	.26
+	HYDROGRAPH AT	395	204.	12.10	21.	6.	3.	.16
+	DIVERSION TO	BS395	179.	12.10	13.	3.	2.	.16
+	HYDROGRAPH AT	D395	25.	11.73	8.	2.	1.	.16
+	HYDROGRAPH AT	RT395	179.	12.10	13.	3.	2.	.16
+	ROUTED TO	SR395	2.	11.77	2.	2.	2.	.16
	3 COMBINED AT	395C	81.	11.77	25.	11.	7.	.42
+	ROUTED TO	R395	81.	11.93	25.	11.	7.	.42
+	HYDROGRAPH AT	385	389.	12.07	28.	8.	4.	.23
+	DIVERSION TO	SF385	339.	12.07	18.	5.	2.	.23

+	HYDROGRAPH AT	D385	50.	11.73	10.	3.	2.	.23
+	HYDROGRAPH AT	RT385	339.	12.07	18.	5.	2.	.23
	ROUTED TO	SR385	3.	11.77	3.	3.	2.	.23
+	2 COMBINED AT	385C	53.	11.77	13.	6.	4.	.23
+	HYDROGRAPH AT	411	329.	12.07	25.	7.	3.	.20
+	DIVERSION TO	SF411	304.	12.07	19.	5.	2.	.20
+	HYDROGRAPH AT	D411	25.	11.67	6.	2.	1.	.20
+	HYDROGRAPH AT	RT411	304.	12.07	19.	5.	2.	.20
+	ROUTED TO	SR411	3.	11.70	3.	3.	2.	.20
+	3 COMBINED AT	411C	81.	11.77	21.	10.	7.	.44
+	ROUTED TO	R411	81.	11.83	21.	10.	7.	.44
+	HYDROGRAPH AT	390	463.	12.03	33.	10.	5.	.24
+	DIVERSION TO	BS390	95.	11.73	6.	2.	1.	.24
+	HYDROGRAPH AT	D390	463.	12.03	30.	8.	4.	.24
+	HYDROGRAPH AT	RT390	95.	11.73	6.	2.	1.	.24
+	ROUTED TO	SR390	1.	.90	1.	1.	1.	.24
+	4 COMBINED AT	390C	617.	12.03	77.	31.	19.	1.10
+	ROUTED TO	RR390	525.	12.23	77.	31.	19.	1.10
	HYDROGRAPH AT	410	336.	12.10	32.	9.	4.	.27
+	2 COMBINED AT	410C	778.	12.20	107.	39.	23.	1.37
+	HYDROGRAPH AT	440	180.	12.03	12.	3.	2.	.08
+	ROUTED TO	R70	176.	12.07	12.	3.	2.	.08
+	HYDROGRAPH AT	441	16.	12.03	1.	0.	0.	.01
+	2 COMBINED AT	C108	191.	12.07	14.	4.	2.	.09
+	DIVERSION TO	SPLIT	96.	12.07	7.	2.	1.	.09
+	HYDROGRAPH AT	DIV4	96.	12.07	7.	2.	1.	.09
+	ROUTED TO	R108	88.	12.13	7.	2.	1.	.09
+	HYDROGRAPH AT	442	102.	12.10	9.	2.	1.	.10
+	2 COMBINED AT	C67	187.	12.10	15.	4.	2.	.19
+	DIVERSION TO	BASIN4	115.	12.10	6.	1.	1.	.19
+	HYDROGRAPH AT	DIV6	72.	12.10	10.	3.	1.	.19
+	HYDROGRAPH AT	RTDIV6	115.	12.10	6.	1.	1.	.19
+	ROUTED TO	RFDIV6	1.	11.90	1.	1.	1.	.19
+	2 COMBINED AT	CDIV6	74.	12.10	10.	4.	2.	.19
	HYDROGRAPH AT	443	148.	12.07	14.	4.	2.	.08
+	DIVERSION TO	WSH66	78.	11.90	12.	3.	2.	.08
+	HYDROGRAPH AT	DIV66	70.	12.07	3.	1.	0.	.08
+	ROUTED TO	R113	69.	12.07	3.	1.	0.	.08

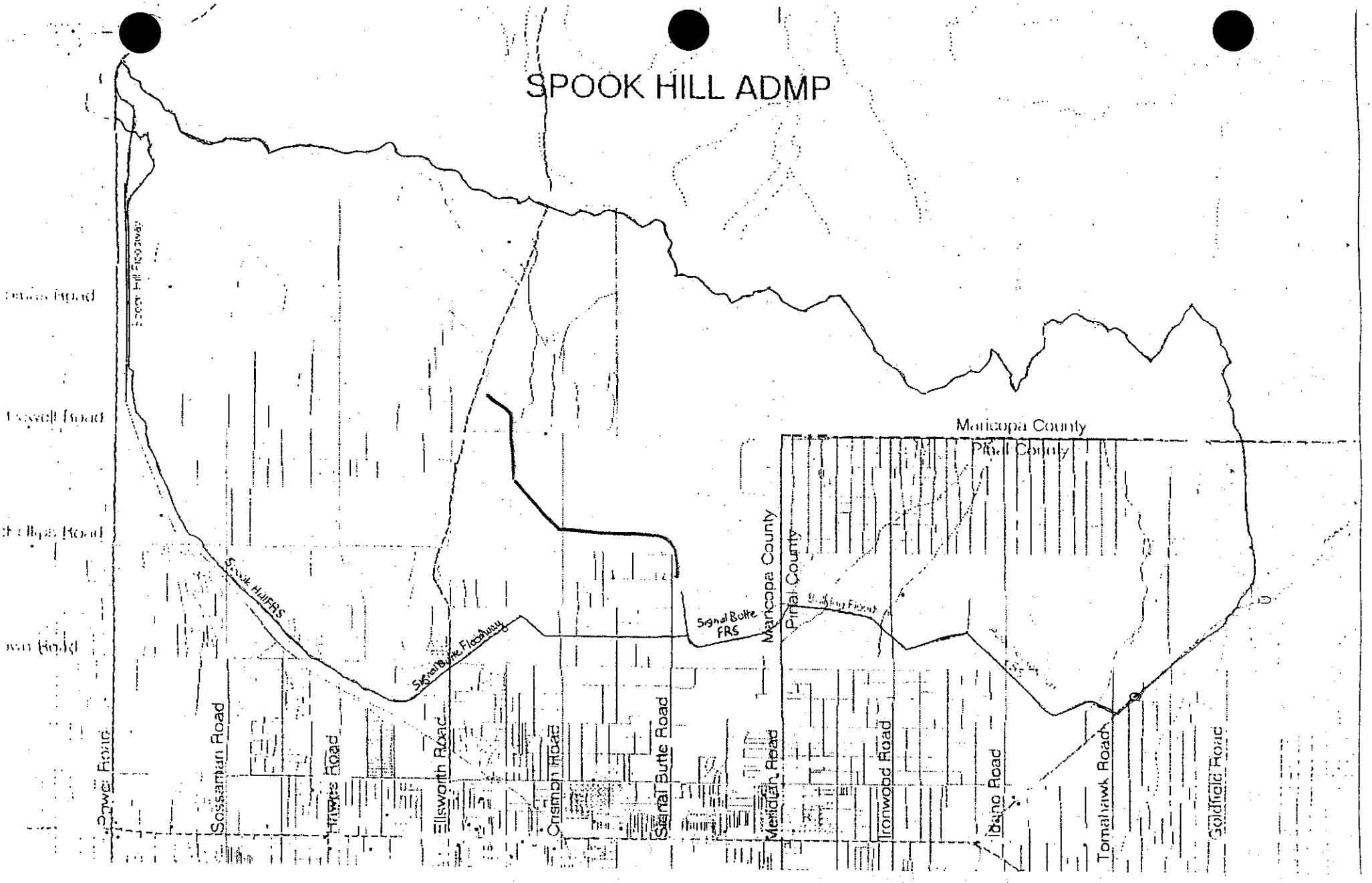
+	2 COMBINED AT	C114	140.	12.07	13.	4.	2.	.27
+	HYDROGRAPH AT	444	82.	12.03	5.	1.	1.	.04
	ROUTED TO	R58	75.	12.07	5.	1.	1.	.04
+	HYDROGRAPH AT	445	296.	12.03	18.	5.	2.	.19
+	2 COMBINED AT	C107	365.	12.03	22.	6.	3.	.23
+	ROUTED TO	R107	365.	12.07	22.	6.	3.	.23
+	HYDROGRAPH AT	RTB2	96.	12.07	7.	2.	1.	.09
+	ROUTED TO	RSPLIT	95.	12.07	7.	2.	1.	.09
+	HYDROGRAPH AT	446	65.	12.03	6.	2.	1.	.04
+	3 COMBINED AT	C109	520.	12.07	35.	9.	4.	.27
+	DIVERSION TO	WSH404	35.	11.73	8.	2.	1.	.27
+	HYDROGRAPH AT	DIV5	485.	12.07	27.	7.	3.	.27
+	ROUTED TO	R109	469.	12.10	27.	7.	3.	.27
+	HYDROGRAPH AT	447	138.	12.07	12.	4.	2.	.09
+	HYDROGRAPH AT	RT404	35.	11.73	8.	2.	1.	.27
+	ROUTED TO	R404	35.	11.90	8.	2.	1.	.27
+	3 COMBINED AT	C110	635.	12.07	46.	13.	6.	.36
+	ROUTED TO	R110	632.	12.10	46.	13.	6.	.36
	2 COMBINED AT	C115	764.	12.10	59.	17.	8.	.63
+	ROUTED TO	R115	767.	12.10	59.	17.	8.	.63
+	HYDROGRAPH AT	448	88.	12.03	6.	2.	1.	.05
+	HYDROGRAPH AT	449	80.	12.03	5.	1.	1.	.05
+	2 COMBINED AT	C6364	166.	12.03	11.	3.	1.	.09
+	ROUTED TO	R6364	137.	12.17	11.	3.	1.	.09
+	HYDROGRAPH AT	450	61.	12.20	6.	2.	1.	.07
+	HYDROGRAPH AT	451	18.	12.17	2.	1.	0.	.03
+	HYDROGRAPH AT	RT66	78.	11.90	12.	3.	2.	.08
+	HYDROGRAPH AT	452	62.	12.03	4.	1.	1.	.04
+	2 COMBINED AT	C6465	140.	12.03	16.	4.	2.	.04
+	ROUTED TO	R6566	135.	12.10	16.	4.	2.	.04
+	4 COMBINED AT	C116	341.	12.17	35.	9.	4.	.23
+	ROUTED TO	BASIN5	152.	12.47	35.	9.	4.	.23
+	ROUTED TO	R116	150.	12.53	35.	9.	4.	.23
+	HYDROGRAPH AT	453	62.	12.10	7.	2.	1.	.06
	2 COMBINED AT	C117	169.	12.50	41.	11.	5.	.29
+	2 COMBINED AT	C118	852.	12.10	99.	28.	14.	.92
+	ROUTED TO	R118	842.	12.10	99.	28.	14.	.92
+	DIVERSION TO	BASIN6	243.	12.10	10.	2.	1.	.92

+	HYDROGRAPH AT	DIV7	599.	12.10	89.	25.	13.	.92
+	HYDROGRAPH AT	RTDIV7	243.	12.10	10.	2.	1.	.92
	ROUTED TO	RFDIV7	1.	11.97	1.	1.	1.	.92
+	2 COMBINED AT	CDIV7	600.	12.10	90.	26.	13.	.92
+	HYDROGRAPH AT	454	157.	12.17	21.	6.	3.	.18
+	2 COMBINED AT	C119	748.	12.13	110.	32.	16.	1.10
+	ROUTED TO	R454	721.	12.20	110.	32.	16.	1.10
+	HYDROGRAPH AT	415	294.	12.13	31.	9.	4.	.28
+	3 COMBINED AT	415C	1743.	12.20	244.	77.	43.	2.75
+	DIVERSION TO	BS415	643.	12.20	28.	7.	3.	2.75
+	HYDROGRAPH AT	D415	1100.	12.03	216.	70.	39.	2.75
+	HYDROGRAPH AT	RT415	643.	12.20	28.	7.	3.	2.75
+	ROUTED TO	SR415	5.	12.03	5.	5.	3.	2.75
+	2 COMBINED AT	C415	1105.	12.03	220.	75.	43.	2.75
+	ROUTED TO	R415	1108.	12.13	220.	75.	43.	2.75
+	HYDROGRAPH AT	455	1346.	12.13	142.	43.	21.	1.11
+	DIVERSION TO	BS455	1346.	12.13	137.	37.	18.	1.11
+	HYDROGRAPH AT	D455	55.	12.77	16.	6.	3.	1.11
	HYDROGRAPH AT	RT455	1346.	12.13	137.	37.	18.	1.11
+	ROUTED TO	SR455	25.	10.47	25.	25.	18.	1.11
+	2 COMBINED AT	C455	80.	12.77	41.	31.	21.	1.11
+	3 COMBINED AT	455C	4400.	12.37	936.	441.	286.	14.73
+	ROUTED TO	SR440	755.	13.57	740.	441.	286.	14.73
+	ROUTED TO	RR455	754.	13.87	739.	441.	283.	14.73
+	HYDROGRAPH AT	456	468.	12.07	35.	10.	5.	.26
+	DIVERSION TO	BASIN1	184.	12.07	8.	2.	1.	.26
+	HYDROGRAPH AT	DIV1	284.	12.07	27.	8.	4.	.26
+	DIVERSION TO	WA30	58.	12.07	10.	3.	2.	.26
+	HYDROGRAPH AT	DIV2	226.	12.07	18.	4.	2.	.26
+	ROUTED TO	R456	213.	12.13	18.	4.	2.	.26
+	HYDROGRAPH AT	457	264.	12.07	20.	5.	3.	.19
+	2 COMBINED AT	C101	462.	12.10	38.	10.	5.	.45
+	DIVERSION TO	BASIN2	165.	12.10	7.	2.	1.	.45
+	HYDROGRAPH AT	DIV3	297.	12.10	30.	8.	4.	.45
	HYDROGRAPH AT	RTDIV3	165.	12.10	7.	2.	1.	.45
+	ROUTED TO	RFDIV3	2.	11.90	2.	2.	1.	.45
+	2 COMBINED AT	CDIV3	299.	12.10	32.	9.	5.	.45
+	ROUTED TO	R101	297.	12.10	32.	9.	5.	.45

+	HYDROGRAPH AT	458	356.	12.03	25.	7.	3.	.19
+	2 COMBINED AT	C103	635.	12.07	56.	16.	8.	.64
+	ROUTED TO	R103	630.	12.07	56.	16.	8.	.64
+	HYDROGRAPH AT	RT30	58.	12.07	10.	3.	2.	.26
+	ROUTED TO	R30	57.	12.10	10.	3.	2.	.26
+	HYDROGRAPH AT	RTB1	184.	12.07	8.	2.	1.	.26
+	ROUTED TO	B1	37.	12.23	8.	2.	1.	.26
+	ROUTED TO	RB1	37.	12.30	8.	2.	1.	.26
+	2 COMBINED AT	CDIV	86.	12.20	17.	5.	3.	.12
+	HYDROGRAPH AT	459	44.	12.03	3.	1.	0.	.03
+	2 COMBINED AT	C52	113.	12.10	20.	6.	3.	.15
+	ROUTED TO	R52	112.	12.17	20.	6.	3.	.15
+	HYDROGRAPH AT	460	214.	12.07	19.	6.	3.	.14
+	2 COMBINED AT	C102	313.	12.07	39.	12.	6.	.29
+	ROUTED TO	BASIN3	71.	12.63	39.	12.	6.	.29
+	ROUTED TO	R3	71.	12.77	39.	12.	6.	.29
+	HYDROGRAPH AT	461	161.	12.10	17.	5.	2.	.12
+	2 COMBINED AT	C104	213.	12.10	55.	17.	8.	.41
+	2 COMBINED AT	C106	835.	12.07	110.	32.	16.	1.05
+	ROUTED TO	R106	797.	12.13	110.	32.	16.	1.05
+	HYDROGRAPH AT	462	538.	12.07	40.	11.	5.	.30
+	2 COMBINED AT	C56	1254.	12.10	149.	42.	21.	1.35
+	HYDROGRAPH AT	480	1050.	12.10	96.	29.	14.	.73
+	DIVERSION TO	BS480	455.	11.90	27.	8.	4.	.73
+	HYDROGRAPH AT	D480	1050.	12.10	78.	21.	10.	.73
+	HYDROGRAPH AT	RT480	455.	11.90	27.	8.	4.	.73
+	ROUTED TO	SR480	6.	3.90	6.	6.	4.	.73
+	2 COMBINED AT	C480	1056.	12.10	84.	27.	14.	.73
+	3 COMBINED AT	480C	2508.	12.10	925.	520.	327.	2.09
+	ROUTED TO	RR480	2345.	12.13	922.	520.	326.	2.09
+	HYDROGRAPH AT	500	1073.	12.27	122.	33.	16.	.93
+	2 COMBINED AT	500C	3237.	12.20	1034.	548.	340.	3.02

*** NORMAL END OF HEC-1 ***

SPOOK HILL ADMP



HEC-1 Existing Condition 100-Year, 24-Hour Storm. Model update based on #34; with additional diversion added creating sub-basins 353 and 355 from sub-basin 355.

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1*************************************
*                                   *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*            JUN   1998             *
*          VERSION 4.1              *
*                                   *
*  RUN DATE   14JUN00  TIME  12:07:13  *
*                                   *
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*                                   *
*    U.S. ARMY CORPS OF ENGINEERS   *
*    HYDROLOGIC ENGINEERING CENTER  *
*          609 SECOND STREET        *
*       DAVIS, CALIFORNIA 95616     *
*           (916) 756-1104          *
*                                   *
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X     X  XXXXXXX   XXXXX          X
X     X  X        X     X        XX
X     X  X        X               X
XXXXXXX  XXXX     X        XXXXX  X
X     X  X        X               X
X     X  X        X     X         X
X     X  XXXXXXX   XXXXX         XXX
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THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

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1                                   HEC-1 INPUT                                          PAGE  1

  LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

    1           ID   EXISTING LAND USE CALCULATIONS WERE BASED ON 1 YR. FROM 11/5/99
    2           ID   FOR LAS SENDAS       AND LANDISCOR JAN.1999 AERIAL PHOTOGPRAPHS
    3           ID
    4           ID   ALL DAMS WERE ANALYZED WITH NO STORAGE BELOW PRINCIPLE SPILLWAY ELEVATIONS
    5           ID
    6           ID   A CONSERVATIVE ESTIMATE WAS USED FOR THE LOCATION OF THE CENTROID FOR
    7           ID   PRECIPITATION VALUES
    8           ID
    9           ID   ALL CHANNEL ROUTING INFORMATION WAS OBTAINED FROM MCFCD SPOOK HILL   SIGNAL
   10           ID   BUTTE        AND BULLDOG FLOODWAY PLANS
   11           ID
   12           ID
   13           ID   PASS MOUNTAIN DIVERSION UPDATE UTILIZING S24CE10.DAT AS 24hr 100yr EVENT
   14           ID   PASS MOUNTAIN DIVERSION EXTENDED NORTH-WEST CREATING SUB-BASIN 295,
   15           ID   300 & 305 FROM SUB-BASIN 300; 353, 355 FROM SUB-BASIN 355
   16           ID   OFFLINE BASINS ADDED TO SUB-BASINS 300 & 305
   17           ID   ANALYSIS PERFORMED BY WOOD/PATEL; MW;  06/14/00;       FILE: S24CE21.DAT
   18           ID
   19           ID   DDM MCUHP1 SPOOK HILL AMDP - EXISTING CONDITIONS MODEL - 100YR, 24HR STORM
                *DIAGRAM
   20           IT       2                    1500
   21           IO       3
   22           IN      15
   23           JD    3.81    0.01
   24           PC    .000    .002    .005    .008    .011    .014    .017    .020    .023    .026
   25           PC    .029    .032    .035    .038    .041    .044    .048    .052    .056    .060
   26           PC    .064    .068    .072    .076    .080    .085    .090    .095    .100    .105
   27           PC    .110    .115    .120    .126    .133    .140    .147    .155    .163    .172
   28           PC    .181    .191    .203    .218    .236    .257    .283    .387    .663    .707
   29           PC    .735    .758    .776    .791    .804    .815    .825    .834    .842    .849
   30           PC    .856    .863    .869    .875    .881    .887    .893    .898    .903    .908
   31           PC    .913    .918    .922    .926    .930    .934    .938    .942    .946    .950
   32           PC    .953    .956    .959    .962    .965    .968    .971    .974    .977    .980
   33           PC    .983    .986    .989    .992    .995    .998   1.000
   34           JD    3.58   10.00
   35           JD    3.43   30.00
   36           JD    3.28   60.00
   37           JD    3.22   90.00
   38           JD    3.18  120.00
   39           JD    3.14  150.00
   40           JD    3.05  300.00
   41           JD    2.97  500.00
                * DDM   ***** Updated *****

   42           KK      10
   43           KM   SUB-BASIN 10
   44           KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
   45           KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
   46           KM     L = 2.00  Kb = .044  Adj. Slope =  165.0
   47           BA    .702
   48           LG    .350    .320   7.600    .090  15.000
   49           UC    .421    .302
   50           UA       0       3       5       8      12      20      43      75      90      96
   51           UA     100
                * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE  2

  LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

   52           KK     R10
   53           KM   ROUTING OF FLOW FROM SUB-BASIN 10 TO R12
   54           RS       4    FLOW      -1
   55           RC    .045     .03    .045    8700    .021
   56           RX       0       1       2      17      27      42      43      44
   57           RY       5       5       5       0       0       5       5       5
                * DDM   ***** Preserved *****

   58           KK     R12
   59           KM   ROUTING OF FLOW FROM R12 TO SUB-BASIN 20
   60           RS       6    FLOW      -1
   61           RC    .045     .03    .045    4500     .01
   62           RX       0       1      30    37.5    57.5      65      94      95
   63           RY       3     2.5     2.5       0       0     2.5     2.5       3
                * DDM   ***** Updated *****
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 64          KK      20
 65          KM   SUB-BASIN 20
 66          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 67          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
 68          KM     L = 2.50  Kb = .041  Adj. Slope =   88.0
 69          BA   1.120
 70          LG    .350    .390   5.800    .190   1.000
 71          UC    .658    .454
 72          UA       0       3       5       8      12      20      43      75      90      96
 73          UA     100
             * DDM   ***** Preserved *****

 74          KK     C20
 75          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 10 AND 20
 76          HC       2
             * DDM   ***** Updated *****

 77          KK      40
 78          KM   SUB-BASIN 40
 79          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 80          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
 81          KM     L = 3.08  Kb = .036  Adj. Slope =  189.0
 82          BA   2.233
 83          LG    .340    .340   4.900    .280   5.000
 84          UC    .496    .264
 85          UA       0       3       5       8      12      20      43      75      90      96
 86          UA     100
             * DDM   ***** Updated *****

 87          KK      60
 88          KM   SUB-BASIN 60
 89          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 90          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .990
 91          KM     L = 4.19  Kb = .038  Adj. Slope =  209.6
 92          BA   1.746
 93          LG    .330    .350   5.800    .190   9.000
 94          UC    .596    .477
 95          UA       0       3       5       8      12      20      43      75      90      96
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 96          UA     100
             * DDM   ***** Preserved *****

 97          KK     60C
 98          KM   HYDROGRAPH COMBINATION FOR APACHE JUNCTION FRS
             *      1       2
 99          HC       3
             * DDM   ***** Preserved *****

100          KK    SR60
101          KM   APACHE JUNCTION FRS AS-BUILT PLANS 12/19/88
102          KM   OUTLET PIPE=30"RCP; L=136.6'; INLET INV.=1783.5; OUTLET INV.=1783
103          KM   EMERGENCY SPILLWAY ELEV.=1799.77'; PRINCIPLE SPILLWAY ELEV.=1793.5'
104          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 100 ACRE-FEET
105          RS       1    STOR       0
106          SV       0       1     100     200     300     400
107          SQ       0      71      81      87    91.5      94
108          SE    83.5    93.5      96    97.7      99   99.77
             * DDM   ***** Preserved *****

109          KK     R60
110          KM        ROUTE FLOW THROUGH BULLDOG FLOODWAY FROM APACHE JUNCTION FRS
111          RS       1    FLOW      -1
112          RC    .016    .016    .016    2850    .012
113          RX       0       1       2     2.1     5.6     5.7       6       7
114          RY     3.5     3.5     3.5       0       0     3.5     3.5     3.5
             * DDM   ***** Preserved *****

115          KK    RR60
116          KM   ROUTE FLOW FROM BULLDOG FLOODWAY TO SUB-BASIN 80
117          RS       4    FLOW      -1
118          RC    .016    .016    .016    3500    .005
119          RX       0       1       2     2.1     7.1     7.2       8       9
120          RY     3.5     3.5     3.5       0       0     3.5     3.5     3.5
             * DDM   ***** Updated *****

121          KK      80
122          KM   SUB-BASIN 80
123          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
124          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .991
125          KM     L = 2.69  Kb = .039  Adj. Slope =  229.8
126          BA   1.475
127          LG    .330    .330   5.600    .210   4.000
128          UC    .433    .259
129          UA       0       3       5       8      12      20      43      75      90      96
130          UA     100
             * DDM   ***** Preserved *****

131          KK     80C
132          KM   HYDROGRAPH COMBINATION FOR FLOW FROM APACHE JUNCTION FRS & SUB-BASIN 80
133          HC       2   1.475
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

134          KK     R80
135          KM   ROUTE FLOW FROM SUB-BASIN 80 TO SUB-BASIN 100
136          RS       1    FLOW      -1
137          RC    .025    .016    .025    1200    .003
138          RX       0       2       6     6.1    41.1    41.2    56.2    58.2
139          RY     5.5     4.5     4.5       0       0     4.5     4.5     5.5
             * DDM   ***** Updated *****

140          KK     100
141          KM   SUB-BASIN 100
142          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
143          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
144          KM     L = 1.94  Kb = .046  Adj. Slope =  108.0
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145          BA    .484
146          LG    .320    .290   5.100    .260   3.000
147          UC    .533    .473
148          UA       0       5      16      30      65      77      84      90      94      97
149          UA     100
             * DDM   ***** Preserved *****

150          KK    100C
151          KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 80 & 100
152          HC       2
             * DDM   ***** Preserved *****

153          KK    R100
154          KM   ROUTE FLOW FROM SUB-BASIN 100 TO SUB-BASIN 120
155          RS       1    FLOW      -1
156          RC    .016    .016    .016     940    .005
157          RX       0       1       2     2.1    52.1    52.2      53      54
158          RY     4.5     4.5     4.5       0       0     4.5     4.5     4.5
             * DDM   ***** Updated *****

159          KK     120
160          KM   SUB-BASIN 120
161          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
162          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
163          KM     L = 3.07  Kb = .037  Adj. Slope =  239.0
164          BA   2.202
165          LG    .330    .280   6.800    .130  11.000
166          UC    .429    .226
167          UA       0       3       5       8      12      20      43      75      90      96
168          UA     100
             * DDM   ***** Preserved *****

169          KK    120C
170          KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 100 & 120
171          HC       2
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE  5

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

172          KK    R120
173          KM   ROUTE FLOW FROM SUB-BASIN 120 TO SIGNAL BUTTE FRS
174          RS       1    FLOW      -1
175          RC    .025    .016    .025    2100    .005
176          RX       0       6      10    10.1    60.1    60.2    74.2    80.2
177          RY       8       5       5       0       0       5       5       8
             * DDM   ***** Updated *****

178          KK     140
179          KM   SUB-BASIN 140
180          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
181          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
182          KM     L = 1.61  Kb = .044  Adj. Slope =  149.0
183          BA    .598
184          LG    .310    .280   4.200    .440   5.000
185          UC    .421    .278
186          UA       0       5      16      30      65      77      84      90      94      97
187          UA     100
             * DDM   ***** Updated *****

188          KK     150
189          KM   SUB-BASIN 150
190          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
191          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
192          KM     L = 1.50  Kb = .047  Adj. Slope =  315.0
193          BA    .408
194          LG    .350    .360   5.100    .260   7.000
195          UC   1.579   1.417
196          UA       0       3       5       8      12      20      43      75      90      96
197          UA     100
             * DDM   ***** Preserved *****

198          KK    R150
199          KM   ROUTING OF FLOW FROM SUB-BASIN 150 TO R152
200          RS       3    FLOW      -1
201          RC    .045     .04    .045    3100    .032
202          RX       0       1       2      23      33      54      55      56
203          RY       7       7       7       0       0       7       7       7
             * DDM   ***** Preserved *****

204          KK    R152
205          KM   ROUTING OF FLOW FROM R152 TO SUB-BASIN 160
206          RS       6    FLOW      -1
207          RC    .045     .03    .045    5900    .019
208          RX       0       1       2       8      33      39      40      41
209          RY       2       2       2       0       0       2       2       2
             * DDM   ***** Updated *****

210          KK     160
211          KM   SUB-BASIN 160
212          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
213          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
214          KM     L = 2.10  Kb = .047  Adj. Slope =  129.0
215          BA    .369
1                                    HEC-1 INPUT                                          PAGE  6

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

216          LG    .340    .330   4.150    .440   1.000
217          UC    .587    .655
218          UA       0       3       5       8      12      20      43      75      90      96
219          UA     100
             * DDM   ***** Updated *****

220          KK     180
221          KM   SUB-BASIN 180
222          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
223          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
224          KM     L = 2.42  Kb = .041  Adj. Slope =  140.0
225          BA   1.000
226          LG    .350    .350   4.150    .430    .000
227          UC    .571    .403
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 228          UA       0       3       5       8      12      20      43      75      90      96
 229          UA     100
              * DDM   ***** Preserved *****

 230          KK    180C
 231          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
 232          HC       5
              * DDM   ***** Updated *****

 233          KK     350
 234          KM   SUB-BASIN 350
 235          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 236          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
 237          KM     L = 2.22  Kb = .042  Adj. Slope =  311.0
 238          BA    .961
 239          LG    .350    .350   4.600    .330   5.000
 240          UC    .367    .235
 241          UA       0       3       5       8      12      20      43      75      90      96
 242          UA     100
              * DDM   ***** Preserved *****

 243          KK    D350
 244          KM   DIVERT FLOW FROM SUB-BASIN 350. FOR MODELING PURPOSES THE SPLIT FLOW WILL
 245          KM   BE ROUTED BETWEEN SUB-BASINS 355 & 310.
 246          DT   SF350
 247          DI       0    5000
 248          DQ       0    2500
              * DDM   ***** Preserved *****

 249          KK    350R
 250          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING
 251          KM   ROUTING OF MAIN FLOW FROM DIVERSION OF SUB-BASIN 350 TO SUB-BASIN 310
 252          RS       7    FLOW      -1
 253          RC    .045    .035    .045    5379    .022
 254          RX       0       1      40      46      56      62     102     103
 255          RY       3       2       2       0       0       2       2       3
              * DDM   ***** Inserted *****
1                                    HEC-1 INPUT                                          PAGE  7

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 256          KK     353
 257          KM   SUB-BASIN 353
 258          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 259          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
 260          KM     L = 2.50  Kb = .046  Adj. Slope =  297.9
 261          BA    .502
 262          LG    .350    .350   4.350    .380   1.000
 263          UC    .442    .460
 264          UA       0       3       5       8      12      20      43      75      90      96
 265          UA     100
              * DDM   ***** Preserved *****

 266          KK   RT350
 267          KM   RETRIEVE SPLIT FLOW FROM DIVERSION OF SUB-BASIN 350
 268          DR   SF350
              * DDM   ***** Preserved *****

 269          KK   RR350
 270          KM   ROUTING OF FLOW FROM SPLIT OF SUB-BASIN 350 TO SUB-BASIN 353
 271          RS       3    FLOW      -1
 272          RC    .045    .045    .045    3200    .025
 273          RX       0       1       2      14      29      41      42      43
 274          RY       4       4       4       0       0       4       4       4

 275          KK    353C
 276          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 353 & SPLIT FLOW FROM SUB-BASIN 350
 277          HC       2

 278          KK    R353
 279          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
 280          KM   ROUTING OF FLOW FROM SUB-BASIN 353 TO ROUTING 353R
 281          KM   OVERBANK MANNINGS INCREASED TO ACCOUNT FOR SKEWED FLOW TO NATURAL
 282          KM   WATERCOURSE FLOW PATH
 283          RS       2    FLOW      -1
 284          RC     .07     .03     .07    1100    .009
 285          RX       0       3       5      11      41      47     172     302
 286          RY     3.5     2.5       2       0       0       2     2.5     3.5

 287          KK    353R
 288          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
 289          KM   ROUTING OF FLOW FROM 353R TO SUB-BASIN 310
 290          RS       1    FLOW      -1
 291          RC    .045     .03    .045    1692     .03
 292          RX       0       1      25      31      51      57      81      82
 293          RY       3       2       2       0       0       2       2       3
              * DDM   ***** Updated *****

 294          KK     310
 295          KM   SUB-BASIN 310
 296          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 297          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
 298          KM     L = 2.70  Kb = .045  Adj. Slope =  283.5
 299          BA    .555
 300          LG    .350    .350   3.910    .480    .000
1                                    HEC-1 INPUT                                          PAGE  8

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 301          UC    .483    .511
 302          UA       0       3       5       8      12      20      43      75      90      96
 303          UA     100
              * DDM   ***** Preserved *****

 304          KK    C310
 305          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 350 & 310
 306          HC       3
              * DDM   ***** Preserved *****

 307          KK    R310
 308          KM   ROUTING OF FLOW FROM SUB-BASIN 310 TO R312
 309          RS       3    FLOW      -1
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310          RC     .05    .045     .05    1500    .021
311          RX       0      60      75      81     101     107     167     182
312          RY       4       3       2       0       0       2       3       4
             * DDM   ***** Preserved *****

313          KK    R312
314          KM   ROUTING OF FLOW FROM R312 TO SUB-BASIN 295
315          RS       1    FLOW      -1
316          RC    .045     .03    .045    1300   .0125
317          RX       0      60      75      81     101     107     167     182
318          RY       4       3       2       0       0       2       3       4
             * DDM   ***** Updated *****

319          KK     295
320          KM   SUB-BASIN 295
321          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
322          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
323          KM     L = 1.60  Kb = .047  Adj. Slope =  131.0
324          BA    .380
325          LG    .350    .350   4.900    .280    .000
326          UC    .450    .386
327          UA       0       3       5       8      12      20      43      75      90      96
328          UA     100
             * DDM   ***** Preserved *****

329          KK    295C
330          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 310 & 295
331          HC       2
             * DDM   ***** Preserved *****

332          KK    295R
333          KM   ROUTING OF FLOW FROM SUB-BASIN 295 TO BEGINNING OF PASS MTN. DIVERSION.
334          RS       1    FLOW      -1
335          RC    .045    .022    .045    1300   .0125
336          RX       0       1       2      10      50      58      59      60
337          RY       4       4       4       0       0       4       4       4
             * DDM   ***** Updated *****
1                                        HEC-1 INPUT                                          PAGE  9

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

338          KK     210
339          KM   SUB-BASIN 210
340          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
341          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
342          KM     L = 1.84  Kb = .045  Adj. Slope =  315.0
343          BA    .583
344          LG    .350    .350   7.000    .120   7.000
345          UC    .321    .232
346          UA       0       3       5       8      12      20      43      75      90      96
347          UA     100
             * DDM   ***** Preserved *****

348          KK    R210
349          KM   ROUTING OF FLOW FROM SUB-BASIN 210 TO SUB-BASIN 220
350          RS       2    FLOW      -1
351          RC    .045     .03    .045    5100    .022
352          RX       0       1       2      14      34      46      47      48
353          RY       4       4       4       0       0       4       4       4
             * DDM   ***** Updated *****

354          KK     240
355          KM   SUB-BASIN 240
356          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
357          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .992
358          KM     L = 3.50  Kb = .039  Adj. Slope =  298.6
359          BA   1.398
360          LG    .350    .370   5.200    .240   2.000
361          UC    .471    .361
362          UA       0       3       5       8      12      20      43      75      90      96
363          UA     100
             * DDM   ***** Preserved *****

364          KK    240C
365          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
366          HC       3
             * DDM   ***** Preserved *****

367          KK   SR240
368          KM   DIGITAL MAPPING SHOWS SEDIMENTATION.  FOR SIMPLICITY NO ADDITIONAL
369          KM   SEDIMENTATION WILL BE CONSIDERED FOR STORAGE ROUTING ANALYSIS. 5/11/00
370          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
371          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
372          RS       1    STOR       0
373          SA    1.38    14.2    36.5
374          SE       0       5      11
375          SS       5      42       3     1.5
             * DDM   ***** Updated *****

376          KK     220
377          KM   SUB-BASIN 220
378          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
379          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
380          KM     L = 1.92  Kb = .043  Adj. Slope =  315.0
381          BA    .725
1                                        HEC-1 INPUT                                          PAGE 10

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

382          LG    .350    .350   7.000    .120   4.000
383          UC    .317    .209
384          UA       0       3       5       8      12      20      43      75      90      96
385          UA     100
             * DDM   ***** Preserved *****

386          KK    220C
387          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
388          HC       2
             * DDM   ***** Preserved *****

389          KK   SR220
390          KM   DIGITAL MAPPING SHOWS SEDIMENTATION.  FOR SIMPLICITY NO ADDITIONAL
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391          KM   SEDIMENTATION WILL BE CONSIDERED FOR STORAGE ROUTING ANALYSIS. 5/11/00
392          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
393          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
394          RS       1    STOR       0
395          SA     .78     4.1    13.7
396          SE       0       3      10
397          SS       3      65       3     1.5
             * DDM   ***** Updated *****

398          KK     190
399          KM   SUB-BASIN 190
400          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
401          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
402          KM     L = 1.91  Kb = .042  Adj. Slope =  315.0
403          BA    .918
404          LG    .350    .390   5.800    .190   8.000
405          UC    .321    .185
406          UA       0       3       5       8      12      20      43      75      90      96
407          UA     100
             * DDM   ***** Preserved *****

408          KK    R190
409          KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
410          RS       2    FLOW      -1
411          RC    .045     .03    .045    4740     .03
412          RX       0       1       2      17      37      52      53      54
413          RY       5       5       5       0       0       5       5       5
             * DDM   ***** Preserved *****

414          KK    R192
415          KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
416          RS       2    FLOW      -1
417          RC    .045    .035    .045    2200    .018
418          RX       0       1      50      59      79      88     137     138
419          RY     3.5       3       3       0       0       3       3     3.5
             * DDM   ***** Updated *****
1                                          HEC-1 INPUT                                          PAGE 11

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

420          KK     200
421          KM   SUB-BASIN 200
422          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
423          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
424          KM     L = 1.92  Kb = .045  Adj. Slope =  315.0
425          BA    .535
426          LG    .350    .390   5.700    .200  10.000
427          UC    .338    .267
428          UA       0       3       5       8      12      20      43      75      90      96
429          UA     100
             * DDM   ***** Preserved *****

430          KK    200C
431          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 220 & 200
432          HC       3
             * DDM   ***** Preserved *****

433          KK   SR200
434          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
435          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
436          RS       1    STOR       0
437          SA    2.56     3.1     9.4
438          SE       0       3      10
439          SS       3     112       3     1.5
             * DDM   ***** Preserved *****

440          KK   200SR
441          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
442          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
443          RS       1    STOR       0
444          SA       8     9.2     9.2
445          SE       0       7      10
446          SS       7     251       3     1.5
             * DDM   ***** Preserved *****

447          KK    C180
448          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
             *      1       2
449          HC       2
             * DDM   ***** Preserved *****

450          KK   SR180
451          KM   SIGNAL BUTTE FRS DATED 1/28/85
452          KM   OUTLET PIPE=36"RCP; L= 147';  INLET INV.=1690; OUTLET INV.=1687
453          KM   EMERGENCY SPILLWAY ELEV.=1712.4; PRINCIPLE SPILLWAY ELEV.=1701
454          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 250 ACRE-FEET
455          RS       1    STOR       0
456          SV       0       1     250     500     750    1060
457          SQ       0   106.5   125.5   137.5     146     160
458          SE      90     101   104.5     107     109   112.4
             * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                          PAGE 12

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

459          KK    R180
460          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
461          KM   ROUTE FLOW FROM SIGNAL BUTTE FRS TO SUB-BASIN 260
462          RS       1    FLOW      -1
463          RC    .035    .025    .035    1500    .003
464          RX       0       1       2    22.6    38.6    59.2      60      61
465          RY     9.3     9.3     9.3       0       0     9.3     9.3     9.3
             * DDM   ***** Updated *****

466          KK     260
467          KM   SUB-BASIN 260
468          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
469          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
470          KM     L =  .81  Kb = .049  Adj. Slope =   68.0
471          BA    .267
472          LG    .300    .170   6.800    .160  15.000
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473          UC    .363    .215
474          UA       0       5      16      30      65      77      84      90      94      97
475          UA     100
             * DDM   ***** Preserved *****

476          KK    260C
477          KM   HYDROGRAPH COMBINATION FOR OUTFLOW OF SIGNAL BUTTE FRS & SUB-BASIN 260
478          HC       2    .267
             * DDM   ***** Preserved *****

479          KK    R260
480          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
481          KM   ROUTE FLOW FROM SUB-BASIN 260 TO SUB-BASIN 280
482          RS       3    FLOW      -1
483          RC    .035    .025    .035    2300    .003
484          RX       0       1       2    23.4    43.4    64.8      65      66
485          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Updated *****

486          KK     280
487          KM   SUB-BASIN 280
488          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
489          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
490          KM     L =  .77  Kb = .049  Adj. Slope =   84.0
491          BA    .304
492          LG    .300    .250   5.300    .290  15.000
493          UC    .333    .175
494          UA       0       5      16      30      65      77      84      90      94      97
495          UA     100
             * DDM   ***** Preserved *****

496          KK    280C
497          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 260 & SUB-BASIN 280
498          HC       2
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 13

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

499          KK    R280
500          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
501          KM   ROUTE FLOW FROM SUB-BASIN 280 TO SUB-BASIN 300
502          RS       2    FLOW      -1
503          RC    .035    .025    .035    2500    .003
504          RX       0       1       2    23.4    43.4    64.8      65      66
505          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Updated *****

506          KK     300
507          KM   SUB-BASIN 300
508          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
509          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
510          KM     L =  .80  Kb = .049  Adj. Slope =  100.0
511          BA    .297
512          LG    .320    .280   4.200    .480  11.000
513          UC    .333    .183
514          UA       0       5      16      30      65      77      84      90      94      97
515          UA     100
             * DDM   ***** Preserved *****

516          KK    C300
517          KM   HYDROGRAPH COMBINATION OF DIVERTED FLOW
518          HC       2
             * DDM   ***** Preserved *****

519          KK    D300
520          KM   DIVERT FLOW INTO OFFLINE BASIN AT SIGNAL BUTTE FLOODWAY TO BE COMBINED
521          KM   LATER WITH BASIN 305 AT END OF SIGNAL BUTTE FLOODWAY
522          DT   DIV300
523          DI       0     300    5000
524          DQ       0       0    4700
             * DDM   ***** Preserved *****

525          KK   RTDIV300
526          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
527          DR   DIV300
             * DDM   ***** Preserved *****

528          KK   SRDIV300
529          KM   RETRIEVE FLOW INTO BASIN AND BLEED OFF WITHIN 36 HOURS
530          KM
531          RS       1    STOR       0
532          SV       0      60
533          SE       0      12
534          SQ       0     300
             * DDM   ***** Preserved *****

535          KK    300C
536          KM   HYDROGRAPH COMBINATION OF DIVERTED FLOW
537          HC       2
             * DDM   ***** Updated *****
1                                    HEC-1 INPUT                                          PAGE 14

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

538          KK     305
539          KM   SUB-BASIN 305
540          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
541          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
542          KM     L = 1.20  Kb = .047  Adj. Slope =   92.0
543          BA    .377
544          LG    .340    .330   4.450    .380   8.000
545          UC    .438    .298
546          UA       0       3       5       8      12      20      43      75      90      96
547          UA     100
             * DDM   ***** Preserved *****

548          KK    D305
549          KM   DIVERT FLOW INTO OFFLINE BASIN TO BE COMBINED LATER WITH PASS MOUNTAIN
550          KM   DIVERSION FLOW AT END OF SIGNAL BUTTE FLOODWAY
551          DT    305D
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552          DI       0    1000
553          DQ       0    1000
             * DDM   ***** Preserved *****

554          KK   RT305D
555          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
556          DR    305D
             * DDM   ***** Preserved *****

557          KK   SR305D
558          KM   RETRIEVE FLOW INTO BASIN AND BLEED OFF WITHIN 36 HOURS
559          KM
560          RS       1    STOR       0
561          SV       0      25
562          SE       0       6
563          SQ       0     100
             * DDM   ***** Preserved *****

564          KK    305C
565          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 280 & 300
566          HC       3
             * DDM   ***** Preserved *****

567          KK    R305
568          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
569          KM   ROUTE FLOW FROM SUB-BASIN 300 TO START OF FLOODWAY CONCRETE CHANNEL
570          RS       2    FLOW      -1
571          RC    .035    .025    .035    2200    .003
572          RX       0       1       2    23.4    55.4    76.8      77      78
573          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Preserved *****

574          KK   RR305
575          KM   CHANNEL GEOMETRY FOR SPOOK HILL FRS OBTAINED FROM AS-BUILTS PLANS.
576          KM   CONTINUE TO ROUTE FLOW WITHIN CONCRETE CHANNEL TO SPOOK HILL FRS
577          RS       1    FLOW      -1
578          RC    .016    .016    .016    6050   .0146
579          RX       0       1       2     2.1    16.1    16.2      17      18
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

580          RY     7.5     7.5     7.5       0       0     7.5     7.5     7.5
             *      1       2
             * DDM   ***** Updated *****

581          KK     320
582          KM   SUB-BASIN 320
583          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
584          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .995
585          KM     L = 1.60  Kb = .042  Adj. Slope =  106.0
586          BA    .870
587          LG    .310    .290   4.500    .380  15.000
588          UC    .450    .240
589          UA       0       5      16      30      65      77      84      90      94      97
590          UA     100
             * DDM   ***** Preserved *****

591          KK    D320
592          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
593          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
594          KM   SIERRA HEIGHTS        FALCON RIDGE    & MARBLE CREEK
595          KM        MAXIMUM VOLUME DIVERSION = 12.27acre-feet
             *      1
596          DT   BS320   12.27
597          DI       0   10000
598          DQ       0   10000
             * DDM   ***** Preserved *****

599          KK   RT320
600          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
601          DR   BS320
             * DDM   ***** Preserved *****

602          KK   SR320
603          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
604          KM   12.27 ACRE-FEETx43560/36x3600=4.1cfs
             *      1
605          RS       1    STOR       0
606          SV       0     .01    12.3
607          SQ       0     4.2     4.2
             * DDM   ***** Preserved *****

608          KK    C320
609          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
610          HC       3
             * DDM   ***** Updated *****

611          KK     340
612          KM   SUB-BASIN 340
613          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
614          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .991
615          KM     L = 2.40  Kb = .042  Adj. Slope =  160.0
616          BA   1.449
617          LG    .280    .280   4.150    .520  21.000
618          UC    .512    .287
619          UA       0       5      16      30      65      77      84      90      94      97
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

620          UA     100
             * DDM   ***** Preserved *****

621          KK    D340
622          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
623          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
624          KM   GRANDVIEW ESTATES    BOULDER MOUNTAIN & 33% OF MESA HIGHLANDS
625          KM        MAXIMUM VOLUME DIVERSION = 56.0 acre-feet
             *      1
626          DT   BS340      56
627          DI       0   10000
628          DQ       0   10000
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            * DDM   ***** Preserved *****

629         KK   RT340
630         KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
631         DR   BS340
            * DDM   ***** Preserved *****

632         KK   SR340
633         KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
634         KM    56.0 ACRE-FEETx43560/36x3600=18.8cfs
            *      1
635         RS       1    STOR       0
636         SV       0     .01      56
637         SQ       0    18.9    18.9
            * DDM   ***** Preserved *****

638         KK    C340
639         KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
640         HC       3
            * DDM   ***** Updated *****

641         KK     355
642         KM   SUB-BASIN 355
643         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
644         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
645         KM     L =  .80  Kb = .052  Adj. Slope =  156.0
646         BA    .174
647         LG    .320    .300   4.550    .360  12.000
648         UC    .283    .207
649         UA       0       5      16      30      65      77      84      90      94      97
650         UA     100
            * DDM   ***** Preserved *****

651         KK    R355
652         KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
653         KM   ROUTING OF FLOW FROM SUB-BASIN 355 TO SUB-BASIN 360
654         RS       9    FLOW      -1
655         RC    .045    .035    .045   10100    .026
656         RX       0       1      40      46      56      62     102     103
657         RY       3       2       2       0       0       2       2       3
            * DDM   ***** Updated *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

658         KK     360
659         KM   SUB-BASIN 360
660         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
661         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
662         KM     L = 2.10  Kb = .048  Adj. Slope =  124.0
663         BA    .670
664         LG    .260    .270   4.100    .560  20.000
665         UC    .587    .466
666         UA       0       5      16      30      65      77      84      90      94      97
667         UA     100
            * DDM   ***** Preserved *****

668         KK    D360
669         KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
670         KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
671         KM        MAXIMUM VOLUME DIVERSION = 28.6 acre-feet
            *      1
672         DT   BS360    28.6
673         DI       0   10000
674         DQ       0   10000
            * DDM   ***** Preserved *****

675         KK   RT360
676         KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
677         DR   BS360
            * DDM   ***** Preserved *****

678         KK   SR360
679         KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
680         KM    28.6 ACRE-FEETx43560/36x3600=9.6cfs
681         RS       1    STOR       0
682         SV       0     .01    28.6
683         SQ       0     9.6     9.6
            * DDM   ***** Preserved *****

684         KK    360C
685         KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
686         HC       4
            * DDM   ***** Updated *****

687         KK     370
688         KM   SUB-BASIN 370
689         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
690         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
691         KM     L = 2.90  Kb = .044  Adj. Slope =  294.6
692         BA    .667
693         LG    .340    .320   4.650    .330   9.000
694         UC    .454    .455
695         UA       0       3       5       8      12      20      43      75      90      96
696         UA     100
            * DDM   ***** Updated *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

697         KK     395
698         KM   SUB-BASIN 395
699         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
700         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
701         KM     L = 1.60  Kb = .051  Adj. Slope =  215.8
702         BA    .198
703         LG    .330    .320   4.900    .300  10.000
704         UC    .383    .468
705         UA       0       3       5       8      12      20      43      75      90      96
706         UA     100
            * DDM   ***** Preserved *****
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707          KK    370C
708          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
709          HC       2
             * DDM   ***** Preserved *****

710          KK    R370
711          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
712          KM   ROUTING OF FLOW FROM SUB-BASINS 370 AND 395 TO SUB-BASIN 380.
713          RS      11    FLOW      -1
714          RC    .045    .035    .045   10250    .023
715          RX       0       1      40      46      56      62     102     103
716          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

717          KK     380
718          KM   SUB-BASIN 380
719          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
720          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
721          KM     L = 2.20  Kb = .048  Adj. Slope =  114.0
722          BA    .972
723          LG    .300    .310   4.150    .500   7.000
724          UC    .658    .444
725          UA       0       5      16      30      65      77      84      90      94      97
726          UA     100
             * DDM   ***** Preserved *****

727          KK    D380
728          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
729          KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
730          KM        MAXIMUM VOLUME DIVERSION = 28.6 acre-feet
             *      1
731          DT   BS380    28.6
732          DI       0   10000
733          DQ       0   10000
             * DDM   ***** Preserved *****

734          KK   RT380
735          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
736          DR   BS380
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

737          KK   SR380
738          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
739          KM    28.6 ACRE-FEETx43560/36x3600=9.6cfs
740          RS       1    STOR       0
741          SV       0     .01    28.6
742          SQ       0     9.6     9.6
             * DDM   ***** Preserved *****

743          KK    380C
744          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
745          HC       4
             * DDM   ***** Updated *****

746          KK     390
747          KM   SUB-BASIN 390
748          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
749          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
750          KM     L =  .70  Kb = .050  Adj. Slope =  299.4
751          BA    .244
752          LG    .300    .250   4.700    .380  18.000
753          UC    .204    .107
754          UA       0       5      16      30      65      77      84      90      94      97
755          UA     100
             * DDM   ***** Preserved *****

756          KK    D390
757          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
758          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THUNDER MOUNTAIN ESTATES
759          KM        MAXIMUM VOLUME DIVERSION  = 3.5 acre-feet
             *      1
760          DT   BS390     3.5
761          DI       0   10000
762          DQ       0   10000
             * DDM   ***** Preserved *****

763          KK   RT390
764          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
765          DR   BS390
             * DDM   ***** Preserved *****

766          KK   SR390
767          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
768          KM     3.5 ACRE-FEETx43560/36x3600=1.2cfs
769          RS       1    STOR       0
770          SV       0     .01     3.5
771          SQ       0     1.2     1.2
             * DDM   ***** Preserved *****

772          KK    390C
773          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
774          HC       2
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

775          KK   RR390
776          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
777          KM   FROM SUB-BASIN 390 TO SUB-BASIN 400
778          RS      14    FLOW      -1
779          RC    .045    .045    .045    8800    .020
780          RX       0       1      40      46      56      62     102     103
781          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

782          KK     400
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783          KM   SUB-BASIN 400
784          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
785          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
786          KM     L = 1.64  Kb = .046  Adj. Slope =  110.0
787          BA    .616
788          LG    .320    .320   3.130    .930   6.000
789          UC    .592    .405
790          UA       0       5      16      30      65      77      84      90      94      97
791          UA     100
             * DDM   ***** Preserved *****

792          KK    D400
793          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
794          KM   DETENTION/RETENTION BASIN LOCATED WITHIN SAGUARO VISTA SUBDIVISION
795          KM        MAXIMUM VOLUME DIVERSION = 5.6 ACRE-FEET
             *      1
796          DT   BS400     5.6
797          DI       0   10000
798          DQ       0   10000
             * DDM   ***** Preserved *****

799          KK   RT400
800          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
801          DR   BS400
             * DDM   ***** Preserved *****

802          KK   SR400
803          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
804          KM     5.6 ACRE-FEETx43560/36x3600 = 2 cfs
805          RS       1    STOR       0
806          SV       0     .01     5.6
807          SQ       0       2       2
             * DDM   ***** Preserved *****

808          KK    C400
809          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
810          HC       2
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

811          KK    400C
812          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
813          HC       3
             * DDM   ***** Updated *****

814          KK     385
815          KM   SUB-BASIN 385
816          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
817          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
818          KM     L = 2.30  Kb = .044  Adj. Slope =  303.0
819          BA    .647
820          LG    .350    .370   5.600    .210  13.000
821          UC    .375    .311
822          UA       0       3       5       8      12      20      43      75      90      96
823          UA     100
             * DDM   ***** Preserved *****

824          KK    D385
825          KM   DIVERT FLOW INTO SUB-BASINS 415 & 420
826          DT   SF385
827          DI       0   10000
828          DQ       0    2500
             * DDM   ***** Preserved *****

829          KK    385R
830          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
831          KM   ROUTING OF FLOW DIVERSION FROM SUB-BASIN 385 INTO SUB-BASIN 420
832          RS      14    FLOW      -1
833          RC    .045     .04    .045   10250    .022
834          RX       0       1      40      46      56      62     102     103
835          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

836          KK     420
837          KM   SUB-BASIN 420
838          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
839          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .995
840          KM     L = 1.91  Kb = .042  Adj. Slope =  120.0
841          BA    .849
842          LG    .310    .270   3.880    .580  12.000
843          UC    .512    .325
844          UA       0       5      16      30      65      77      84      90      94      97
845          UA     100
             * DDM   ***** Preserved *****

846          KK    D420
847          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
848          KM   DETENTION/RETENTION BASINS LOCATED WITHIN GRAY FOX SUBDIVISION
849          KM        MAXIMUM VOLUME DIVERSION = 8.65 acre-feet
             *      1
850          DT   BS420    8.65
851          DI       0   10000
852          DQ       0   10000
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

853          KK   RT420
854          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
855          DR   BS420
             * DDM   ***** Preserved *****

856          KK   SR420
857          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
858          KM   38.55 ACRE-FEETx43560/36x3600=13cfs
859          RS       1    STOR       0
860          SV       0     .01   38.55
861          SQ       0      13      13
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            * DDM   ***** Preserved *****

 862        KK    420C
 863        KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
 864        HC       4   10.87
            * DDM   ***** Updated *****

 865        KK     440
 866        KM   SUB-BASIN 440
 867        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 868        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
 869        KM     L =  .40  Kb = .039  Adj. Slope =  315.0
 870        BA    .080
 871        LG    .190    .380   6.400    .140  13.000
 872        UC    .129    .077
 873        UA       0       3       5       8      12      20      43      75      90      96
 874        UA     100
            * DDM   ***** Preserved *****

 875        KK     R70
 876        KM   ROUTE FLOW FROM SUB-BASIN 440 TO C108
 877        RS       1    FLOW      -1
 878        RC     .05    .035     .05    2250     .08
 879        RX    1000    1025    1050    1070    1075    1095    1120    1145
 880        RY      30    22.9    15.7      10      10    15.7    22.9      30
            * DDM   ***** Updated *****

 881        KK     441
 882        KM   SUB-BASIN 441
 883        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 884        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
 885        KM     L =  .28  Kb = .069  Adj. Slope =  315.0
 886        BA    .010
 887        LG    .300    .250   5.600    .220   5.000
 888        UC    .150    .225
 889        UA       0       5      16      30      65      77      84      90      94      97
 890        UA     100
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 23

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 891        KK    C108
 892        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 440 & 441
 893        HC       2
            * DDM   ***** Preserved *****

 894        KK    DIV4
 895        KM        SPLIT FLOW WITH TWO 42 INCH PIPES TO WEST AND SOUTH
            *      1
 896        DT   SPLIT
 897        DI       0      14      40      82     120     154     180
 898        DQ       0       7      20      41      60      77      90
            * DDM   ***** Preserved *****

 899        KK    R108
 900        KM        ROUTE FLOW FROM SUB-BASIN C108 TO C67
 901        RS       2    FLOW      -1
 902        RC     .05    .035     .05    3200      .1
 903        RX    1000    1025    1050    1070    1075    1095    1120    1145
 904        RY      30    22.9    15.7      10      10    15.7    22.9      30
            * DDM   ***** Updated *****

 905        KK     442
 906        KM   SUB-BASIN 442
 907        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 908        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
 909        KM     L =  .83  Kb = .055  Adj. Slope =  274.2
 910        BA    .100
 911        LG    .300    .270   3.290    .770   5.000
 912        UC    .258    .264
 913        UA       0       5      16      30      65      77      84      90      94      97
 914        UA     100
            * DDM   ***** Preserved *****

 915        KK     C67
 916        KM   COMBINE FLOW FROM SUB-BASIN 442 & DIV4
 917        HC       2
            * DDM   ***** Preserved *****

 918        KK    DIV6
 919        KM        OFFLINE BASIN WITH 25 FOOT WEIR SET AT 2.5 FEET ABOVE BOTTOM OF CHANNEL
 920        KM        FLOW CONTINUES BEYOND BASIN THROUGH 2-30" PIPES
            *      1
 921        DT  BASIN4
 922        DI       0      10      32      44    79.9   132.5     198   272.9   356.8
 923        DQ       0       0       0       0    23.9    67.5     124   190.9   266.8
            * DDM   ***** Preserved *****

 924        KK  RTDIV6
 925        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
 926        DR  BASIN4
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 24

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 927        KK  RFDIV6
 928        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
 929        KM     3.3 ACRE-FEETx43560/36x3600=1.1cfs
            *      1
 930        RS       1    STOR       0
 931        SV       0     .01     3.3
 932        SQ       0     1.1     1.1
            * DDM   ***** Preserved *****

 933        KK   CDIV6
 934        KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
 935        HC       2
            * DDM   ***** Updated *****
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936          KK     443
937          KM   SUB-BASIN 443
938          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
939          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
940          KM     L =  .71  Kb = .050  Adj. Slope =  315.0
941          BA    .080
942          LG    .250    .190   8.000    .080  10.000
943          UC    .196    .194
944          UA       0       5      16      30      65      77      84      90      94      97
945          UA     100
             * DDM   ***** Preserved *****

946          KK   DIV66
947          KM        DIVERT FLOW INTO 3 NATURAL WASHES WITH ONE 24" PIPE IN EACH WASH.
948          KM        EACH PIPE CAPACITY BASED ON 4 FEET OF HEAD
949          DT   WSH66
950          DI       0      78     100     200
951          DQ       0      78      78      78
             * DDM   ***** Preserved *****

952          KK    R113
953          KM        ROUTE FLOW FROM C113 TO C114
954          RS       1    FLOW      -1
955          RC    .019    .019    .019    1300    .029
956          RX    1000    1004    1008    1012    1018    1022    1026    1030
957          RY      17   15.33   12.67      10      10   12.67   15.33      17
             * DDM   ***** Preserved *****

958          KK    C114
959          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 67 AND C113
960          HC       2
             * DDM   ***** Updated *****

961          KK     444
962          KM   SUB-BASIN 444
963          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
964          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
965          KM     L =  .33  Kb = .034  Adj. Slope =  315.0
966          BA    .040
967          LG    .130    .350   4.450    .320   1.000
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

968          UC    .112    .084
969          UA       0       3       5       8      12      20      43      75      90      96
970          UA     100
             * DDM   ***** Preserved *****

971          KK     R58
972          KM   ROUTE FLOW FROM SUB-BASIN 444 TO C107
973          RS       1    FLOW      -1
974          RC     .05    .035     .05    2370   .0516
975          RX    1000    1010    1020    1050    1055    1085    1095    1105
976          RY      19      18      17      10      10      17      18      19
             * DDM   ***** Updated *****

977          KK     445
978          KM   SUB-BASIN 445
979          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
980          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
981          KM     L =  .82  Kb = .036  Adj. Slope =  315.0
982          BA    .190
983          LG    .170    .320   3.470    .590   3.000
984          UC    .192    .130
985          UA       0       5      16      30      65      77      84      90      94      97
986          UA     100
             * DDM   ***** Preserved *****

987          KK    C107
988          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 444 & 445
989          HC       2
             * DDM   ***** Preserved *****

990          KK    R107
991          KM        ROUTE FLOW FROM C107 TO C109
992          RS       1    FLOW      -1
993          RC     .05    .035     .05     700   .0516
994          RX    1000    1010    1020    1050    1055    1085    1095    1105
995          RY      19      18      17      10      10      17      18      19
             * DDM   ***** Preserved *****

996          KK    RTB2
997          KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
             *      1
998          DR   SPLIT
             * DDM   ***** Preserved *****

999          KK  RSPLIT
1000         KM        ROUTE FLOW FROM SPLIT TO C109
1001         RS       1    FLOW      -1
1002         RC     .05    .035     .05     800     .05
1003         RX    1000    1025    1050    1070    1075    1095    1120    1145
1004         RY      30    22.9    15.7      10      10    15.7    22.9      30
             * DDM   ***** Updated *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1005         KK     446
1006         KM   SUB-BASIN 446
1007         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1008         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1009         KM     L =  .46  Kb = .061  Adj. Slope =  303.9
1010         BA    .040
1011         LG    .270    .250   4.500    .400  19.000
1012         UC    .183    .189
1013         UA       0       5      16      30      65      77      84      90      94      97
1014         UA     100
             * DDM   ***** Preserved *****

1015         KK    C109
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1016        KM        COMBINE HYDROGRAPHS FROM COMBINES C107 AND C108
1017        HC       3
            * DDM   ***** Preserved *****

1018        KK    DIV5
1019        KM        DIVERT FLOW INTO WASHES TOWARDS WEST
1020        KM        DIVERSION THROUGH 36" PIPE WITH 3 FEET OF HEAD
            *      1
1021        DT  WSH404
1022        DI       0    40.7    71.2   121.6     190     276   379.4   500.6
1023        DQ       0      35      35      35      35      35      35      35
            * DDM   ***** Preserved *****

1024        KK    R109
1025        KM        ROUTE FLOW FROM C109 TO C110
1026        RS       1    FLOW      -1
1027        RC    .019    .019    .019    3080     .05
1028        RX    1000    1005    1010    1015    1025    1030    1035    1040
1029        RY   13.75    12.5   11.25      10      10   11.25    12.5   13.75
            * DDM   ***** Updated *****

1030        KK    447
1031        KM   SUB-BASIN 447
1032        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1033        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1034        KM     L =  .49  Kb = .056  Adj. Slope =  221.0
1035        BA    .090
1036        LG    .250    .270   3.350    .870  30.000
1037        UC    .208    .145
1038        UA       0       5      16      30      65      77      84      90      94      97
1039        UA     100
            * DDM   ***** Preserved *****

1040        KK   RT404
1041        KM        RETRIEVE DIVERTED FLOW FOR WASH 109
1042        DR  WSH404
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1043        KK    R404
1044        KM        ROUTE FLOW FROM C110 TO C110
1045        RS       5    FLOW      -1
1046        RC    .019    .019    .019    3540     .03
1047        RX    1000    1012    1016    1020    1025    1029    1033    1045
1048        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Preserved *****

1049        KK    C110
1050        KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 447 AND R404
1051        HC       3
            * DDM   ***** Preserved *****

1052        KK    R110
1053        KM        ROUTE FLOW FROM C110 TO C115
1054        RS       1    FLOW      -1
1055        RC    .019    .019    .019     580   .0291
1056        RX    1000    1012    1016    1020    1035    1039    1043    1055
1057        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Preserved *****

1058        KK    C115
1059        KM        COMBINE HYDROGRAPHS FROM C114 AND C110
1060        HC       2
            * DDM   ***** Preserved *****

1061        KK    R115
1062        KM        ROUTE FLOW FROM C115 TO C119
1063        RS       1    FLOW      -1
1064        RC    .019    .019    .019    2125    .029
1065        RC    .019    .019    .019     580   .0291
1066        RX    1000    1012    1016    1020    1035    1039    1043    1055
1067        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Updated *****

1068        KK     448
1069        KM   SUB-BASIN 448
1070        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1071        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1072        KM     L =  .36  Kb = .042  Adj. Slope =  315.0
1073        BA    .045
1074        LG    .170    .310   4.200    .390  11.000
1075        UC    .133    .102
1076        UA       0       5      16      30      65      77      84      90      94      97
1077        UA     100
            * DDM   ***** Updated *****

1078        KK     449
1079        KM   SUB-BASIN 449
1080        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1081        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1082        KM     L =  .40  Kb = .054  Adj. Slope =  315.0
1083        BA    .050
1084        LG    .260    .280   3.500    .640   6.000
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1085        UC    .167    .134
1086        UA       0       5      16      30      65      77      84      90      94      97
1087        UA     100
            * DDM   ***** Preserved *****

1088        KK   C6364
1089        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 448 & 449
1090        HC       2
            * DDM   ***** Preserved *****

1091        KK   R6364
1092        KM   ROUTE FLOW FROM C116 AND SUB-BASINS 448 AND 449
1093        RS       4    FLOW      -1
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1094        RC     .05    .035     .05    4375   .0333
1095        RX    1000    1027    1053    1080    1090    1117    1143    1170
1096        RY      15   13.33   11.67      10      10   11.67   13.33      15
            * DDM   ***** Updated *****

1097        KK     450
1098        KM   SUB-BASIN 450
1099        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1100        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1101        KM     L =  .85  Kb = .057  Adj. Slope =  210.5
1102        BA    .070
1103        LG    .340    .350   3.630    .570   4.000
1104        UC    .296    .383
1105        UA       0       3       5       8      12      20      43      75      90      96
1106        UA     100
            * DDM   ***** Updated *****

1107        KK     451
1108        KM   SUB-BASIN 451
1109        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1110        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1111        KM     L =  .57  Kb = .063  Adj. Slope =  175.0
1112        BA    .025
1113        LG    .340    .340   3.290    .750   3.000
1114        UC    .271    .453
1115        UA       0       3       5       8      12      20      43      75      90      96
1116        UA     100
            * DDM   ***** Preserved *****

1117        KK    RT66
1118        KM        RETRIEVE DIVERTED FLOW FROM SUB-BASIN 66
1119        DR   WSH66
            * DDM   ***** Updated *****

1120        KK     452
1121        KM   SUB-BASIN 452
1122        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1123        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1124        KM     L =  .43  Kb = .055  Adj. Slope =  315.0
1125        BA    .040
1126        LG    .260    .280   3.700    .550   9.000
1127        UC    .171    .166
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1128        UA       0       5      16      30      65      77      84      90      94      97
1129        UA     100
            * DDM   ***** Preserved *****

1130        KK   C6465
1131        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 443 AND 452
1132        HC       2
            * DDM   ***** Preserved *****

1133        KK   R6566
1134        KM        ROUTE FLOW FROM DIVERSIONS 65 AND 66 TO C116
1135        RS       2    FLOW      -1
1136        RC     .05    .035     .05    2435   .0282
1137        RX    1000    1045    1090    1150    1160    1220    1265    1310
1138        RY      25      23      20      10      10      20      23      25
            * DDM   ***** Preserved *****

1139        KK    C116
1140        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 450 & 451 AND R6364 & R6465
1141        HC       4
            * DDM   ***** Preserved *****

1142        KK  BASIN5
1143        KM        RESERVOIR WITHIN PARCEL 31      2-48 INCH PIPES AT OUTFALL
1144        KM        BASIN 5 FEET DEEP
1145        RS       1    ELEV       0
1146        SV       0     4.5     9.9
1147        SQ       0      69     190
1148        SE       0     2.5       5
            * DDM   ***** Preserved *****

1149        KK    R116
1150        KM   ROUTE FLOW FROM C116 TO C117
1151        RS       2    FLOW      -1
1152        RC     .05    .035     .05    1300   .0333
1153        RX    1000    1100    1200    1300    1320    1420    1520    1620
1154        RY      13      12      11      10      10      11      12      13
            * DDM   ***** Updated *****

1155        KK     453
1156        KM   SUB-BASIN 453
1157        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1158        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1159        KM     L =  .58  Kb = .058  Adj. Slope =  138.0
1160        BA    .060
1161        LG    .290    .300   3.290    .820  18.000
1162        UC    .275    .284
1163        UA       0       5      16      30      65      77      84      90      94      97
1164        UA     100
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1165        KK    C117
1166        KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 453 AND R116
1167        HC       2
            * DDM   ***** Preserved *****

1168        KK    C118
1169        KM   COMBINE HYDROGRAPHS FROM R115 AND C117
1170        HC       2
            * DDM   ***** Preserved *****

1171        KK    R118
1172        KM        ROUTE FLOW FROM C118 TO  DIV7
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1173        RS       1    FLOW      -1
1174        RC    .019    .019    .019    1500    .024
1175        RX    1000    1012    1016    1020    1035    1039    1043    1055
1176        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Preserved *****

1177        KK    DIV7
1178        KM        OFFLINE BASIN AT NORTH MOUNTAIN RIDGE   FLOWS ENTER BASIN OVER
1179        KM        30' WEIR SET AT 5.3' ABOVE THE CHANNEL BOTTOM
            *      1
1180        DT  BASIN6
1181        DI       0     363     487     563     645     844
1182        DQ       0       3      47      83     125     244
            * DDM   ***** Preserved *****

1183        KK  RTDIV7
1184        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1185        DR  BASIN6
            * DDM   ***** Preserved *****

1186        KK  RFDIV7
1187        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1188        KM     3.6 ACRE-FEETx43560/36x3600=1.2cfs
1189        RS       1    STOR       0
1190        SV       0     .01     3.6
1191        SQ       0     1.2     1.2
            * DDM   ***** Preserved *****

1192        KK   CDIV7
1193        KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1194        HC       2
            * DDM   ***** Updated *****

1195        KK     454
1196        KM   SUB-BASIN 454
1197        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1198        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1199        KM     L = 1.23  Kb = .051  Adj. Slope =  163.0
1200        BA    .180
1201        LG    .300    .310   3.780    .560  14.000
1202        UC    .379    .395
1203        UA       0       5      16      30      65      77      84      90      94      97
1                                      HEC-1 INPUT                                          PAGE 31

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1204        UA     100
            * DDM   ***** Preserved *****

1205        KK    C119
1206        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 454 AND C119
            *      1       2
1207        HC       2
            * DDM   ***** Preserved *****

1208        KK    R454
1209        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1210        KM   ROUTE FLOW FROM C119 TO 415C
1211        RS       2    FLOW      -1
1212        RC    .045    .035    .045    2200    .009
1213        RX       0      .5       1      33      42      67    67.5      68
1214        RY       5       4       4       0       0       6       6       6
            * DDM   ***** Updated *****

1215        KK     415
1216        KM   SUB-BASIN 415
1217        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1218        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
1219        KM     L = 2.10  Kb = .046  Adj. Slope =  266.0
1220        BA    .448
1221        LG    .310    .270   4.250    .480  15.000
1222        UC    .404    .387
1223        UA       0       5      16      30      65      77      84      90      94      97
1224        UA     100
            * DDM   ***** Preserved *****

1225        KK   RT385
1226        KM   RETRIEVE FLOW FROM DIVERSION OF SUB-BASIN 385 INTO SUB-BASIN 415
1227        DR   SF385
            * DDM   ***** Preserved *****

1228        KK   RR385
1229        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1230        KM   ROUTING OF SPLIT FLOW FROM SUB-BASIN 385 TO SUB-BASIN 415
1231        RS       5    FLOW      -1
1232        RC    .045     .04    .045    5878    .024
1233        RX       0       1      40      46      56      62     102     103
1234        RY       3       2       2       0       0       2       2       3
            * DDM   ***** Preserved *****

1235        KK    415C
1236        KM   HYDROGRAPH COMBINATION OF SUB-BASINS 415, R454 & SPLIT FLOW FROM 385
1237        HC       3    1.71
            * DDM   ***** Preserved *****

1238        KK    R415
1239        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1240        KM   ROUTING OF FLOW FROM 415C TO 455C
1241        RS       2    FLOW      -1
1242        RC    .045     .03    .045    4100    .024
1243        RX       0      .5       1       8      16      23    23.5      24
1                                      HEC-1 INPUT                                          PAGE 32

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1244        RY       8       8       8       0       0       8       8       8
            * DDM   ***** Updated *****

1245        KK     455
1246        KM   SUB-BASIN 455
1247        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1248        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
1249        KM     L = 1.70  Kb = .041  Adj. Slope =  146.0
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1250          BA   1.111
1251          LG    .270    .280   3.700    .640  24.000
1252          UC    .421    .204
1253          UA       0       5      16      30      65      77      84      90      94      97
1254          UA     100
              * DDM   ***** Preserved *****

1255          KK    D455
1256          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1257          KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1258          KM   FOR BASIN #: 30      34      43      47&58
1259          KM        MAXIMUM VOLUME DIVERSION = 74.1 acre-feet
              *      1
1260          DT   BS455    74.1
1261          DI       0   10000
1262          DQ       0   10000
              * DDM   ***** Preserved *****

1263          KK   RT455
1264          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1265          DR   BS455
              * DDM   ***** Preserved *****

1266          KK   SR455
1267          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1268          KM    74.1 ACRE-FEETx43560/36x3600=25cfs
1269          RS       1    STOR       0
1270          SV       0     .01    74.1
1271          SQ       0      25      25
              * DDM   ***** Preserved *****

1272          KK    C455
1273          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 455 AND DIVERTED BASIN STORAGE OF 455
1274          HC       2
              * DDM   ***** Preserved *****

1275          KK    455C
1276          KM  HYDROGRAPH COMBINATION OF 420C, R415 AND C455
              *      1       2
1277          HC       3
              * DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1278          KK   SR440
1279          KM   SPOOK HILL FRS PLANS DATED 6/15/77
1280          KM   OUTLET PIPE=7'x7.5'RCBC; L=70 INLET INV.=1566; OUTLET INV.=1566
1281          KM   EMERGENCY SPILLWAY ELEV.=1582; PRINCIPLE SPILLWAY ELEV.=1577.5
1282          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 200 ACRE-FEET
1283          RS       1    STOR       0
1284          SV       0      10     100     300     500     680
1285          SQ       0     640     720     780     825     860
1286          SE      66    77.5      79    80.2    81.2      82
              * DDM   ***** Preserved *****

1287          KK   RR455
1288          KM   ROUTE FLOW FROM SPOOK HILL FRS TO SUB-BASIN 462
1289          RS       9    FLOW      -1
1290          RC    .035    .025    .035    9200    .002
1291          RX       0       1       2      28      58      84      85      86
1292          RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
              * DDM   ***** Updated *****

1293          KK     456
1294          KM   SUB-BASIN 456
1295          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1296          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1297          KM     L =  .94  Kb = .045  Adj. Slope =  315.0
1298          BA    .260
1299          LG    .300    .380   5.600    .200  12.000
1300          UC    .217    .139
1301          UA       0       5      16      30      65      77      84      90      94      97
1302          UA     100
              * DDM   ***** Preserved *****

1303          KK    DIV1
1304          KM        DIVERT FLOW INTO OFFLINE DETENTION BASIN
1305          KM        WEIR FOR BASIN SET AT 4 FEET ABOVE CHANNEL BOTTOM
              *      1
1306          DT  BASIN1
1307          DI       0    11.1   127.9   234.4   577.7   789.9  1025.5  1280.9  1555.7
1308          DQ       0       0       0    47.7     248   381.8   533.6   701.5     884
              * DDM   ***** Preserved *****

1309          KK    DIV2
1310          KM        SPLIT OUT FLOW FOR WASHES THAT FLOW TO THE SOUTH FROM
1311          KM        WASHES THAT DRAIN TO THE WES, SOUTHERN WASHES FED BY 30" & 24" PIPE
1312          DT    WA30
1313          DI       0    11.1   127.9   189.6   329.7     408   491.9   579.4   671.7
1314          DQ       0    11.1    38.4    48.2      63    69.5      76      81      86
              * DDM   ***** Preserved *****

1315          KK    R456
1316          KM        ROUTE FLOW FROM SUB-BASIN 51 TO C101
1317          RS       2    FLOW      -1
1318          RC     .05    .035     .05    3800    .044
1319          RX    1000    1010    1020    1036    1041    1057    1067    1077
1320          RY   14.88   14.44      14      10      10      14   14.44   14.88
              * DDM   ***** Updated *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1321          KK     457
1322          KM   SUB-BASIN 457
1323          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1324          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1325          KM     L = 1.01  Kb = .045  Adj. Slope =  308.8
1326          BA    .190
1327          LG    .270    .330   3.950    .460   6.000
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1328          UC    .237    .195
1329          UA       0       5      16      30      65      77      84      90      94      97
1330          UA     100
              * DDM   ***** Preserved *****

1331          KK    C101
1332          KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 50 AND 51
1333          HC       2
              * DDM   ***** Preserved *****

1334          KK    DIV3
1335          KM        RESERVOIR AT THE EDGE OF THE PROPERTY   FLOW FROM CHANNEL
1336          KM        DIVERTED  INTO OFFLINE BASIN A 25' WEIR SET AT ELEVATION 1808 FT
              *      1
1337          DT  BASIN2
1338          DI       0      36      70     110     180   313.5     402   500.9
1339          DQ       0       0       0       0       0    67.5     124   190.9
              * DDM   ***** Preserved *****

1340          KK  RTDIV3
1341          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1342          DR  BASIN2
              * DDM   ***** Preserved *****

1343          KK  RFDIV3
1344          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1345          KM     5.0 ACRE-FEETx43560/36x3600=1.7cfs
1346          RS       1    STOR       0
1347          SV       0     .01       5
1348          SQ       0     1.7     1.7
              * DDM   ***** Preserved *****

1349          KK   CDIV3
1350          KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1351          HC       2
              * DDM   ***** Preserved *****

1352          KK    R101
1353          KM        ROUTE FLOW FROM SUBBASIN C101 TO C103
1354          RS       1    FLOW      -1
1355          RC     .05    .035     .05    1450     .05
1356          RX    1000    1010    1020    1036    1041    1057    1067    1077
1357          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Updated *****
1                                   HEC-1 INPUT                                          PAGE 35

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1358          KK     458
1359          KM   SUB-BASIN 458
1360          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1361          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1362          KM     L =  .76  Kb = .048  Adj. Slope =  299.0
1363          BA    .190
1364          LG    .290    .330   5.800    .190   6.000
1365          UC    .204    .131
1366          UA       0       5      16      30      65      77      84      90      94      97
1367          UA     100
              * DDM   ***** Preserved *****

1368          KK    C103
1369          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 55 AND C101
1370          HC       2
              * DDM   ***** Preserved *****

1371          KK    R103
1372          KM        ROUTE FLOW FROM SUBBASIN C103 TO C106
1373          RS       1    FLOW      -1
1374          RC     .05    .035     .05     900     .03
1375          RX    1000    1010    1020    1030    1050    1060    1070    1080
1376          RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
              * DDM   ***** Preserved *****

1377          KK    RT30
1378          KM        RETRIEVE DIVERTED FLOW FOR WASH BELOW 30 INCH PIPE
1379          DR    WA30
              * DDM   ***** Preserved *****

1380          KK     R30
1381          KM        ROUTE FLOW FROM WASH DIVERSION TO COMBINE C52
1382          RS       1    FLOW      -1
1383          RC     .05    .035     .05    1630     .05
1384          RX    1000    1010    1020    1036    1041    1057    1067    1077
1385          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Preserved *****

1386          KK    RTB1
1387          KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
              *      1       2
1388          DR  BASIN1
              * DDM   ***** Preserved *****

1389          KK      B1
1390          KM        ROUTE FLOW THROUGH OFFLINE DETENTION BASIN
1391          KM        FLOW OUTLETS THROUGH A 30 INCH OUTLET PIPE
              *      1       2
1392          RS       1    ELEV       0
1393          SV              .7     1.4     2.3     2.7     3.2
1394          SQ       0       5      16      28    32.5      37
1395          SE       0       1       2       3     3.5       4
              * DDM   ***** Preserved *****
                                    HEC-1 INPUT                                          PAGE 36

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1396          KK     RB1
1397          KM        ROUTE FLOW FROM BASIN DIVERSION TO COMBINE C52
1398          RS       2    FLOW      -1
1399          RC     .05    .035     .05    1720     .05
1400          RX    1000    1010    1020    1036    1041    1057    1067    1077
1401          RY      15    14.5      14      10      10      14    14.5      15
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            * DDM   ***** Preserved *****

1402        KK    CDIV
1403        KM        COMBINE FLOWS FROM WA30 AND BASIN 1
1404        HC       2     .12
            * DDM   ***** Updated *****

1405        KK     459
1406        KM   SUB-BASIN 459
1407        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1408        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1409        KM     L =  .35  Kb = .052  Adj. Slope =  251.6
1410        BA    .030
1411        LG    .220    .300   3.330    .710   8.000
1412        UC    .162    .157
1413        UA       0       5      16      30      65      77      84      90      94      97
1414        UA     100
            * DDM   ***** Preserved *****

1415        KK     C52
1416        KM        COMBINE FLOWS FROM SUB-BASIN 52 WA30 AND BASIN 1
1417        HC       2
            * DDM   ***** Preserved *****

1418        KK     R52
1419        KM        ROUTE FLOW FROM SUBBASIN 52 TO C102
1420        RS       2    FLOW      -1
1421        RC     .05    .035     .05    2000     .05
1422        RX    1000    1010    1020    1036    1041    1057    1067    1077
1423        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Updated *****

1424        KK     460
1425        KM   SUB-BASIN 460
1426        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1427        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1428        KM     L =  .62  Kb = .058  Adj. Slope =  194.0
1429        BA    .140
1430        LG    .250    .260   3.740    .690  27.000
1431        UC    .242    .160
1432        UA       0       5      16      30      65      77      84      90      94      97
1433        UA     100
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1434        KK    C102
1435        KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 52 AND 53
1436        HC       2
            * DDM   ***** Preserved *****

1437        KK  BASIN3
1438        KM        RESERVOIR AT CLUBHOUSE LOCATION 1-30 INCH PIPE AT OUTFALL
1439        KM        BOTTOM OF BASIN AT 6 FEET ABOVE 1795 ELEVATION
1440        RS       1    ELEV       0
1441        SA       0       0       0       0     .34    1.59    1.81    1.96    2.13     2.3
            *      0       0       0       0    1.14    3.25    5.52    9.23
1442        SQ       0      22      45    47.4      48      51      57      62      67      73
1443        SE    1795  1797.5    1800  1800.4  1800.5    1801    1802    1803    1804  1805.5
            * DDM   ***** Preserved *****

1444        KK      R3
1445        KM        ROUTE FLOW FROM C102 to C106
1446        RS       4    FLOW      -1
1447        RC     .05     .03     .05    2750   .0375
1448        RX    1000    1010    1020    1052    1086    1118    1128    1138
1449        RY    19.2    18.4      18      10      10      18    18.4    19.2
            * DDM   ***** Updated *****

1450        KK     461
1451        KM   SUB-BASIN 461
1452        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1453        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1454        KM     L =  .83  Kb = .052  Adj. Slope =  181.0
1455        BA    .120
1456        LG    .270    .250   4.250    .450  21.000
1457        UC    .271    .250
1458        UA       0       5      16      30      65      77      84      90      94      97
1459        UA     100
            * DDM   ***** Preserved *****

1460        KK    C104
1461        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 54 AND R102
1462        HC       2
            * DDM   ***** Preserved *****

1463        KK    C106
1464        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN C103 AND C104
1465        HC       2
            * DDM   ***** Preserved *****

1466        KK    R106
1467        KM        ROUTE FLOW FROM C106 TO C49
1468        RS       2    FLOW      -1
1469        RC     .05    .035     .05    3950    .033
1470        RX    1000    1010    1020    1030    1050    1060    1070    1080
1471        RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
            * DDM   ***** Updated *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1472        KK     462
1473        KM   SUB-BASIN 462
1474        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1475        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1476        KM     L =  .97  Kb = .045  Adj. Slope =  297.7
1477        BA    .301
1478        LG    .300    .330   5.300    .240  12.000
1479        UC    .225    .137
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1480        UA       0       5      16      30      65      77      84      90      94      97
1481        UA     100
            * DDM   ***** Preserved *****

1482        KK     C56
1483        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 56 AND C106
            *      1       2
1484        HC       2
            * DDM   ***** Updated *****

1485        KK     480
1486        KM   SUB-BASIN 480
1487        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1488        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
1489        KM     L = 1.21  Kb = .042  Adj. Slope =  165.0
1490        BA    .731
1491        LG    .270    .270   3.580    .730  27.000
1492        UC    .325    .148
1493        UA       0       5      16      30      65      77      84      90      94      97
1494        UA     100
            * DDM   ***** Preserved *****

1495        KK    D480
1496        KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1497        KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1498        KM   FOR BASIN #: 18 & 26
1499        KM        MAXIMUM VOLUME DIVERSION = 16.5 acre-feet
            *      1
1500        DT   BS480    16.5
1501        DI       0   10000
1502        DQ       0   10000
            * DDM   ***** Preserved *****

1503        KK   RT480
1504        KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1505        DR   BS480
            * DDM   ***** Preserved *****

1506        KK   SR480
1507        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1508        KM    16.5 ACRE-FEETx43560/36x3600=5.5cfs
1509        RS       1    STOR       0
1510        SV       0     .01    16.5
1511        SQ       0     5.6     5.6
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1512        KK    C480
1513        KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1514        HC       2
            * DDM   ***** Preserved *****

1515        KK    480C
1516        KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1517        HC       3    2.09
            * DDM   ***** Preserved *****

1518        KK   RR480
1519        KM   ROUTE FLOW FROM SUB-BASIN 480 TO SUB-BASIN 500
1520        RS       1    FLOW      -1
1521        RC    .025    .025    .025    6500     .05
1522        RX       0       1       2      28      58      84      85      86
1523        RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
            * DDM   ***** Updated *****

1524        KK     500
1525        KM   SUB-BASIN 500
1526        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1527        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
1528        KM     L = 2.77  Kb = .042  Adj. Slope =  286.8
1529        BA    .930
1530        LG    .350    .400   6.000    .170   9.000
1531        UC    .421    .333
1532        UA       0       3       5       8      12      20      43      75      90      96
1533        UA     100
            * DDM   ***** Preserved *****

1534        KK    500C
1535        KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1536        HC       2    3.02
1537        ZZ
```

SCHEMATIC DIAGRAM OF STREAM NETWORK

```
INPUT
 LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

  NO.      (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

   42          10
               V
               V
   52         R10
               V
               V
   58         R12
               .
               .
   64          .          20
               .           .
               .           .
   74         C20...........
               .
               .
   77          .          40
               .           .
               .           .
   87          .           .          60
               .           .           .
               .           .           .
   97         60C......................
               V
               V
  100        SR60
               V
               V
  109         R60
               V
               V
  115        RR60
               .
               .
  121          .          80
               .           .
               .           .
  131         80C...........
               V
               V
  134         R80
               .
               .
  140          .         100
               .           .
               .           .
  150        100C...........
               V
               V
  153        R100
               .
               .
  159          .         120
               .           .
               .           .
  169        120C...........
               V
               V
  172        R120
               .
               .
  178          .         140
               .           .
               .           .
  188          .           .        150
               .           .          V
               .           .          V
  198          .           .       R150
               .           .          V
               .           .          V
  204          .           .       R152
               .           .          .
               .           .          .
  210          .           .          .         160
               .           .          .           .
               .           .          .           .
  220          .           .          .           .         180
               .           .          .           .           .
               .           .          .           .           .
  230        180C.............................................
               .
               .
  233          .         350
               .           .
               .           .
  246          .           .-------->   SF350
  243          .        D350
               .           V
               .           V
  249          .        350R
               .           .
               .           .
  256          .           .        353
               .           .          .
               .           .          .
  268          .           .          .          .<-------   SF350
  266          .           .          .      RT350
               .           .          .          V
               .           .          .          V
  269          .           .          .      RR350
               .           .          .           .
               .           .          .           .
  275          .           .       353C...........
               .           .          V
               .           .          V
  278          .           .       R353
               .           .          V
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                .           .          V
287             .           .       353R
                .           .          .
                .           .          .
294             .           .          .        310
                .           .          .          .
                .           .          .          .
304             .       C310.......................
                .           V
                .           V
307             .       R310
                .           V
                .           V
313             .       R312
                .           .
                .           .
319             .           .       295
                .           .          .
                .           .          .
329             .       295C............
                .           V
                .           V
332             .       295R
                .           .
                .           .
338             .           .       210
                .           .         V
                .           .         V
348             .           .      R210
                .           .          .
                .           .          .
354             .           .          .        240
                .           .          .          .
                .           .          .          .
364             .       240C.......................
                .           V
                .           V
367             .      SR240
                .           .
                .           .
376             .           .       220
                .           .          .
                .           .          .
386             .       220C............
                .           V
                .           V
389             .      SR220
                .           .
                .           .
398             .           .       190
                .           .         V
                .           .         V
408             .           .      R190
                .           .         V
                .           .         V
414             .           .      R192
                .           .          .
                .           .          .
420             .           .          .        200
                .           .          .          .
                .           .          .          .
430             .       200C.......................
                .           V
                .           V
433             .      SR200
                .           V
                .           V
440             .      200SR
                .           .
                .           .
447         C180............
                V
                V
450        SR180
                V
                V
459         R180
                .
                .
466             .        260
                .          .
                .          .
476         260C............
                V
                V
479         R260
                .
                .
486             .        280
                .          .
                .          .
496         280C............
                V
                V
499         R280
                .
                .
506             .        300
                .          .
                .          .
516         C300............
                .
                .
522             .-------> DIV30
519         D300
                .
                .
527             .          .<-------   DIV30
525             .      RTDIV
                .          V
                .          V
528             .      SRDIV
                .          .
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535        300C............
538           305
551           .-------->    305D
548        D305
556           .<-------    305D
554        RT305
               V
               V
557        SR305
564        305C.......................
           V
           V
567        R305
           V
           V
574       RR305
581           320
596           .-------->   BS320
591        D320
601           .<-------   BS320
599        RT320
               V
               V
602        SR320
608        C320.......................
611           340
626           .-------->   BS340
621        D340
631           .<-------   BS340
629        RT340
               V
               V
632        SR340
638        C340.......................
641           355
              V
              V
651        R355
658           360
672           .-------->   BS360
668        D360
677           .<-------   BS360
675        RT360
               V
               V
678        SR360
684        360C.................................
687           370
697           395
707        370C............
           V
           V
710        R370
717           380
731           .-------->   BS380
727        D380
736           .<-------   BS380
734        RT380
               V
               V
737        SR380
743        380C.................................
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746          .        390
             .          .
             .          .
760          .          .-------> BS390
756          .      D390
             .          .
             .          .
765          .          .          .<-------  BS390
763          .          .      RT390
             .          .          V
             .          .          V
766          .          .      SR390
             .          .          .
             .          .          .
772          .      390C............
             .         V
             .         V
775          .     RR390
             .          .
             .          .
782          .          .        400
             .          .          .
             .          .          .
796          .          .          .-------> BS400
792          .          .      D400
             .          .          .
             .          .          .
801          .          .          .          .<-------  BS400
799          .          .          .      RT400
             .          .          .          V
             .          .          .          V
802          .          .          .      SR400
             .          .          .          .
             .          .          .          .
808          .          .      C400............
             .          .          .
             .          .          .
811       400C........................
             .
             .
814          .        385
             .          .
             .          .
826          .          .-------> SF385
824          .      D385
             .         V
             .         V
829          .      385R
             .          .
             .          .
836          .          .        420
             .          .          .
             .          .          .
850          .          .          .-------> BS420
846          .          .      D420
             .          .          .
             .          .          .
855          .          .          .          .<-------  BS420
853          .          .          .      RT420
             .          .          .          V
             .          .          .          V
856          .          .          .      SR420
             .          .          .          .
             .          .          .          .
862       420C....................................
             .
             .
865          .        440
             .         V
             .         V
875          .        R70
             .          .
             .          .
881          .          .        441
             .          .          .
             .          .          .
891          .      C108............
             .          .
             .          .
896          .          .-------> SPLIT
894          .      DIV4
             .         V
             .         V
899          .      R108
             .          .
             .          .
905          .          .        442
             .          .          .
             .          .          .
915          .       C67............
             .          .
             .          .
921          .          .-------> BASIN4
918          .      DIV6
             .          .
             .          .
926          .          .          .<-------  BASIN4
924          .          .     RTDIV6
             .          .          V
             .          .          V
927          .          .     RFDIV6
             .          .          .
             .          .          .
933          .     CDIV6............
             .          .
             .          .
936          .          .        443
             .          .          .
             .          .          .
949          .          .          .-------> WSH66
946          .          .      DIV66
             .          .          V
             .          .          V
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 952          .          .       R113
              .          .          .
              .          .          .
 958          .      C114...........
              .          .
              .          .
 961          .          .        444
              .          .          V
              .          .          V
 971          .          .       R58
              .          .          .
              .          .          .
 977          .          .          .        445
              .          .          .          .
              .          .          .          .
 987          .          .       C107...........
              .          .          V
              .          .          V
 990          .          .       R107
              .          .          .
              .          .          .
 998          .          .          .          .<-------   SPLIT
 996          .          .          .      RTB2
              .          .          .         V
              .          .          .         V
 999          .          .          .     RSPLIT
              .          .          .          .
              .          .          .          .
1005          .          .          .          .         446
              .          .          .          .           .
              .          .          .          .           .
1015          .          .       C109......................
              .          .          .
              .          .          .
1021          .          .          .-------> WSH404
1018          .          .       DIV5
              .          .          V
              .          .          V
1024          .          .       R109
              .          .          .
              .          .          .
1030          .          .          .        447
              .          .          .          .
              .          .          .          .
1042          .          .          .          .          .<-------  WSH404
1040          .          .          .          .      RT404
              .          .          .          .         V
              .          .          .          .         V
1043          .          .          .          .       R404
              .          .          .          .          .
              .          .          .          .          .
1049          .          .       C110......................
              .          .          V
              .          .          V
1052          .          .       R110
              .          .          .
              .          .          .
1058          .      C115...........
              .         V
              .         V
1061          .      R115
              .          .
              .          .
1068          .          .        448
              .          .          .
              .          .          .
1078          .          .          .        449
              .          .          .          .
              .          .          .          .
1088          .          .      C6364...........
              .          .          V
              .          .          V
1091          .          .      R6364
              .          .          .
              .          .          .
1097          .          .          .        450
              .          .          .          .
              .          .          .          .
1107          .          .          .          .         451
              .          .          .          .           .
              .          .          .          .           .
1119          .          .          .          .           .          .<-------   WSH66
1117          .          .          .          .           .       RT66
              .          .          .          .           .          .
              .          .          .          .           .          .
1120          .          .          .          .           .          .         452
              .          .          .          .           .          .           .
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1130          .          .          .          .           .      C6465...........
              .          .          .          .           .          V
              .          .          .          .           .          V
1133          .          .          .          .           .      R6566
              .          .          .          .           .          .
              .          .          .          .           .          .
1139          .          .       C116.................................
              .          .          V
              .          .          V
1142          .          .     BASIN5
              .          .          V
              .          .          V
1149          .          .       R116
              .          .          .
              .          .          .
1155          .          .          .        453
              .          .          .          .
              .          .          .          .
1165          .          .       C117...........
              .          .          .
              .          .          .
1168          .      C118...........
              .         V
              .         V
1171          .      R118
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                .          .
                .          .
1180            .          .-------> BASIN6
1177            .       DIV7
                .          .
                .          .
1185            .          .          .<-------  BASIN6
1183            .          .      RTDIV7
                .          .          V
                .          .          V
1186            .          .      RFDIV7
                .          .          .
                .          .          .
1192            .      CDIV7...........
                .          .
                .          .
1195            .          .        454
                .          .          .
                .          .          .
1205            .       C119...........
                .          V
                .          V
1208            .       R454
                .          .
                .          .
1215            .          .        415
                .          .          .
                .          .          .
1227            .          .          .          .<-------   SF385
1225            .          .          .      RT385
                .          .          .          V
                .          .          .          V
1228            .          .          .      RR385
                .          .          .          .
                .          .          .          .
1235            .       415C......................
                .          V
                .          V
1238            .       R415
                .          .
                .          .
1245            .          .        455
                .          .          .
                .          .          .
1260            .          .          .------->   BS455
1255            .          .       D455
                .          .          .
                .          .          .
1265            .          .          .          .<-------   BS455
1263            .          .          .      RT455
                .          .          .          V
                .          .          .          V
1266            .          .          .      SR455
                .          .          .          .
                .          .          .          .
1272            .          .       C455...........
                .          .          .
                .          .          .
1275         455C......................
                V
                V
1278        SR440
                V
                V
1287        RR455
                .
                .
1293            .        456
                .          .
                .          .
1306            .          .-------> BASIN1
1303            .       DIV1
                .          .
                .          .
1312            .          .------->    WA30
1309            .       DIV2
                .          V
                .          V
1315            .       R456
                .          .
                .          .
1321            .          .        457
                .          .          .
                .          .          .
1331            .       C101...........
                .          .
                .          .
1337            .          .-------> BASIN2
1334            .       DIV3
                .          .
                .          .
1342            .          .          .<-------  BASIN2
1340            .          .      RTDIV3
                .          .          V
                .          .          V
1343            .          .      RFDIV3
                .          .          .
                .          .          .
1349            .      CDIV3...........
                .          V
                .          V
1352            .       R101
                .          .
                .          .
1358            .          .        458
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                .          .          .
1368            .       C103...........
                .          V
                .          V
1371            .       R103
                .          .
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1379          .          .          .<-------    WA30
1377          .          .       RT30
              .          .          V
              .          .          V
1380          .          .        R30
              .          .          .
              .          .          .
1388          .          .          .          .<-------  BASIN1
1386          .          .          .       RTB1
              .          .          .          V
              .          .          .          V
1389          .          .          .         B1
              .          .          .          V
              .          .          .          V
1396          .          .          .        RB1
              .          .          .          .
              .          .          .          .
1402          .          .       CDIV............
              .          .          .
              .          .          .
1405          .          .          .        459
              .          .          .          .
              .          .          .          .
1415          .          .        C52............
              .          .          V
              .          .          V
1418          .          .        R52
              .          .          .
              .          .          .
1424          .          .          .        460
              .          .          .          .
              .          .          .          .
1434          .          .       C102............
              .          .          V
              .          .          V
1437          .          .     BASIN3
              .          .          V
              .          .          V
1444          .          .         R3
              .          .          .
              .          .          .
1450          .          .          .        461
              .          .          .          .
              .          .          .          .
1460          .          .       C104............
              .          .          .
              .          .          .
1463          .       C106............
              .          V
              .          V
1466          .       R106
              .          .
              .          .
1472          .          .        462
              .          .          .
              .          .          .
1482          .        C56............
              .          .
              .          .
1485          .          .        480
              .          .          .
              .          .          .
1500          .          .          .------->   BS480
1495          .          .       D480
              .          .          .
              .          .          .
1505          .          .          .          .<-------   BS480
1503          .          .          .      RT480
              .          .          .          V
              .          .          .          V
1506          .          .          .      SR480
              .          .          .          .
              .          .          .          .
1512          .          .       C480............
              .          .          .
              .          .          .
1515       480C........................
              V
              V
1518      RR480
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              .
1524          .        500
              .          .
              .          .
1534       500C............
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(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT	10	951.	12.27	114.	31.	15.	.70		
+	ROUTED TO	R10	882.	12.40	114.	31.	15.	.70		
+	ROUTED TO	R12	833.	12.60	114.	31.	15.	.70		
+	HYDROGRAPH AT	20	959.	12.43	128.	32.	16.	1.12		
+	2 COMBINED AT	C20	1663.	12.53	240.	63.	30.	1.82		
+	HYDROGRAPH AT	40	2582.	12.30	252.	66.	32.	2.23		
+	HYDROGRAPH AT	60	1553.	12.40	228.	61.	29.	1.75		
+	3 COMBINED AT	60C	5274.	12.37	708.	188.	90.	5.80		
+	ROUTED TO	SR60	92.	14.40	92.	89.	70.	5.80		
+	ROUTED TO	R60	92.	14.40	92.	89.	70.	5.80		
+	ROUTED TO	RR60	92.	14.53	92.	89.	70.	5.80		
+	HYDROGRAPH AT	80	1868.	12.27	179.	46.	22.	1.48		
+	2 COMBINED AT	80C	1942.	12.27	266.	134.	92.	1.48		
+	ROUTED TO	R80	1919.	12.27	266.	134.	92.	1.48		
+	HYDROGRAPH AT	100	404.	12.20	58.	15.	7.	.48		
+	2 COMBINED AT	100C	2300.	12.27	321.	148.	99.	1.96		
+	ROUTED TO	R100	2292.	12.30	321.	148.	99.	1.96		
+	HYDROGRAPH AT	120	3232.	12.27	326.	88.	42.	2.20		
+	2 COMBINED AT	120C	5469.	12.27	636.	229.	141.	4.16		
+	ROUTED TO	R120	5397.	12.30	636.	229.	140.	4.16		
+	HYDROGRAPH AT	140	632.	12.13	64.	17.	8.	.60		
+	HYDROGRAPH AT	150	135.	13.20	47.	13.	6.	.41		
+	ROUTED TO	R150	134.	13.30	47.	13.	6.	.41		
+	ROUTED TO	R152	133.	13.50	47.	13.	6.	.41		
+	HYDROGRAPH AT	160	217.	12.40	35.	9.	4.	.37		
+	HYDROGRAPH AT	180	785.	12.37	90.	23.	11.	1.00		
+	5 COMBINED AT	180C	6707.	12.30	857.	286.	168.	6.54		
+	HYDROGRAPH AT	350	1192.	12.20	104.	27.	13.	.96		
+	DIVERSION TO	SF350	596.	12.20	52.	14.	7.	.96		
+	HYDROGRAPH AT	D350	596.	12.20	52.	14.	7.	.96		
+	ROUTED TO	350R	524.	12.43	52.	14.	7.	.96		
+	HYDROGRAPH AT	353	401.	12.30	49.	12.	6.	.50		
+	HYDROGRAPH AT	RT350	596.	12.20	52.	14.	7.	.96		
+	ROUTED TO	RR350	583.	12.30	52.	14.	7.	.96		
+	2 COMBINED AT	353C	989.	12.30	102.	26.	13.	.50		

+ ROUTED TO	R353	948.	12.37	102.	26.	13.	.50
+ ROUTED TO	353R	926.	12.40	102.	26.	13.	.50
HYDROGRAPH AT	310	376.	12.33	49.	12.	6.	.56
+ 3 COMBINED AT	C310	1757.	12.40	199.	51.	25.	2.02
+ ROUTED TO	R310	1735.	12.47	199.	51.	25.	2.02
+ ROUTED TO	R312	1690.	12.50	199.	51.	25.	2.02
+ HYDROGRAPH AT	295	364.	12.30	40.	10.	5.	.38
+ 2 COMBINED AT	295C	1921.	12.50	237.	61.	29.	2.40
+ ROUTED TO	295R	1915.	12.50	237.	61.	29.	2.40
+ HYDROGRAPH AT	210	873.	12.20	82.	22.	10.	.58
+ ROUTED TO	R210	818.	12.27	82.	22.	10.	.58
+ HYDROGRAPH AT	240	1405.	12.30	155.	39.	19.	1.40
+ 3 COMBINED AT	240C	3550.	12.37	466.	120.	58.	4.38
+ ROUTED TO	SR240	1364.	12.87	398.	103.	50.	4.38
+ HYDROGRAPH AT	220	1126.	12.17	98.	25.	12.	.73
+ 2 COMBINED AT	220C	1441.	12.80	489.	127.	61.	5.10
+ ROUTED TO	SR220	1385.	12.97	478.	124.	60.	5.10
+ HYDROGRAPH AT	190	1403.	12.17	116.	31.	15.	.92
+ ROUTED TO	R190	1348.	12.23	116.	31.	15.	.92
+ ROUTED TO	R192	1267.	12.30	116.	31.	15.	.92
+ HYDROGRAPH AT	200	703.	12.20	69.	19.	9.	.54
+ 3 COMBINED AT	200C	2625.	12.30	651.	171.	83.	6.56
+ ROUTED TO	SR200	2484.	12.37	646.	168.	81.	6.56
+ ROUTED TO	200SR	1851.	12.67	525.	137.	66.	6.56
+ 2 COMBINED AT	C180	6707.	12.30	1375.	423.	234.	13.09
+ ROUTED TO	SR180	141.	18.87	141.	140.	113.	13.09
+ ROUTED TO	R180	141.	18.93	141.	140.	113.	13.09
+ HYDROGRAPH AT	260	418.	12.10	43.	12.	6.	.27
+ 2 COMBINED AT	260C	527.	12.10	177.	151.	120.	.27
+ ROUTED TO	R260	515.	12.20	177.	151.	120.	.27
+ HYDROGRAPH AT	280	478.	12.10	42.	12.	6.	.30
+ 2 COMBINED AT	280C	945.	12.13	216.	161.	125.	.57
+ ROUTED TO	R280	909.	12.20	216.	161.	125.	.57
+ HYDROGRAPH AT	300	407.	12.10	34.	9.	5.	.30
+ 2 COMBINED AT	C300	1243.	12.17	248.	169.	129.	.87
+ DIVERSION TO	DIV30	943.	12.17	68.	17.	8.	.87
+ HYDROGRAPH AT	D300	300.	11.87	179.	152.	121.	.87
+ HYDROGRAPH AT	RTDIV	943.	12.17	68.	17.	8.	.87

+	ROUTED TO	SRDIV	141.	12.60	62.	17.	8.	.87
+	2 COMBINED AT	300C	441.	12.60	241.	169.	129.	.87
+	HYDROGRAPH AT	305	409.	12.27	42.	11.	6.	.38
+	DIVERSION TO	305D	409.	12.27	42.	11.	6.	.38
+	HYDROGRAPH AT	D305	0.	.00	0.	0.	0.	.38
+	HYDROGRAPH AT	RT305	409.	12.27	42.	11.	6.	.38
+	ROUTED TO	SR305	62.	12.93	36.	11.	6.	.38
+	3 COMBINED AT	305C	498.	12.67	275.	180.	134.	1.25
+	ROUTED TO	R305	497.	12.73	274.	180.	133.	1.25
+	ROUTED TO	RR305	494.	12.77	274.	180.	133.	1.25
+	HYDROGRAPH AT	320	1040.	12.17	111.	31.	15.	.87
+	DIVERSION TO	BS320	409.	11.93	21.	6.	3.	.87
+	HYDROGRAPH AT	D320	1040.	12.17	96.	25.	12.	.87
+	HYDROGRAPH AT	RT320	409.	11.93	21.	6.	3.	.87
+	ROUTED TO	SR320	4.	4.17	4.	4.	3.	.87
+	3 COMBINED AT	C320	1351.	12.17	372.	208.	148.	2.12
+	HYDROGRAPH AT	340	1471.	12.17	186.	55.	26.	1.45
+	DIVERSION TO	BS340	1471.	12.17	104.	28.	14.	1.45
+	HYDROGRAPH AT	D340	1199.	12.33	97.	27.	13.	1.45
+	HYDROGRAPH AT	RT340	1471.	12.17	104.	28.	14.	1.45
+	ROUTED TO	SR340	19.	9.00	19.	19.	14.	1.45
+	3 COMBINED AT	C340	2305.	12.33	483.	253.	173.	3.56
+	HYDROGRAPH AT	355	246.	12.10	22.	6.	3.	.17
+	ROUTED TO	R355	214.	12.33	22.	6.	3.	.17
+	HYDROGRAPH AT	360	504.	12.23	84.	25.	12.	.67
+	DIVERSION TO	BS360	504.	12.23	53.	14.	7.	.67
+	HYDROGRAPH AT	D360	306.	12.63	38.	11.	5.	.67
+	HYDROGRAPH AT	RT360	504.	12.23	53.	14.	7.	.67
+	ROUTED TO	SR360	10.	9.83	10.	10.	7.	.67
+	4 COMBINED AT	360C	2512.	12.33	546.	277.	187.	4.41
+	HYDROGRAPH AT	370	588.	12.30	79.	21.	10.	.67
+	HYDROGRAPH AT	395	182.	12.23	25.	7.	3.	.20
+	2 COMBINED AT	370C	758.	12.30	103.	28.	13.	.87
+	ROUTED TO	R370	654.	12.67	103.	28.	13.	.87
+	HYDROGRAPH AT	380	666.	12.27	98.	26.	13.	.97
+	DIVERSION TO	BS380	666.	12.27	56.	14.	7.	.97
+	HYDROGRAPH AT	D380	472.	12.57	46.	12.	6.	.97
+	HYDROGRAPH AT	RT380	666.	12.27	56.	14.	7.	.97

+	ROUTED TO	SR380	10.	11.33	10.	10.	7.	.97
+	4 COMBINED AT	380C	2747.	12.33	695.	323.	212.	6.24
	HYDROGRAPH AT	390	463.	12.03	33.	10.	5.	.24
+	DIVERSION TO	BS390	95.	11.73	6.	2.	1.	.24
+	HYDROGRAPH AT	D390	463.	12.03	30.	8.	4.	.24
+	HYDROGRAPH AT	RT390	95.	11.73	6.	2.	1.	.24
+	ROUTED TO	SR390	1.	.90	1.	1.	1.	.24
+	2 COMBINED AT	390C	464.	12.03	31.	9.	5.	.24
+	ROUTED TO	RR390	324.	12.50	31.	9.	5.	.24
+	HYDROGRAPH AT	400	351.	12.23	47.	13.	6.	.62
+	DIVERSION TO	BS400	262.	12.10	10.	3.	1.	.62
+	HYDROGRAPH AT	D400	351.	12.23	39.	10.	5.	.62
+	HYDROGRAPH AT	RT400	262.	12.10	10.	3.	1.	.62
+	ROUTED TO	SR400	2.	8.70	2.	2.	1.	.62
+	2 COMBINED AT	C400	353.	12.23	41.	12.	6.	.62
+	3 COMBINED AT	400C	3261.	12.33	762.	343.	223.	7.11
+	HYDROGRAPH AT	385	782.	12.23	87.	24.	12.	.65
+	DIVERSION TO	SF385	195.	12.23	22.	6.	3.	.65
	HYDROGRAPH AT	D385	586.	12.23	65.	18.	9.	.65
+	ROUTED TO	385R	475.	12.70	65.	18.	9.	.65
+	HYDROGRAPH AT	420	752.	12.20	92.	26.	12.	.85
+	DIVERSION TO	BS420	269.	11.97	15.	4.	2.	.85
+	HYDROGRAPH AT	D420	752.	12.20	83.	22.	10.	.85
+	HYDROGRAPH AT	RT420	269.	11.97	15.	4.	2.	.85
+	ROUTED TO	SR420	13.	11.03	12.	4.	2.	.85
+	4 COMBINED AT	420C	3966.	12.33	901.	379.	242.	10.87
+	HYDROGRAPH AT	440	180.	12.03	12.	3.	2.	.08
+	ROUTED TO	R70	176.	12.07	12.	3.	2.	.08
+	HYDROGRAPH AT	441	16.	12.03	1.	0.	0.	.01
+	2 COMBINED AT	C108	191.	12.07	14.	4.	2.	.09
+	DIVERSION TO	SPLIT	96.	12.07	7.	2.	1.	.09
+	HYDROGRAPH AT	DIV4	96.	12.07	7.	2.	1.	.09
+	ROUTED TO	R108	88.	12.13	7.	2.	1.	.09
+	HYDROGRAPH AT	442	102.	12.10	9.	2.	1.	.10
	2 COMBINED AT	C67	187.	12.10	15.	4.	2.	.19
+	DIVERSION TO	BASIN4	115.	12.10	6.	1.	1.	.19
+	HYDROGRAPH AT	DIV6	72.	12.10	10.	3.	1.	.19
+	HYDROGRAPH AT	RTDIV6	115.	12.10	6.	1.	1.	.19

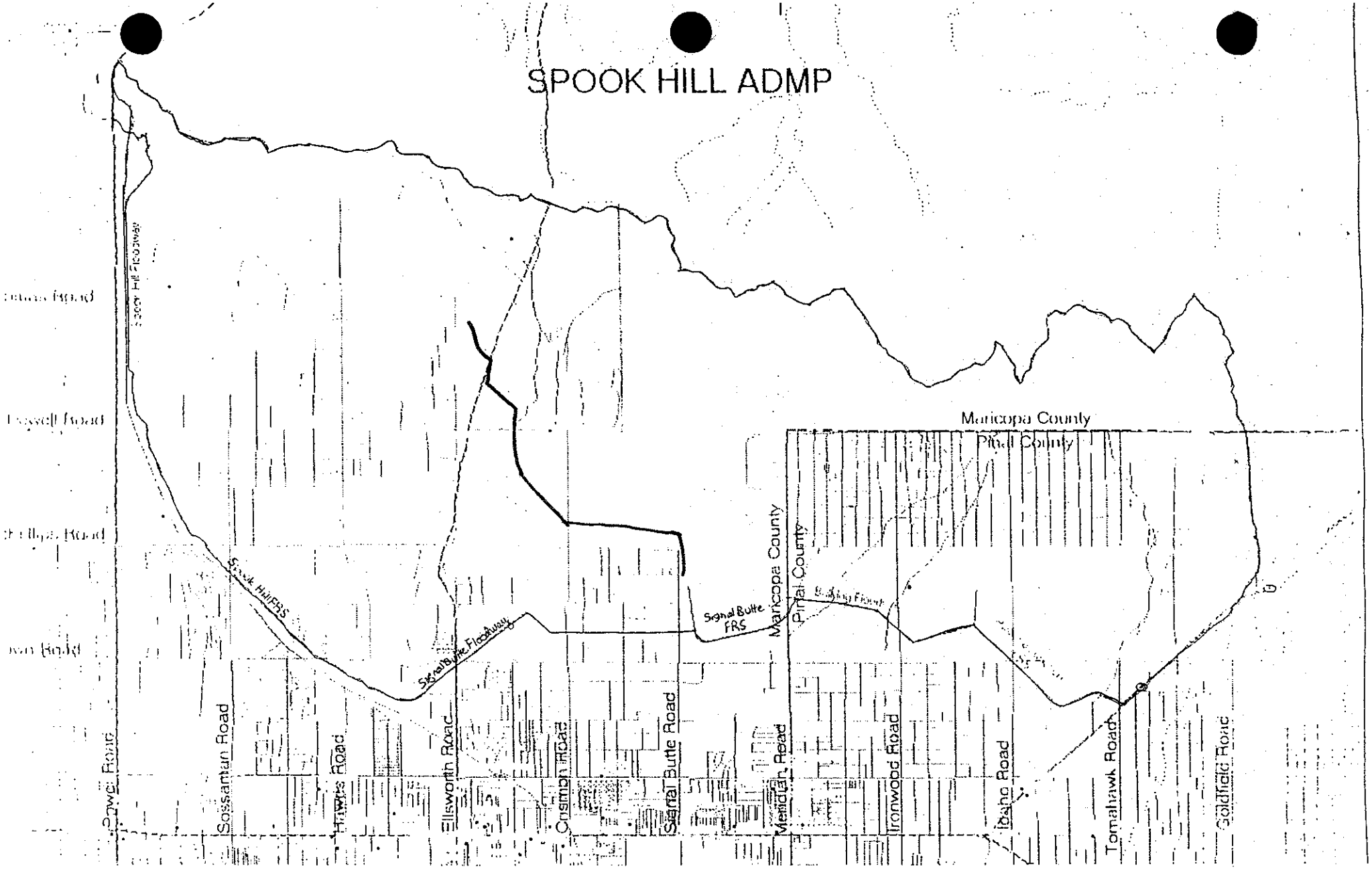
+	ROUTED TO	RFDIV6	1.	11.90	1.	1.	1.	.19
+	2 COMBINED AT	CDIV6	74.	12.10	10.	4.	2.	.19
	HYDROGRAPH AT	443	148.	12.07	14.	4.	2.	.08
+	DIVERSION TO	WSH66	78.	11.90	12.	3.	2.	.08
+	HYDROGRAPH AT	DIV66	70.	12.07	3.	1.	0.	.08
+	ROUTED TO	R113	69.	12.07	3.	1.	0.	.08
+	2 COMBINED AT	C114	140.	12.07	13.	4.	2.	.27
+	HYDROGRAPH AT	444	82.	12.03	5.	1.	1.	.04
+	ROUTED TO	R58	75.	12.07	5.	1.	1.	.04
+	HYDROGRAPH AT	445	296.	12.03	18.	5.	2.	.19
+	2 COMBINED AT	C107	365.	12.03	22.	6.	3.	.23
+	ROUTED TO	R107	365.	12.07	22.	6.	3.	.23
+	HYDROGRAPH AT	RTB2	96.	12.07	7.	2.	1.	.09
+	ROUTED TO	RSPLIT	95.	12.07	7.	2.	1.	.09
+	HYDROGRAPH AT	446	65.	12.03	6.	2.	1.	.04
+	3 COMBINED AT	C109	520.	12.07	35.	9.	4.	.27
+	DIVERSION TO	WSH404	35.	11.73	8.	2.	1.	.27
+	HYDROGRAPH AT	DIV5	485.	12.07	27.	7.	3.	.27
	ROUTED TO	R109	469.	12.10	27.	7.	3.	.27
+	HYDROGRAPH AT	447	138.	12.07	12.	4.	2.	.09
+	HYDROGRAPH AT	RT404	35.	11.73	8.	2.	1.	.27
+	ROUTED TO	R404	35.	11.90	8.	2.	1.	.27
+	3 COMBINED AT	C110	635.	12.07	46.	13.	6.	.36
+	ROUTED TO	R110	632.	12.10	46.	13.	6.	.36
+	2 COMBINED AT	C115	764.	12.10	59.	17.	8.	.63
+	ROUTED TO	R115	767.	12.10	59.	17.	8.	.63
+	HYDROGRAPH AT	448	88.	12.03	6.	2.	1.	.05
+	HYDROGRAPH AT	449	80.	12.03	5.	1.	1.	.05
+	2 COMBINED AT	C6364	166.	12.03	11.	3.	1.	.09
+	ROUTED TO	R6364	137.	12.17	11.	3.	1.	.09
+	HYDROGRAPH AT	450	61.	12.20	6.	2.	1.	.07
+	HYDROGRAPH AT	451	18.	12.17	2.	1.	0.	.03
+	HYDROGRAPH AT	RT66	78.	11.90	12.	3.	2.	.08
+	HYDROGRAPH AT	452	62.	12.03	4.	1.	1.	.04
	2 COMBINED AT	C6465	140.	12.03	16.	4.	2.	.04
	ROUTED TO	R6566	135.	12.10	16.	4.	2.	.04
+	4 COMBINED AT	C116	341.	12.17	35.	9.	4.	.23
+	ROUTED TO	BASIN5	152.	12.47	35.	9.	4.	.23

+	ROUTED TO	R116	150.	12.53	35.	9.	4.	.23
+	HYDROGRAPH AT	453	62.	12.10	7.	2.	1.	.06
+	2 COMBINED AT	C117	169.	12.50	41.	11.	5.	.29
+	2 COMBINED AT	C118	852.	12.10	99.	28.	14.	.92
+	ROUTED TO	R118	842.	12.10	99.	28.	14.	.92
+	DIVERSION TO	BASIN6	243.	12.10	10.	2.	1.	.92
+	HYDROGRAPH AT	DIV7	599.	12.10	89.	25.	13.	.92
+	HYDROGRAPH AT	RTDIV7	243.	12.10	10.	2.	1.	.92
+	ROUTED TO	RFDIV7	1.	11.97	1.	1.	1.	.92
+	2 COMBINED AT	CDIV7	600.	12.10	90.	26.	13.	.92
+	HYDROGRAPH AT	454	157.	12.17	21.	6.	3.	.18
+	2 COMBINED AT	C119	748.	12.13	110.	32.	16.	1.10
+	ROUTED TO	R454	722.	12.20	110.	32.	16.	1.10
+	HYDROGRAPH AT	415	412.	12.17	55.	16.	7.	.45
+	HYDROGRAPH AT	RT385	195.	12.23	22.	6.	3.	.65
+	ROUTED TO	RR385	177.	12.40	22.	6.	3.	.65
+	3 COMBINED AT	415C	1193.	12.20	184.	53.	26.	1.71
+	ROUTED TO	R415	1179.	12.27	184.	53.	26.	1.71
+	HYDROGRAPH AT	455	1346.	12.13	142.	43.	21.	1.11
+	DIVERSION TO	BS455	1346.	12.13	137.	37.	18.	1.11
+	HYDROGRAPH AT	D455	55.	12.77	16.	6.	3.	1.11
+	HYDROGRAPH AT	RT455	1346.	12.13	137.	37.	18.	1.11
+	ROUTED TO	SR455	25.	10.47	25.	25.	18.	1.11
+	2 COMBINED AT	C455	80.	12.77	41.	31.	21.	1.11
+	3 COMBINED AT	455C	4955.	12.37	1091.	451.	284.	13.69
+	ROUTED TO	SR440	777.	13.77	760.	451.	284.	13.69
+	ROUTED TO	RR455	777.	14.10	760.	451.	282.	13.69
+	HYDROGRAPH AT	456	468.	12.07	35.	10.	5.	.26
+	DIVERSION TO	BASIN1	184.	12.07	8.	2.	1.	.26
+	HYDROGRAPH AT	DIV1	284.	12.07	27.	8.	4.	.26
+	DIVERSION TO	WA30	58.	12.07	10.	3.	2.	.26
+	HYDROGRAPH AT	DIV2	226.	12.07	18.	4.	2.	.26
+	ROUTED TO	R456	213.	12.13	18.	4.	2.	.26
+	HYDROGRAPH AT	457	264.	12.07	20.	5.	3.	.19
+	2 COMBINED AT	C101	462.	12.10	38.	10.	5.	.45
+	DIVERSION TO	BASIN2	165.	12.10	7.	2.	1.	.45
+	HYDROGRAPH AT	DIV3	297.	12.10	30.	8.	4.	.45
+	HYDROGRAPH AT	RTDIV3	165.	12.10	7.	2.	1.	.45

+	ROUTED TO	RFDIV3	2.	11.90	2.	2.	1.	.45
+	2 COMBINED AT	CDIV3	299.	12.10	32.	9.	5.	.45
	ROUTED TO	R101	297.	12.10	32.	9.	5.	.45
+	HYDROGRAPH AT	458	356.	12.03	25.	7.	3.	.19
+	2 COMBINED AT	C103	635.	12.07	56.	16.	8.	.64
+	ROUTED TO	R103	630.	12.07	56.	16.	8.	.64
+	HYDROGRAPH AT	RT30	58.	12.07	10.	3.	2.	.26
+	ROUTED TO	R30	57.	12.10	10.	3.	2.	.26
+	HYDROGRAPH AT	RTB1	184.	12.07	8.	2.	1.	.26
+	ROUTED TO	B1	37.	12.23	8.	2.	1.	.26
+	ROUTED TO	RB1	37.	12.30	8.	2.	1.	.26
+	2 COMBINED AT	CDIV	86.	12.20	17.	5.	3.	.12
+	HYDROGRAPH AT	459	44.	12.03	3.	1.	0.	.03
+	2 COMBINED AT	C52	113.	12.10	20.	6.	3.	.15
+	ROUTED TO	R52	112.	12.17	20.	6.	3.	.15
+	HYDROGRAPH AT	460	214.	12.07	19.	6.	3.	.14
+	2 COMBINED AT	C102	313.	12.07	39.	12.	6.	.29
+	ROUTED TO	BASIN3	71.	12.63	39.	12.	6.	.29
	ROUTED TO	R3	71.	12.77	39.	12.	6.	.29
+	HYDROGRAPH AT	461	161.	12.10	17.	5.	2.	.12
+	2 COMBINED AT	C104	213.	12.10	55.	17.	8.	.41
+	2 COMBINED AT	C106	835.	12.07	110.	32.	16.	1.05
+	ROUTED TO	R106	797.	12.13	110.	32.	16.	1.05
+	HYDROGRAPH AT	462	538.	12.07	40.	11.	5.	.30
+	2 COMBINED AT	C56	1254.	12.10	149.	42.	21.	1.35
+	HYDROGRAPH AT	480	1050.	12.10	96.	29.	14.	.73
+	DIVERSION TO	BS480	455.	11.90	27.	8.	4.	.73
+	HYDROGRAPH AT	D480	1050.	12.10	78.	21.	10.	.73
+	HYDROGRAPH AT	RT480	455.	11.90	27.	8.	4.	.73
+	ROUTED TO	SR480	6.	3.90	6.	6.	4.	.73
+	2 COMBINED AT	C480	1056.	12.10	84.	27.	14.	.73
+	3 COMBINED AT	480C	2505.	12.10	941.	532.	324.	2.09
+	ROUTED TO	RR480	2343.	12.13	939.	532.	324.	2.09
+	HYDROGRAPH AT	500	1073.	12.27	122.	33.	16.	.93
	2 COMBINED AT	500C	3231.	12.17	1050.	560.	338.	3.02

*** NORMAL END OF HEC-1 ***

SPOOK HILL ADMP



HEC-1 Existing Condition 100-Year, 24-Hour Storm. Model update based o
#35; with additional diversion added north-west of Pass Mountain Diversion
creating sub-basins 365 and 370 from sub-basin 370.

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1****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*              JUN   1998              *
*            VERSION 4.1               *
*                                      *
*  RUN DATE   14JUN00  TIME  13:26:14  *
*                                      *
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*                                      *
*   U.S. ARMY CORPS OF ENGINEERS       *
*   HYDROLOGIC ENGINEERING CENTER      *
*         609 SECOND STREET            *
*      DAVIS, CALIFORNIA 95616         *
*          (916) 756-1104              *
*                                      *
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X     X  XXXXXXX   XXXXX          X
X     X  X        X     X        XX
X     X  X        X              X
XXXXXXX  XXXX     X        XXXXX X
X     X  X        X              X
X     X  X        X     X        X
X     X  XXXXXXX   XXXXX        XXX
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THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

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1                                    HEC-1 INPUT                                                    PAGE  1

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  1           ID   EXISTING LAND USE CALCULATIONS WERE BASED ON 1 YR. FROM 11/5/99
  2           ID   FOR LAS SENDAS       AND LANDISCOR JAN.1999 AERIAL PHOTOGPRAPHS
  3           ID
  4           ID   ALL DAMS WERE ANALYZED WITH NO STORAGE BELOW PRINCIPLE SPILLWAY ELEVATIONS
  5           ID
  6           ID   A CONSERVATIVE ESTIMATE WAS USED FOR THE LOCATION OF THE CENTROID FOR
  7           ID   PRECIPITATION VALUES
  8           ID
  9           ID   ALL CHANNEL ROUTING INFORMATION WAS OBTAINED FROM MCFCD SPOOK HILL   SIGNAL
 10           ID   BUTTE        AND BULLDOG FLOODWAY PLANS
 11           ID
 12           ID
 13           ID   PASS MOUNTAIN DIVERSION UPDATE UTILIZING S24CE10.DAT AS 24hr 100yr EVENT
 14           ID   PASS MOUNTAIN DIVERSION EXTENDED NORTH-WEST CREATING SUB-BASIN 295,
 15           ID   300 & 305 FROM SUB-BASIN 300; 353, 355 FROM SUB-BASIN 355
 16           ID   SUB-BASIN 365 AND 370 FROM SUB-BASIN 370
 17           ID   OFFLINE BASINS ADDED TO SUB-BASINS 300 & 305
 18           ID   ANALYSIS PERFORMED BY WOOD/PATEL; MW;  06/14/00;       FILE: S24CE22.DAT
 19           ID
              *DIAGRAM
 20           IT       2                    1500
 21           IO       3
 22           IN      15
 23           JD    3.81    0.01
 24           PC    .000    .002    .005    .008    .011    .014    .017    .020    .023    .026
 25           PC    .029    .032    .035    .038    .041    .044    .048    .052    .056    .060
 26           PC    .064    .068    .072    .076    .080    .085    .090    .095    .100    .105
 27           PC    .110    .115    .120    .126    .133    .140    .147    .155    .163    .172
 28           PC    .181    .191    .203    .218    .236    .257    .283    .387    .663    .707
 29           PC    .735    .758    .776    .791    .804    .815    .825    .834    .842    .849
 30           PC    .856    .863    .869    .875    .881    .887    .893    .898    .903    .908
 31           PC    .913    .918    .922    .926    .930    .934    .938    .942    .946    .950
 32           PC    .953    .956    .959    .962    .965    .968    .971    .974    .977    .980
 33           PC    .983    .986    .989    .992    .995    .998   1.000
 34           JD    3.58   10.00
 35           JD    3.43   30.00
 36           JD    3.28   60.00
 37           JD    3.22   90.00
 38           JD    3.18  120.00
 39           JD    3.14  150.00
 40           JD    3.05  300.00
 41           JD    2.97  500.00
              * DDM   ***** Updated *****

 42           KK      10
 43           KM   SUB-BASIN 10
 44           KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 45           KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
 46           KM     L = 2.00  Kb = .044  Adj. Slope =  165.0
 47           BA    .702
 48           LG    .350    .320   7.600    .090  15.000
 49           UC    .421    .302
 50           UA       0       3       5       8      12      20      43      75      90      96
 51           UA     100
              * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                                    PAGE  2

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 52           KK     R10
 53           KM   ROUTING OF FLOW FROM SUB-BASIN 10 TO R12
 54           RS       4    FLOW      -1
 55           RC    .045     .03    .045    8700    .021
 56           RX       0       1       2      17      27      42      43      44
 57           RY       5       5       5       0       0       5       5       5
              * DDM   ***** Preserved *****

 58           KK     R12
 59           KM   ROUTING OF FLOW FROM R12 TO SUB-BASIN 20
 60           RS       6    FLOW      -1
 61           RC    .045     .03    .045    4500     .01
 62           RX       0       1      30    37.5    57.5      65      94      95
 63           RY       3     2.5     2.5       0       0     2.5     2.5       3
              * DDM   ***** Updated *****
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 64          KK      20
 65          KM   SUB-BASIN 20
 66          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 67          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
 68          KM     L = 2.50  Kb = .041  Adj. Slope =   88.0
 69          BA   1.120
 70          LG    .350    .390   5.800    .190   1.000
 71          UC    .658    .454
 72          UA       0       3       5       8      12      20      43      75      90      96
 73          UA     100
             * DDM   ***** Preserved *****

 74          KK     C20
 75          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 10 AND 20
 76          HC       2
             * DDM   ***** Updated *****

 77          KK      40
 78          KM   SUB-BASIN 40
 79          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 80          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
 81          KM     L = 3.08  Kb = .036  Adj. Slope =  189.0
 82          BA   2.233
 83          LG    .340    .340   4.900    .280   5.000
 84          UC    .496    .264
 85          UA       0       3       5       8      12      20      43      75      90      96
 86          UA     100
             * DDM   ***** Updated *****

 87          KK      60
 88          KM   SUB-BASIN 60
 89          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 90          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .990
 91          KM     L = 4.19  Kb = .038  Adj. Slope =  209.6
 92          BA   1.746
 93          LG    .330    .350   5.800    .190   9.000
 94          UC    .596    .477
 95          UA       0       3       5       8      12      20      43      75      90      96
1                                      HEC-1 INPUT                                          PAGE  3

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 96          UA     100
             * DDM   ***** Preserved *****

 97          KK     60C
 98          KM   HYDROGRAPH COMBINATION FOR APACHE JUNCTION FRS
             *      1       2
 99          HC       3
             * DDM   ***** Preserved *****

100          KK    SR60
101          KM   APACHE JUNCTION FRS AS-BUILT PLANS 12/19/88
102          KM   OUTLET PIPE=30"RCP; L=136.6'; INLET INV.=1783.5; OUTLET INV.=1783
103          KM   EMERGENCY SPILLWAY ELEV.=1799.77'; PRINCIPLE SPILLWAY ELEV.=1793.5'
104          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 100 ACRE-FEET
105          RS       1    STOR       0
106          SV       0       1     100     200     300     400
107          SQ       0      71      81      87    91.5      94
108          SE    83.5    93.5      96    97.7      99   99.77
             * DDM   ***** Preserved *****

109          KK     R60
110          KM        ROUTE FLOW THROUGH BULLDOG FLOODWAY FROM APACHE JUNCTION FRS
111          RS       1    FLOW      -1
112          RC    .016    .016    .016    2850    .012
113          RX       0       1       2     2.1     5.6     5.7       6       7
114          RY     3.5     3.5     3.5       0       0     3.5     3.5     3.5
             * DDM   ***** Preserved *****

115          KK    RR60
116          KM   ROUTE FLOW FROM BULLDOG FLOODWAY TO SUB-BASIN 80
117          RS       4    FLOW      -1
118          RC    .016    .016    .016    3500    .005
119          RX       0       1       2     2.1     7.1     7.2       8       9
120          RY     3.5     3.5     3.5       0       0     3.5     3.5     3.5
             * DDM   ***** Updated *****

121          KK      80
122          KM   SUB-BASIN 80
123          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
124          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .991
125          KM     L = 2.69  Kb = .039  Adj. Slope =  229.8
126          BA   1.475
127          LG    .330    .330   5.600    .210   4.000
128          UC    .433    .259
129          UA       0       3       5       8      12      20      43      75      90      96
130          UA     100
             * DDM   ***** Preserved *****

131          KK     80C
132          KM   HYDROGRAPH COMBINATION FOR FLOW FROM APACHE JUNCTION FRS & SUB-BASIN 80
133          HC       2   1.475
             * DDM   ***** Preserved *****
1                                      HEC-1 INPUT                                          PAGE  4

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

134          KK     880
135          KM   ROUTE FLOW FROM SUB-BASIN 80 TO SUB-BASIN 100
136          RS       1    FLOW      -1
137          RC    .025    .016    .025    1200    .003
138          RX       0       2       6     6.1    41.1    41.2    56.2    58.2
139          RY     5.5     4.5     4.5       0       0     4.5     4.5     5.5
             * DDM   ***** Updated *****

140          KK     100
141          KM   SUB-BASIN 100
142          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
143          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
144          KM     L = 1.94  Kb = .046  Adj. Slope =  108.0
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145          BA    .484
146          LG    .320    .290   5.100    .260   3.000
147          UC    .533    .473
148          UA       0       5      16      30      65      77      84      90      94      97
149          UA     100
             * DDM   ***** Preserved *****

150          KK    100C
151          KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 80 & 100
152          HC       2
             * DDM   ***** Preserved *****

153          KK    R100
154          KM   ROUTE FLOW FROM SUB-BASIN 100 TO SUB-BASIN 120
155          RS       1    FLOW      -1
156          RC    .016    .016    .016     940    .005
157          RX       0       1       2     2.1    52.1    52.2      53      54
158          RY     4.5     4.5     4.5       0       0     4.5     4.5     4.5
             * DDM   ***** Updated *****

159          KK     120
160          KM   SUB-BASIN 120
161          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
162          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
163          KM     L = 3.07  Kb = .037  Adj. Slope =  239.0
164          BA   2.202
165          LG    .330    .280   6.800    .130  11.000
166          UC    .429    .226
167          UA       0       3       5       8      12      20      43      75      90      96
168          UA     100
             * DDM   ***** Preserved *****

169          KK    120C
170          KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 100 & 120
171          HC       2
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

172          KK    R120
173          KM   ROUTE FLOW FROM SUB-BASIN 120 TO SIGNAL BUTTE FRS
174          RS       1    FLOW      -1
175          RC    .025    .016    .025    2100    .005
176          RX       0       6      10    10.1    60.1    60.2    74.2    80.2
177          RY       8       5       5       0       0       5       5       8
             * DDM   ***** Updated *****

178          KK     140
179          KM   SUB-BASIN 140
180          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
181          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
182          KM     L = 1.61  Kb = .044  Adj. Slope =  149.0
183          BA    .598
184          LG    .310    .280   4.200    .440   5.000
185          UC    .421    .278
186          UA       0       5      16      30      65      77      84      90      94      97
187          UA     100
             * DDM   ***** Updated *****

188          KK     150
189          KM   SUB-BASIN 150
190          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
191          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
192          KM     L = 1.50  Kb = .047  Adj. Slope =  315.0
193          BA    .408
194          LG    .350    .360   5.100    .260   7.000
195          UC   1.579   1.417
196          UA       0       3       5       8      12      20      43      75      90      96
197          UA     100
             * DDM   ***** Preserved *****

198          KK    R150
199          KM   ROUTING OF FLOW FROM SUB-BASIN 150 TO R152
200          RS       3    FLOW      -1
201          RC    .045     .04    .045    3100    .032
202          RX       0       1       2      23      33      54      55      56
203          RY       7       7       7       0       0       7       7       7
             * DDM   ***** Preserved *****

204          KK    R152
205          KM   ROUTING OF FLOW FROM R152 TO SUB-BASIN 160
206          RS       6    FLOW      -1
207          RC    .045     .03    .045    5900    .019
208          RX       0       1       2       8      33      39      40      41
209          RY       2       2       2       0       0       2       2       2
             * DDM   ***** Updated *****

210          KK     160
211          KM   SUB-BASIN 160
212          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
213          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
214          KM     L = 2.10  Kb = .047  Adj. Slope =  129.0
215          BA    .369
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

216          LG    .340    .330   4.150    .440   1.000
217          UC    .587    .655
218          UA       0       3       5       8      12      20      43      75      90      96
219          UA     100
             * DDM   ***** Updated *****

220          KK     180
221          KM   SUB-BASIN 180
222          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
223          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
224          KM     L = 2.42  Kb = .041  Adj. Slope =  140.0
225          BA   1.000
226          LG    .350    .350   4.150    .430    .000
227          UC    .571    .403
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228          UA       0       3       5       8      12      20      43      75      90      96
229          UA     100
             * DDM   ***** Preserved *****

230          KK    180C
231          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
232          HC       5
             * DDM   ***** Inserted *****

233          KK     365
234          KM   SUB-BASIN 365
235          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
236          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
237          KM     L = 2.20  Kb = .047  Adj. Slope =  299.5
238          BA    .415
239          LG    .350    .350   4.600    .330   4.000
240          UC    .400    .415
241          UA       0       3       5       8      12      20      43      75      90      96
242          UA     100

243          KK    R365
244          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
245          KM   ROUTING OF FLOW FROM SUB-BASIN 365 TO ROUTING 365R
246          RS       2    FLOW      -1
247          RC    .045     .03    .045    1000    .025
248          RX       0       1      50      56      76      82     131     132
249          RY     2.5       2       2       0       0       2       2     2.5

250          KK    365R
251          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
252          KM   ROUTING OF FLOW FROM 365R TO SUB-BASIN 353
253          KM   OVERBANK MANNINGS INCREASED TO ACCOUNT FOR SKEWED FLOW TO NATURAL
254          KM   WATERCOURSE FLOW PATH
255          RS       2    FLOW      -1
256          RC     .07     .03     .07    1300    .008
257          RX       0       3       5      11      41      47     147     247
258          RY       3     2.5       2       0       0       2     2.5       3
             * DDM   ***** Updated *****
1                                    HEC-1 INPUT                                                    PAGE  7

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

259          KK     350
260          KM   SUB-BASIN 350
261          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
262          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
263          KM     L = 2.22  Kb = .042  Adj. Slope =  311.0
264          BA    .961
265          LG    .350    .350   4.600    .330   5.000
266          UC    .367    .235
267          UA       0       3       5       8      12      20      43      75      90      96
268          UA     100
             * DDM   ***** Preserved *****

269          KK    D350
270          KM   DIVERT FLOW FROM SUB-BASIN 350. FOR MODELING PURPOSES THE SPLIT FLOW WILL
271          KM   BE ROUTED BETWEEN SUB-BASINS 355 & 310.
272          DT   SF350
273          DI       0    5000
274          DQ       0    2500
             * DDM   ***** Preserved *****

275          KK    350R
276          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING
277          KM   ROUTING OF MAIN FLOW FROM DIVERSION OF SUB-BASIN 350 TO SUB-BASIN 310
278          RS       7    FLOW      -1
279          RC    .045    .035    .045    5379    .022
280          RX       0       1      40      46      56      62     102     103
281          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

282          KK     353
283          KM   SUB-BASIN 353
284          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
285          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
286          KM     L = 2.50  Kb = .046  Adj. Slope =  297.9
287          BA    .502
288          LG    .350    .350   4.350    .380   1.000
289          UC    .442    .460
290          UA       0       3       5       8      12      20      43      75      90      96
291          UA     100
             * DDM   ***** Preserved *****

292          KK   RT350
293          KM   RETRIEVE SPLIT FLOW FROM DIVERSION OF SUB-BASIN 350
294          DR   SF350
             * DDM   ***** Preserved *****

295          KK   RR350
296          KM   ROUTING OF FLOW FROM SPLIT OF SUB-BASIN 350 TO SUB-BASIN 353
297          RS       3    FLOW      -1
298          RC    .045    .045    .045    3200    .025
299          RX       0       1       2      14      29      41      42      43
300          RY       4       4       4       0       0       4       4       4
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                                    PAGE  8

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

301          KK    353C
302          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 353 & SPLIT FLOW FROM SUB-BASIN 350
303          HC       4
             * DDM   ***** Preserved *****

304          KK    R353
305          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
306          KM   ROUTING OF FLOW FROM SUB-BASIN 353 TO ROUTING 353R
307          KM   OVERBANK MANNINGS INCREASED TO ACCOUNT FOR SKEWED FLOW TO NATURAL
308          KM   WATERCOURSE FLOW PATH
309          RS       2    FLOW      -1
310          RC     .07     .03     .07    1100    .009
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311          RX       0       3       5      11      41      47     172     302
312          RY     3.5     2.5       2       0       0       2     2.5     3.5
             * DDM   ***** Preserved *****

313          KK    353R
314          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
315          KM   ROUTING OF FLOW FROM 353R TO SUB-BASIN 310
316          RS       2    FLOW      -1
317          RC    .045     .03    .045    1692     .03
318          RX       0      25      50      56      76      82     107     132
319          RY     3.5     2.5       2       0       0       2     2.5     3.5
             * DDM   ***** Updated *****

320          KK     310
321          KM   SUB-BASIN 310
322          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
323          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
324          KM     L = 2.70  Kb = .045  Adj. Slope =  283.5
325          BA    .555
326          LG    .350    .350   3.910    .480    .000
327          UC    .483    .511
328          UA       0       3       5       8      12      20      43      75      90      96
329          UA     100
             * DDM   ***** Preserved *****

330          KK    C310
331          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 350 & 310
332          HC       2
             * DDM   ***** Preserved *****

333          KK    R310
334          KM   ROUTING OF FLOW FROM SUB-BASIN 310 TO R312
335          RS       2    FLOW      -1
336          RC     .05    .045     .05    1500    .021
337          RX       0      60      75      81     101     107     167     182
338          RY       4       3       2       0       0       2       3       4
             * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                                    PAGE  9

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

339          KK    R312
340          KM   ROUTING OF FLOW FROM R312 TO SUB-BASIN 295
341          RS       1    FLOW      -1
342          RC    .045     .03    .045    1300   .0125
343          RX       0      60      75      81     101     107     167     182
344          RY       4       3       2       0       0       2       3       4
             * DDM   ***** Updated *****

345          KK     295
346          KM   SUB-BASIN 295
347          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
348          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
349          KM     L = 1.60  Kb = .047  Adj. Slope =  131.0
350          BA    .380
351          LG    .350    .350   4.900    .280    .000
352          UC    .450    .386
353          UA       0       3       5       8      12      20      43      75      90      96
354          UA     100
             * DDM   ***** Preserved *****

355          KK    295C
356          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 310 & 295
357          HC       2
             * DDM   ***** Preserved *****

358          KK    295R
359          KM   ROUTING OF FLOW FROM SUB-BASIN 295 TO BEGINNING OF PASS MTN. DIVERSION.
360          RS       1    FLOW      -1
361          RC    .045    .022    .045    1300   .0125
362          RX       0       1       2      10      50      58      59      60
363          RY       4       4       4       0       0       4       4       4
             * DDM   ***** Updated *****

364          KK     210
365          KM   SUB-BASIN 210
366          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
367          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
368          KM     L = 1.84  Kb = .045  Adj. Slope =  315.0
369          BA    .583
370          LG    .350    .350   7.000    .120   7.000
371          UC    .321    .232
372          UA       0       3       5       8      12      20      43      75      90      96
373          UA     100
             * DDM   ***** Preserved *****

374          KK    R210
375          KM   ROUTING OF FLOW FROM SUB-BASIN 210 TO SUB-BASIN 220
376          RS       2    FLOW      -1
377          RC    .045     .03    .045    5100    .022
378          RX       0       1       2      14      34      46      47      48
379          RY       4       4       4       0       0       4       4       4
             * DDM   ***** Updated *****
1                                          HEC-1 INPUT                                                    PAGE 10

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

380          KK     240
381          KM   SUB-BASIN 240
382          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
383          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .992
384          KM     L = 3.50  Kb = .039  Adj. Slope =  298.6
385          BA   1.398
386          LG    .350    .370   5.200    .240   2.000
387          UC    .471    .361
388          UA       0       3       5       8      12      20      43      75      90      96
389          UA     100
             * DDM   ***** Preserved *****

390          KK    240C
391          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
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392          HC       3
             * DDM   ***** Preserved *****

393          KK   SR240
394          KM   DIGITAL MAPPING SHOWS SEDIMENTATION.  FOR SIMPLICITY NO ADDITIONAL
395          KM   SEDIMENTATION WILL BE CONSIDERED FOR STORAGE ROUTING ANALYSIS. 5/11/00
396          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
397          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
398          RS       1    STOR       0
399          SA    1.38    14.2    36.5
400          SE       0       5      11
401          SS       5      42       3     1.5
             * DDM   ***** Updated *****

402          KK     220
403          KM   SUB-BASIN 220
404          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
405          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
406          KM     L = 1.92  Kb = .043  Adj. Slope =  315.0
407          BA    .725
408          LG    .350    .350   7.000    .120   4.000
409          UC    .317    .209
410          UA       0       3       5       8      12      20      43      75      90      96
411          UA     100
             * DDM   ***** Preserved *****

412          KK    220C
413          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
414          HC       2
             * DDM   ***** Preserved *****

415          KK   SR220
416          KM   DIGITAL MAPPING SHOWS SEDIMENTATION.  FOR SIMPLICITY NO ADDITIONAL
417          KM   SEDIMENTATION WILL BE CONSIDERED FOR STORAGE ROUTING ANALYSIS. 5/11/00
418          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
419          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
420          RS       1    STOR       0
421          SA     .78     4.1    13.7
422          SE       0       3      10
423          SS       3      65       3     1.5
             * DDM   ***** Updated *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

424          KK     190
425          KM   SUB-BASIN 190
426          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
427          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
428          KM     L = 1.91  Kb = .042  Adj. Slope =  315.0
429          BA    .918
430          LG    .350    .390   5.800    .190   8.000
431          UC    .321    .185
432          UA       0       3       5       8      12      20      43      75      90      96
433          UA     100
             * DDM   ***** Preserved *****

434          KK    R190
435          KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
436          RS       2    FLOW      -1
437          RC    .045     .03    .045    4740     .03
438          RX       0       1       2      17      37      52      53      54
439          RY       5       5       5       0       0       5       5       5
             * DDM   ***** Preserved *****

440          KK    R192
441          KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
442          RS       2    FLOW      -1
443          RC    .045    .035    .045    2200    .018
444          RX       0       1      50      59      79      88     137     138
445          RY     3.5       3       3       0       0       3       3     3.5
             * DDM   ***** Updated *****

446          KK     200
447          KM   SUB-BASIN 200
448          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
449          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
450          KM     L = 1.92  Kb = .045  Adj. Slope =  315.0
451          BA    .535
452          LG    .350    .390   5.700    .200  10.000
453          UC    .338    .267
454          UA       0       3       5       8      12      20      43      75      90      96
455          UA     100
             * DDM   ***** Preserved *****

456          KK    200C
457          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 220 & 200
458          HC       3
             * DDM   ***** Preserved *****

459          KK   SR200
460          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
461          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
462          RS       1    STOR       0
463          SA    2.56     3.1     9.4
464          SE       0       3      10
465          SS       3     112       3     1.5
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

466          KK   200SR
467          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
468          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
469          RS       1    STOR       0
470          SA       8     9.2     9.2
471          SE       0       7      10
472          SS       7     251       3     1.5
             * DDM   ***** Preserved *****
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473          KK    C180
474          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
             *      1        2
475          HC       2
             * DDM   ***** Preserved *****

476          KK   SR180
477          KM   SIGNAL BUTTE FRS DATED 1/28/85
478          KM   OUTLET PIPE=36"RCP; L= 147';  INLET INV.=1690; OUTLET INV.=1687
479          KM   EMERGENCY SPILLWAY ELEV.=1712.4; PRINCIPLE SPILLWAY ELEV.=1701
480          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 250 ACRE-FEET
481          RS       1    STOR       0
482          SV       0       1     250     500     750    1060
483          SQ       0   106.5   125.5   137.5     146     160
484          SE      90     101   104.5     107     109   112.4
             * DDM   ***** Preserved *****

485          KK    R180
486          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
487          KM   ROUTE FLOW FROM SIGNAL BUTTE FRS TO SUB-BASIN 260
488          RS       1    FLOW      -1
489          RC    .035    .025    .035    1500    .003
490          RX       0       1       2    22.6    38.6    59.2      60      61
491          RY     9.3     9.3     9.3       0       0     9.3     9.3     9.3
             * DDM   ***** Updated *****

492          KK     260
493          KM   SUB-BASIN 260
494          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
495          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
496          KM     L =  .81  Kb = .049  Adj. Slope =   68.0
497          BA    .267
498          LG    .300    .170   6.800    .160  15.000
499          UC    .363    .215
500          UA       0       5      16      30      65      77      84      90      94      97
501          UA     100
             * DDM   ***** Preserved *****

502          KK    260C
503          KM   HYDROGRAPH COMBINATION FOR OUTFLOW OF SIGNAL BUTTE FRS & SUB-BASIN 260
504          HC       2    .267
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 13

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

505          KK    R260
506          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
507          KM   ROUTE FLOW FROM SUB-BASIN 260 TO SUB-BASIN 280
508          RS       3    FLOW      -1
509          RC    .035    .025    .035    2300    .003
510          RX       0       1       2    23.4    43.4    64.8      65      66
511          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Updated *****

512          KK     280
513          KM   SUB-BASIN 280
514          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
515          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
516          KM     L =  .77  Kb = .049  Adj. Slope =   84.0
517          BA    .304
518          LG    .300    .250   5.300    .290  15.000
519          UC    .333    .175
520          UA       0       5      16      30      65      77      84      90      94      97
521          UA     100
             * DDM   ***** Preserved *****

522          KK    280C
523          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 260 & SUB-BASIN 280
524          HC       2
             * DDM   ***** Preserved *****

525          KK    R280
526          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
527          KM   ROUTE FLOW FROM SUB-BASIN 280 TO SUB-BASIN 300
528          RS       2    FLOW      -1
529          RC    .035    .025    .035    2500    .003
530          RX       0       1       2    23.4    43.4    64.8      65      66
531          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Updated *****

532          KK     300
533          KM   SUB-BASIN 300
534          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
535          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
536          KM     L =  .80  Kb = .049  Adj. Slope =  100.0
537          BA    .297
538          LG    .320    .280   4.200    .480  11.000
539          UC    .333    .183
540          UA       0       5      16      30      65      77      84      90      94      97
541          UA     100
             * DDM   ***** Preserved *****

542          KK    C300
543          KM   HYDROGRAPH COMBINATION OF DIVERTED FLOW
544          HC       2
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 14

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

545          KK    D300
546          KM   DIVERT FLOW INTO OFFLINE BASIN AT SIGNAL BUTTE FLOODWAY TO BE COMBINED
547          KM   LATER WITH BASIN 305 AT END OF SIGNAL BUTTE FLOODWAY
548          DT   DIV300
549          DI       0     300    5000
550          DQ       0       0    4700
             * DDM   ***** Preserved *****

551          KK   RTDIV300
552          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
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553          DR   DIV300
             * DDM   ***** Preserved *****

554          KK   SRDIV300
555          KM   RETRIEVE FLOW INTO BASIN AND BLEED OFF WITHIN 36 HOURS
556          KM
557          RS       1    STOR       0
558          SV       0      60
559          SE       0      12
560          SQ       0     300
             * DDM   ***** Preserved *****

561          KK    300C
562          KM   HYDROGRAPH COMBINATION OF DIVERTED FLOW
563          HC       2
             * DDM   ***** Updated *****

564          KK     305
565          KM   SUB-BASIN 305
566          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
567          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
568          KM     L = 1.20  Kb = .047  Adj. Slope =   92.0
569          BA    .377
570          LG    .340    .330   4.450    .380   8.000
571          UC    .438    .298
572          UA       0       3       5       8      12      20      43      75      90      96
573          UA     100
             * DDM   ***** Preserved *****

574          KK    D305
575          KM   DIVERT FLOW INTO OFFLINE BASIN TO BE COMBINED LATER WITH PASS MOUNTAIN
576          KM   DIVERSION FLOW AT END OF SIGNAL BUTTE FLOODWAY
577          DT    305D
578          DI       0    1000
579          DQ       0    1000
             * DDM   ***** Preserved *****

580          KK   RT305D
581          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
582          DR    305D
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

583          KK   SR305D
584          KM   RETRIEVE FLOW INTO BASIN AND BLEED OFF WITHIN 36 HOURS
585          KM
586          RS       1    STOR       0
587          SV       0      25
588          SE       0       6
589          SQ       0     100
             * DDM   ***** Preserved *****

590          KK    305C
591          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 280 & 300
592          HC       3
             * DDM   ***** Preserved *****

593          KK    R305
594          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
595          KM   ROUTE FLOW FROM SUB-BASIN 300 TO START OF FLOODWAY CONCRETE CHANNEL
596          RS       2    FLOW      -1
597          RC    .035    .025    .035    2200    .003
598          RX       0       1       2    23.4    55.4    76.8      77      78
599          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Preserved *****

600          KK   RR305
601          KM   CHANNEL GEOMETRY FOR SPOOK HILL FRS OBTAINED FROM AS-BUILTS PLANS.
602          KM   CONTINUE TO ROUTE FLOW WITHIN CONCRETE CHANNEL TO SPOOK HILL FRS
603          RS       1    FLOW      -1
604          RC    .016    .016    .016    6050   .0146
605          RX       0       1       2     2.1    16.1    16.2      17      18
606          RY     7.5     7.5     7.5       0       0     7.5     7.5     7.5
             *        1       2
             * DDM   ***** Updated *****

607          KK     320
608          KM   SUB-BASIN 320
609          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
610          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .995
611          KM     L = 1.60  Kb = .042  Adj. Slope =  106.0
612          BA    .870
613          LG    .310    .290   4.500    .380  15.000
614          UC    .450    .240
615          UA       0       5      16      30      65      77      84      90      94      97
616          UA     100
             * DDM   ***** Preserved *****

617          KK    D320
618          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
619          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
620          KM   SIERRA HEIGHTS        FALCON RIDGE     & MARBLE CREEK
621          KM        MAXIMUM VOLUME DIVERSION = 12.27acre-feet
             *        1
622          DT   BS320   12.27
623          DI       0   10000
624          DQ       0   10000
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

625          KK   RT320
626          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
627          DR   BS320
             * DDM   ***** Preserved *****

628          KK   SR320
629          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
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630          KM   12.27 ACRE-FEETx43560/36x3600=4.1cfs
             *      1
631          RS       1    STOR       0
632          SV       0     .01    12.3
633          SQ       0     4.2     4.2
             * DDM   ***** Preserved *****

634          KK    C320
635          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
636          HC       3
             * DDM   ***** Updated *****

637          KK     340
638          KM   SUB-BASIN 340
639          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
640          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .991
641          KM     L = 2.40  Kb = .042  Adj. Slope =  160.0
642          BA   1.449
643          LG    .280    .280   4.150    .520  21.000
644          UC    .512    .287
645          UA       0       5      16      30      65      77      84      90      94      97
646          UA     100
             * DDM   ***** Preserved *****

647          KK    D340
648          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
649          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
650          KM   GRANDVIEW ESTATES    BOULDER MOUNTAIN & 33% OF MESA HIGHLANDS
651          KM        MAXIMUM VOLUME DIVERSION = 56.0 acre-feet
             *      1
652          DT   BS340      56
653          DI       0   10000
654          DQ       0   10000
             * DDM   ***** Preserved *****

655          KK   RT340
656          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
657          DR   BS340
             * DDM   ***** Preserved *****

658          KK   SR340
659          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
660          KM    56.0 ACRE-FEETx43560/36x3600=18.8cfs
             *      1
661          RS       1    STOR       0
662          SV       0     .01      56
663          SQ       0    18.9    18.9
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

664          KK    C340
665          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
666          HC       3
             * DDM   ***** Updated *****

667          KK     355
668          KM   SUB-BASIN 355
669          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
670          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
671          KM     L =  .80  Kb = .052  Adj. Slope =  156.0
672          BA    .174
673          LG    .320    .300   4.550    .360  12.000
674          UC    .283    .207
675          UA       0       5      16      30      65      77      84      90      94      97
676          UA     100
             * DDM   ***** Preserved *****

677          KK    R355
678          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
679          KM   ROUTING OF FLOW FROM SUB-BASIN 355 TO SUB-BASIN 360
680          RS       9    FLOW      -1
681          RC    .045    .035    .045   10100    .026
682          RX       0       1      40      46      56      62     102     103
683          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

684          KK     360
685          KM   SUB-BASIN 360
686          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
687          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
688          KM     L = 2.10  Kb = .048  Adj. Slope =  124.0
689          BA    .670
690          LG    .260    .270   4.100    .560  20.000
691          UC    .587    .466
692          UA       0       5      16      30      65      77      84      90      94      97
693          UA     100
             * DDM   ***** Preserved *****

694          KK    D360
695          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
696          KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
697          KM        MAXIMUM VOLUME DIVERSION = 28.6 acre-feet
             *      1
698          DT   BS360    28.6
699          DI       0   10000
700          DQ       0   10000
             * DDM   ***** Preserved *****

701          KK   RT360
702          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
703          DR   BS360
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

704          KK   SR360
705          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
706          KM    28.6 ACRE-FEETx43560/36x3600=9.6cfs
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707          RS        1    STOR        0
708          SV        0     .01     28.6
709          SQ        0     9.6      9.6
             * DDM   ***** Preserved *****

710          KK    360C
711          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
712          HC        4
             * DDM   ***** Updated *****

713          KK     370
714          KM   SUB-BASIN 370
715          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
716          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
717          KM     L =  .90  Kb = .050  Adj. Slope =  176.0
718          BA    .257
719          LG    .310    .280   4.800    .340  16.000
720          UC    .279    .179
721          UA       0       5      16      30      65      77      84      90      94      97
722          UA     100
             * DDM   ***** Updated *****

723          KK     395
724          KM   SUB-BASIN 395
725          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
726          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
727          KM     L = 1.60  Kb = .051  Adj. Slope =  215.8
728          BA    .198
729          LG    .330    .320   4.900    .300  10.000
730          UC    .383    .468
731          UA       0       3       5       8      12      20      43      75      90      96
732          UA     100
             * DDM   ***** Preserved *****

733          KK    370C
734          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
735          HC        2
             * DDM   ***** Preserved *****

736          KK    R370
737          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
738          KM   ROUTING OF FLOW FROM SUB-BASINS 370 AND 395 TO SUB-BASIN 380.
739          RS       11    FLOW      -1
740          RC     .045    .035    .045   10250    .023
741          RX        0       1      40      46      56      62     102     103
742          RY        3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

743          KK     380
744          KM   SUB-BASIN 380
745          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
746          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
747          KM     L = 2.20  Kb = .048  Adj. Slope =  114.0
748          BA    .972
749          LG    .300    .310   4.150    .500   7.000
750          UC    .658    .444
751          UA       0       5      16      30      65      77      84      90      94      97
752          UA     100
             * DDM   ***** Preserved *****

753          KK    D380
754          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
755          KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
756          KM        MAXIMUM VOLUME DIVERSION = 28.6 acre-feet
             *      1
757          DT   BS380    28.6
758          DI        0   10000
759          DQ        0   10000
             * DDM   ***** Preserved *****

760          KK   RT380
761          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
762          DR   BS380
             * DDM   ***** Preserved *****

763          KK   SR380
764          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
765          KM    28.6 ACRE-FEETx43560/36x3600=9.6cfs
766          RS        1    STOR        0
767          SV        0     .01     28.6
768          SQ        0     9.6      9.6
             * DDM   ***** Preserved *****

769          KK    380C
770          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
771          HC        4
             * DDM   ***** Updated *****

772          KK     390
773          KM   SUB-BASIN 390
774          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
775          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
776          KM     L =  .70  Kb = .050  Adj. Slope =  299.4
777          BA    .244
778          LG    .300    .250   4.700    .380  18.000
779          UC    .204    .107
780          UA       0       5      16      30      65      77      84      90      94      97
781          UA     100
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

782          KK    D390
783          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
784          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THUNDER MOUNTAIN ESTATES
785          KM        MAXIMUM VOLUME DIVERSION  = 3.5 acre-feet
             *      1
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786          DT   BS390     3.5
787          DI       0   10000
788          DQ       0   10000
             * DDM   ***** Preserved *****

789          KK   RT390
790          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
791          DR   BS390
             * DDM   ***** Preserved *****

792          KK   SR390
793          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
794          KM     3.5 ACRE-FEETx43560/36x3600=1.2cfs
795          RS       1    STOR       0
796          SV       0     .01     3.5
797          SQ       0     1.2     1.2
             * DDM   ***** Preserved *****

798          KK    390C
799          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
800          HC       2
             * DDM   ***** Preserved *****

801          KK   RR390
802          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
803          KM   FROM SUB-BASIN 390 TO SUB-BASIN 400
804          RS      14    FLOW      -1
805          RC    .045    .045    .045    8800    .020
806          RX       0       1      40      46      56      62     102     103
807          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

808          KK     400
809          KM   SUB-BASIN 400
810          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
811          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
812          KM     L = 1.64  Kb = .046  Adj. Slope =  110.0
813          BA    .616
814          LG    .320    .320   3.130    .930   6.000
815          UC    .592    .405
816          UA       0       5      16      30      65      77      84      90      94      97
817          UA     100
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

818          KK    D400
819          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
820          KM   DETENTION/RETENTION BASIN LOCATED WITHIN SAGUARO VISTA SUBDIVISION
821          KM        MAXIMUM VOLUME DIVERSION = 5.6 ACRE-FEET
             *      1
822          DT   BS400     5.6
823          DI       0   10000
824          DQ       0   10000
             * DDM   ***** Preserved *****

825          KK   RT400
826          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
827          DR   BS400
             * DDM   ***** Preserved *****

828          KK   SR400
829          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
830          KM     5.6 ACRE-FEETx43560/36x3600 = 2 cfs
831          RS       1    STOR       0
832          SV       0     .01     5.6
833          SQ       0       2       2
             * DDM   ***** Preserved *****

834          KK    C400
835          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
836          HC       2
             * DDM   ***** Preserved *****

837          KK    400C
838          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
839          HC       3
             * DDM   ***** Updated *****

840          KK     385
841          KM   SUB-BASIN 385
842          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
843          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
844          KM     L = 2.30  Kb = .044  Adj. Slope =  303.0
845          BA    .647
846          LG    .350    .370   5.600    .210  13.000
847          UC    .375    .311
848          UA       0       3       5       8      12      20      43      75      90      96
849          UA     100
             * DDM   ***** Preserved *****

850          KK    D385
851          KM   DIVERT FLOW INTO SUB-BASINS 415 & 420
852          DT   SF385
853          DI       0   10000
854          DQ       0    2500
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

855          KK    385R
856          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
857          KM   ROUTING OF FLOW DIVERSION FROM SUB-BASIN 385 INTO SUB-BASIN 420
858          RS      14    FLOW      -1
859          RC    .045     .04    .045   10250    .022
860          RX       0       1      40      46      56      62     102     103
861          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****
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862          KK     420
863          KM   SUB-BASIN 420
864          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
865          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .995
866          KM     L = 1.91  Kb = .042  Adj. Slope =  120.0
867          BA    .849
868          LG    .310    .270   3.880    .580  12.000
869          UC    .512    .325
870          UA       0       5      16      30      65      77      84      90      94      97
871          UA     100
             * DDM   ***** Preserved *****

872          KK    D420
873          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
874          KM   DETENTION/RETENTION BASINS LOCATED WITHIN GRAY FOX SUBDIVISION
875          KM        MAXIMUM VOLUME DIVERSION = 8.65 acre-feet
             *      1
876          DT   BS420    8.65
877          DI       0   10000
878          DQ       0   10000
             * DDM   ***** Preserved *****

879          KK   RT420
880          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
881          DR   BS420
             * DDM   ***** Preserved *****

882          KK   SR420
883          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
884          KM   38.55 ACRE-FEETx43560/36x3600=13cfs
885          RS       1    STOR       0
886          SV       0     .01   38.55
887          SQ       0      13      13
             * DDM   ***** Preserved *****

888          KK    420C
889          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
890          HC       4   10.87
             * DDM   ***** Updated *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

891          KK     440
892          KM   SUB-BASIN 440
893          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
894          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
895          KM     L =  .40  Kb = .039  Adj. Slope =  315.0
896          BA    .080
897          LG    .190    .380   6.400    .140  13.000
898          UC    .129    .077
899          UA       0       3       5       8      12      20      43      75      90      96
900          UA     100
             * DDM   ***** Preserved *****

901          KK     R70
902          KM   ROUTE FLOW FROM SUB-BASIN 440 TO C108
903          RS       1    FLOW      -1
904          RC     .05    .035     .05    2250     .08
905          RX    1000    1025    1050    1070    1075    1095    1120    1145
906          RY      30    22.9    15.7      10      10    15.7    22.9      30
             * DDM   ***** Updated *****

907          KK     441
908          KM   SUB-BASIN 441
909          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
910          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
911          KM     L =  .28  Kb = .069  Adj. Slope =  315.0
912          BA    .010
913          LG    .300    .250   5.600    .220   5.000
914          UC    .150    .225
915          UA       0       5      16      30      65      77      84      90      94      97
916          UA     100
             * DDM   ***** Preserved *****

917          KK    C108
918          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 440 & 441
919          HC       2
             * DDM   ***** Preserved *****

920          KK    DIV4
921          KM        SPLIT FLOW WITH TWO 42 INCH PIPES TO WEST AND SOUTH
             *      1
922          DT   SPLIT
923          DI       0      14      40      82     120     154     180
924          DQ       0       7      20      41      60      77      90
             * DDM   ***** Preserved *****

925          KK    R108
926          KM        ROUTE FLOW FROM SUB-BASIN C108 TO C67
927          RS       2    FLOW      -1
928          RC     .05    .035     .05    3200      .1
929          RX    1000    1025    1050    1070    1075    1095    1120    1145
930          RY      30    22.9    15.7      10      10    15.7    22.9      30
             * DDM   ***** Updated *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

931          KK     442
932          KM   SUB-BASIN 442
933          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
934          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
935          KM     L =  .83  Kb = .055  Adj. Slope =  274.2
936          BA    .100
937          LG    .300    .270   3.290    .770   5.000
938          UC    .258    .264
939          UA       0       5      16      30      65      77      84      90      94      97
940          UA     100
             * DDM   ***** Preserved *****
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 941          KK     C67
 942          KM   COMBINE FLOW FROM SUB-BASIN 442 & DIV4
 943          HC       2
              * DDM   ***** Preserved *****

 944          KK    DIV6
 945          KM        OFFLINE BASIN WITH 25 FOOT WEIR SET AT 2.5 FEET ABOVE BOTTOM OF CHANNEL
 946          KM        FLOW CONTINUES BEYOND BASIN THROUGH 2-30" PIPES
              *      1
 947          DT  BASIN4
 948          DI       0      10      32      44    79.9   132.5     198   272.9   356.8
 949          DQ       0       0       0       0    23.9    67.5     124   190.9   266.8
              * DDM   ***** Preserved *****

 950          KK  RTDIV6
 951          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
 952          DR  BASIN4
              * DDM   ***** Preserved *****

 953          KK  RFDIV6
 954          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
 955          KM     3.3 ACRE-FEETx43560/36x3600=1.1cfs
              *      1
 956          RS       1    STOR       0
 957          SV       0     .01     3.3
 958          SQ       0     1.1     1.1
              * DDM   ***** Preserved *****

 959          KK   CDIV6
 960          KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
 961          HC       2
              * DDM   ***** Updated *****

 962          KK     443
 963          KM   SUB-BASIN 443
 964          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 965          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
 966          KM     L =  .71  Kb = .050  Adj. Slope =  315.0
 967          BA    .080
 968          LG    .250    .190   8.000    .080  10.000
 969          UC    .196    .194
 970          UA       0       5      16      30      65      77      84      90      94      97
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 971          UA     100
              * DDM   ***** Preserved *****

 972          KK   DIV66
 973          KM        DIVERT FLOW INTO 3 NATURAL WASHES WITH ONE 24" PIPE IN EACH WASH.
 974          KM        EACH PIPE CAPACITY BASED ON 4 FEET OF HEAD
 975          DT   WSH66
 976          DI       0      78     100     200
 977          DQ       0      78      78      78
              * DDM   ***** Preserved *****

 978          KK    R113
 979          KM        ROUTE FLOW FROM C113 TO C114
 980          RS       1    FLOW      -1
 981          RC    .019    .019    .019    1300    .029
 982          RX    1000    1004    1008    1012    1018    1022    1026    1030
 983          RY      17   15.33   12.67      10      10   12.67   15.33      17
              * DDM   ***** Preserved *****

 984          KK    C114
 985          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 67 AND C113
 986          HC       2
              * DDM   ***** Updated *****

 987          KK     444
 988          KM   SUB-BASIN 444
 989          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 990          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
 991          KM     L =  .33  Kb = .034  Adj. Slope =  315.0
 992          BA    .040
 993          LG    .130    .350   4.450    .320   1.000
 994          UC    .112    .084
 995          UA       0       3       5       8      12      20      43      75      90      96
 996          UA     100
              * DDM   ***** Preserved *****

 997          KK     R58
 998          KM   ROUTE FLOW FROM SUB-BASIN 444 TO C107
 999          RS       1    FLOW      -1
1000          RC     .05    .035     .05    2370   .0516
1001          RX    1000    1010    1020    1050    1055    1085    1095    1105
1002          RY      19      18      17      10      10      17      18      19
              * DDM   ***** Updated *****

1003          KK     445
1004          KM   SUB-BASIN 445
1005          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1006          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1007          KM     L =  .82  Kb = .036  Adj. Slope =  315.0
1008          BA    .190
1009          LG    .170    .320   3.470    .590   3.000
1010          UC    .192    .130
1011          UA       0       5      16      30      65      77      84      90      94      97
1012          UA     100
              * DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1013          KK    C107
1014          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 444 & 445
1015          HC       2
              * DDM   ***** Preserved *****

1016          KK    R107
1017          KM        ROUTE FLOW FROM C107 TO C109
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1018    RS       1    FLOW      -1
1019    RC     .05    .035     .05     700   .0516
1020    RX    1000    1010    1020    1050    1055    1085    1095    1105
1021    RY      19      18      17      10      10      17      18      19
        * DDM   ***** Preserved *****

1022    KK    RTB2
1023    KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
        *      1
1024    DR   SPLIT
        * DDM   ***** Preserved *****

1025    KK  RSPLIT
1026    KM        ROUTE FLOW FROM SPLIT TO C109
1027    RS       1    FLOW      -1
1028    RC     .05    .035     .05     800     .05
1029    RX    1000    1025    1050    1070    1075    1095    1120    1145
1030    RY      30    22.9    15.7      10      10    15.7    22.9      30
        * DDM   ***** Updated *****

1031    KK     446
1032    KM   SUB-BASIN 446
1033    KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1034    KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1035    KM     L =  .46  Kb = .061  Adj. Slope =  303.9
1036    BA    .040
1037    LG    .270    .250   4.500    .400  19.000
1038    UC    .183    .189
1039    UA       0       5      16      30      65      77      84      90      94      97
1040    UA     100
        * DDM   ***** Preserved *****

1041    KK    C109
1042    KM        COMBINE HYDROGRAPHS FROM COMBINES C107 AND C108
1043    HC       3
        * DDM   ***** Preserved *****

1044    KK    DIV5
1045    KM        DIVERT FLOW INTO WASHES TOWARDS WEST
1046    KM        DIVERSION THROUGH 36" PIPE WITH 3 FEET OF HEAD
        *      1
1047    DT  WSH404
1048    DI       0    40.7    71.2   121.6     190     276   379.4   500.6
1049    DQ       0      35      35      35      35      35      35      35
        * DDM   ***** Preserved *****
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LINE    ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1050    KK    R109
1051    KM        ROUTE FLOW FROM C109 TO C110
1052    RS       1    FLOW      -1
1053    RC    .019    .019    .019    3080     .05
1054    RX    1000    1005    1010    1015    1025    1030    1035    1040
1055    RY   13.75    12.5   11.25      10      10   11.25    12.5   13.75
        * DDM   ***** Updated *****

1056    KK     447
1057    KM   SUB-BASIN 447
1058    KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1059    KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1060    KM     L =  .49  Kb = .056  Adj. Slope =  221.0
1061    BA    .090
1062    LG    .250    .270   3.350    .870  30.000
1063    UC    .208    .145
1064    UA       0       5      16      30      65      77      84      90      94      97
1065    UA     100
        * DDM   ***** Preserved *****

1066    KK   RT404
1067    KM        RETRIEVE DIVERTED FLOW FOR WASH 109
1068    DR  WSH404
        * DDM   ***** Preserved *****

1069    KK    R404
1070    KM        ROUTE FLOW FROM C110 TO C110
1071    RS       5    FLOW      -1
1072    RC    .019    .019    .019    3540     .03
1073    RX    1000    1012    1016    1020    1025    1029    1033    1045
1074    RY      15      12      11      10      10      11      12      15
        * DDM   ***** Preserved *****

1075    KK    C110
1076    KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 447 AND R404
1077    HC       3
        * DDM   ***** Preserved *****

1078    KK    R110
1079    KM        ROUTE FLOW FROM C110 TO C115
1080    RS       1    FLOW      -1
1081    RC    .019    .019    .019     580   .0291
1082    RX    1000    1012    1016    1020    1035    1039    1043    1055
1083    RY      15      12      11      10      10      11      12      15
        * DDM   ***** Preserved *****

1084    KK    C115
1085    KM        COMBINE HYDROGRAPHS FROM C114 AND C110
1086    HC       2
        * DDM   ***** Preserved *****
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LINE    ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1087    KK    R115
1088    KM        ROUTE FLOW FROM C115 TO C119
1089    RS       1    FLOW      -1
1090    RC    .019    .019    .019    2125    .029
1091    RC    .019    .019    .019     580   .0291
1092    RX    1000    1012    1016    1020    1035    1039    1043    1055
1093    RY      15      12      11      10      10      11      12      15
        * DDM   ***** Updated *****
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1094        KK     448
1095        KM   SUB-BASIN 448
1096        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1097        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1098        KM     L =  .36  Kb = .042  Adj. Slope =  315.0
1099        BA    .045
1100        LG    .170    .310   4.200    .390  11.000
1101        UC    .133    .102
1102        UA      0       5      16      30      65      77      84      90      94      97
1103        UA     100
            * DDM   ***** Updated *****

1104        KK     449
1105        KM   SUB-BASIN 449
1106        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1107        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1108        KM     L =  .40  Kb = .054  Adj. Slope =  315.0
1109        BA    .050
1110        LG    .260    .280   3.500    .640   6.000
1111        UC    .167    .134
1112        UA      0       5      16      30      65      77      84      90      94      97
1113        UA     100
            * DDM   ***** Preserved *****

1114        KK   C6364
1115        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 448 & 449
1116        HC       2
            * DDM   ***** Preserved *****

1117        KK   R6364
1118        KM   ROUTE FLOW FROM C116 AND SUB-BASINS 448 AND 449
1119        RS       4    FLOW      -1
1120        RC     .05    .035     .05    4375   .0333
1121        RX    1000    1027    1053    1080    1090    1117    1143    1170
1122        RY      15   13.33   11.67      10      10   11.67   13.33      15
            * DDM   ***** Updated *****

1123        KK     450
1124        KM   SUB-BASIN 450
1125        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1126        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1127        KM     L =  .85  Kb = .057  Adj. Slope =  210.5
1128        BA    .070
1129        LG    .340    .350   3.630    .570   4.000
1130        UC    .296    .383
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1131        UA      0       3       5       8      12      20      43      75      90      96
1132        UA     100
            * DDM   ***** Updated *****

1133        KK     451
1134        KM   SUB-BASIN 451
1135        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1136        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1137        KM     L =  .57  Kb = .063  Adj. Slope =  175.0
1138        BA    .025
1139        LG    .340    .340   3.290    .750   3.000
1140        UC    .271    .453
1141        UA      0       3       5       8      12      20      43      75      90      96
1142        UA     100
            * DDM   ***** Preserved *****

1143        KK    RT66
1144        KM        RETRIEVE DIVERTED FLOW FROM SUB-BASIN 66
1145        DR   WSH66
            * DDM   ***** Updated *****

1146        KK     452
1147        KM   SUB-BASIN 452
1148        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1149        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1150        KM     L =  .43  Kb = .055  Adj. Slope =  315.0
1151        BA    .040
1152        LG    .260    .280   3.700    .550   9.000
1153        UC    .171    .166
1154        UA      0       5      16      30      65      77      84      90      94      97
1155        UA     100
            * DDM   ***** Preserved *****

1156        KK   C6465
1157        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 443 AND 452
1158        HC       2
            * DDM   ***** Preserved *****

1159        KK   R6566
1160        KM        ROUTE FLOW FROM DIVERSIONS 65 AND 66 TO C116
1161        RS       2    FLOW      -1
1162        RC     .05    .035     .05    2435   .0282
1163        RX    1000    1045    1090    1150    1160    1220    1265    1310
1164        RY      25      23      20      10      10      20      23      25
            * DDM   ***** Preserved *****

1165        KK    C116
1166        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 450 & 451 AND R6364 & R6465
1167        HC       4
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1168        KK  BASIN5
1169        KM        RESERVOIR WITHIN PARCEL 31      2-48 INCH PIPES AT OUTFALL
1170        KM        BASIN 5 FEET DEEP
1171        RS       1    ELEV       0
1172        SV       0     4.5     9.9
1173        SQ       0      69     190
1174        SE       0     2.5       5
            * DDM   ***** Preserved *****
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1175        KK    R116
1176        KM   ROUTE FLOW FROM C116 TO C117
1177        RS       2    FLOW      -1
1178        RC     .05    .035     .05    1300   .0333
1179        RX    1000    1100    1200    1300    1320    1420    1520    1620
1180        RY      13      12      11      10      10      11      12      13
            * DDM   ***** Updated *****

1181        KK     453
1182        KM   SUB-BASIN 453
1183        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1184        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1185        KM     L =  .58  Kb = .058  Adj. Slope =  138.0
1186        BA    .060
1187        LG    .290    .300   3.290    .820  18.000
1188        UC    .275    .284
1189        UA       0       5      16      30      65      77      84      90      94      97
1190        UA     100
            * DDM   ***** Preserved *****

1191        KK    C117
1192        KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 453 AND R116
1193        HC       2
            * DDM   ***** Preserved *****

1194        KK    C118
1195        KM   COMBINE HYDROGRAPHS FROM R115 AND C117
1196        HC       2
            * DDM   ***** Preserved *****

1197        KK    R118
1198        KM        ROUTE FLOW FROM C118 TO  DIV7
1199        RS       1    FLOW      -1
1200        RC    .019    .019    .019    1500    .024
1201        RX    1000    1012    1016    1020    1035    1039    1043    1055
1202        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Preserved *****

1203        KK    DIV7
1204        KM        OFFLINE BASIN AT NORTH MOUNTAIN RIDGE   FLOWS ENTER BASIN OVER
1205        KM        30' WEIR SET AT 5.3' ABOVE THE CHANNEL BOTTOM
            *      1
1206        DT  BASIN6
1207        DI       0     363     487     563     645     844
1208        DQ       0       3      47      83     125     244
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1209        KK  RTDIV7
1210        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1211        DR  BASIN6
            * DDM   ***** Preserved *****

1212        KK  RFDIV7
1213        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1214        KM     3.6 ACRE-FEETx43560/36x3600=1.2cfs
1215        RS       1    STOR       0
1216        SV       0     .01     3.6
1217        SQ       0     1.2     1.2
            * DDM   ***** Preserved *****

1218        KK   CDIV7
1219        KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1220        HC       2
            * DDM   ***** Updated *****

1221        KK     454
1222        KM   SUB-BASIN 454
1223        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1224        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1225        KM     L = 1.23  Kb = .051  Adj. Slope =  163.0
1226        BA    .180
1227        LG    .300    .310   3.780    .560  14.000
1228        UC    .379    .395
1229        UA       0       5      16      30      65      77      84      90      94      97
1230        UA     100
            * DDM   ***** Preserved *****

1231        KK    C119
1232        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 454 AND C119
            *      1       2
1233        HC       2
            * DDM   ***** Preserved *****

1234        KK    R454
1235        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1236        KM   ROUTE FLOW FROM C119 TO 415C
1237        RS       2    FLOW      -1
1238        RC    .045    .035    .045    2200    .009
1239        RX       0      .5       1      33      42      67    67.5      68
1240        RY       5       4       4       0       0       6       6       6
            * DDM   ***** Updated *****

1241        KK     415
1242        KM   SUB-BASIN 415
1243        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1244        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
1245        KM     L = 2.10  Kb = .046  Adj. Slope =  266.0
1246        BA    .448
1247        LG    .310    .270   4.250    .480  15.000
1248        UC    .404    .387
1249        UA       0       5      16      30      65      77      84      90      94      97
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1250        UA     100
            * DDM   ***** Preserved *****
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1251        KK   RT385
1252        KM   RETRIEVE FLOW FROM DIVERSION OF SUB-BASIN 385 INTO SUB-BASIN 415
1253        DR   SF385
            * DDM   ***** Preserved *****

1254        KK   RR385
1255        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1256        KM   ROUTING OF SPLIT FLOW FROM SUB-BASIN 385 TO SUB-BASIN 415
1257        RS       5    FLOW      -1
1258        RC    .045     .04    .045    5878    .024
1259        RX       0       1      40      46      56      62     102     103
1260        RY       3       2       2       0       0       2       2       3
            * DDM   ***** Preserved *****

1261        KK    415C
1262        KM   HYDROGRAPH COMBINATION OF SUB-BASINS 415, R454 & SPLIT FLOW FROM 385
1263        HC       3    1.71
            * DDM   ***** Preserved *****

1264        KK    R415
1265        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1266        KM   ROUTING OF FLOW FROM 415C TO 455C
1267        RS       2    FLOW      -1
1268        RC    .045     .03    .045    4100    .024
1269        RX       0      .5       1       8      16      23    23.5      24
1270        RY       8       8       8       0       0       8       8       8
            * DDM   ***** Updated *****

1271        KK     455
1272        KM   SUB-BASIN 455
1273        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1274        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
1275        KM     L = 1.70  Kb = .041  Adj. Slope =  146.0
1276        BA   1.111
1277        LG    .270    .280   3.700    .640  24.000
1278        UC    .421    .204
1279        UA       0       5      16      30      65      77      84      90      94      97
1280        UA     100
            * DDM   ***** Preserved *****

1281        KK    D455
1282        KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1283        KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1284        KM   FOR BASIN #: 30      34      43      47&58
1285        KM        MAXIMUM VOLUME DIVERSION = 74.1 acre-feet
            *      1
1286        DT   BS455    74.1
1287        DI       0   10000
1288        DQ       0   10000
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1289        KK   RT455
1290        KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1291        DR   BS455
            * DDM   ***** Preserved *****

1292        KK   SR455
1293        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1294        KM    74.1 ACRE-FEETx43560/36x3600=25cfs
1295        RS       1    STOR       0
1296        SV       0     .01    74.1
1297        SQ       0      25      25
            * DDM   ***** Preserved *****

1298        KK    C455
1299        KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 455 AND DIVERTED BASIN STORAGE OF 455
1300        HC       2
            * DDM   ***** Preserved *****

1301        KK    455C
1302        KM  HYDROGRAPH COMBINATION OF 420C, R415 AND C455
            *      1       2
1303        HC       3
            * DDM   ***** Preserved *****

1304        KK   SR440
1305        KM   SPOOK HILL FRS PLANS DATED 6/15/77
1306        KM   OUTLET PIPE=7'x7.5'RCBC; L=70 INLET INV.=1566; OUTLET INV.=1566
1307        KM   EMERGENCY SPILLWAY ELEV.=1582; PRINCIPLE SPILLWAY ELEV.=1577.5
1308        KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 200 ACRE-FEET
1309        RS       1    STOR       0
1310        SV       0      10     100     300     500     680
1311        SQ       0     640     720     780     825     860
1312        SE      66    77.5      79    80.2    81.2      82
            * DDM   ***** Preserved *****

1313        KK   RR455
1314        KM   ROUTE FLOW FROM SPOOK HILL FRS TO SUB-BASIN 462
1315        RS       9    FLOW      -1
1316        RC    .035    .025    .035    9200    .002
1317        RX       0       1       2      28      58      84      85      86
1318        RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
            * DDM   ***** Updated *****

1319        KK     456
1320        KM   SUB-BASIN 456
1321        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1322        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1323        KM     L =  .94  Kb = .045  Adj. Slope =  315.0
1324        BA    .260
1325        LG    .300    .380   5.600    .200  12.000
1326        UC    .217    .139
1327        UA       0       5      16      30      65      77      84      90      94      97
1328        UA     100
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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1329        KK    DIV1
1330        KM        DIVERT FLOW INTO OFFLINE DETENTION BASIN
1331        KM        WEIR FOR BASIN SET AT 4 FEET ABOVE CHANNEL BOTTOM
            *      1
1332        DT  BASIN1
1333        DI       0     11.1   127.9   234.4   577.7   789.9  1025.5  1280.9  1555.7
1334        DQ       0        0       0    47.7     248   381.8   533.6   701.5     884
            * DDM   ***** Preserved *****

1335        KK    DIV2
1336        KM        SPLIT OUT FLOW FOR WASHES THAT FLOW TO THE SOUTH FROM
1337        KM        WASHES THAT DRAIN TO THE WES, SOUTHERN WASHES FED BY 30" & 24" PIPE
1338        DT    WA30
1339        DI       0     11.1   127.9   189.6   329.7     408   491.9   579.4   671.7
1340        DQ       0     11.1    38.4    48.2      63    69.5      76      81      86
            * DDM   ***** Preserved *****

1341        KK    R456
1342        KM        ROUTE FLOW FROM SUB-BASIN 51 TO C101
1343        RS       2    FLOW      -1
1344        RC     .05    .035     .05    3800    .044
1345        RX    1000    1010    1020    1036    1041    1057    1067    1077
1346        RY   14.88   14.44      14      10      10      14   14.44   14.88
            * DDM   ***** Updated *****

1347        KK     457
1348        KM   SUB-BASIN 457
1349        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1350        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1351        KM     L = 1.01  Kb = .045  Adj. Slope =  308.8
1352        BA    .190
1353        LG    .270    .330   3.950    .460   6.000
1354        UC    .237    .195
1355        UA       0       5      16      30      65      77      84      90      94      97
1356        UA     100
            * DDM   ***** Preserved *****

1357        KK    C101
1358        KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 50 AND 51
1359        HC       2
            * DDM   ***** Preserved *****

1360        KK    DIV3
1361        KM        RESERVOIR AT THE EDGE OF THE PROPERTY   FLOW FROM CHANNEL
1362        KM        DIVERTED  INTO OFFLINE BASIN A 25' WEIR SET AT ELEVATION 1808 FT
            *      1
1363        DT  BASIN2
1364        DI       0      36      70     110     180   313.5     402   500.9
1365        DQ       0       0       0       0       0    67.5     124   190.9
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1366        KK  RTDIV3
1367        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1368        DR  BASIN2
            * DDM   ***** Preserved *****

1369        KK  RFDIV3
1370        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1371        KM     5.0 ACRE-FEETx43560/36x3600=1.7cfs
1372        RS       1    STOR       0
1373        SV       0     .01       5
1374        SQ       0     1.7     1.7
            * DDM   ***** Preserved *****

1375        KK   CDIV3
1376        KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1377        HC       2
            * DDM   ***** Preserved *****

1378        KK    R101
1379        KM        ROUTE FLOW FROM SUBBASIN C101 TO C103
1380        RS       1    FLOW      -1
1381        RC     .05    .035     .05    1450     .05
1382        RX    1000    1010    1020    1036    1041    1057    1067    1077
1383        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Updated *****

1384        KK     458
1385        KM   SUB-BASIN 458
1386        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1387        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1388        KM     L =  .76  Kb = .048  Adj. Slope =  299.0
1389        BA    .190
1390        LG    .290    .330   5.800    .190   6.000
1391        UC    .204    .131
1392        UA       0       5      16      30      65      77      84      90      94      97
1393        UA     100
            * DDM   ***** Preserved *****

1394        KK    C103
1395        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 55 AND C101
1396        HC       2
            * DDM   ***** Preserved *****

1397        KK    R103
1398        KM        ROUTE FLOW FROM SUBBASIN C103 TO C106
1399        RS       1    FLOW      -1
1400        RC     .05    .035     .05     900     .03
1401        RX    1000    1010    1020    1030    1050    1060    1070    1080
1402        RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1403        KK    RT30
1404        KM        RETRIEVE DIVERTED FLOW FOR WASH BELOW 30 INCH PIPE
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1405        DR    WA30
            * DDM   ***** Preserved *****

1406        KK     R30
1407        KM        ROUTE FLOW FROM WASH DIVERSION TO COMBINE C52
1408        RS       1    FLOW      -1
1409        RC     .05    .035     .05    1630     .05
1410        RX    1000    1010    1020    1036    1041    1057    1067    1077
1411        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Preserved *****

1412        KK    RTB1
1413        KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
            *      1        2
1414        DR  BASIN1
            * DDM   ***** Preserved *****

1415        KK      B1
1416        KM        ROUTE FLOW THROUGH OFFLINE DETENTION BASIN
1417        KM        FLOW OUTLETS THROUGH A 30 INCH OUTLET PIPE
            *      1        2
1418        RS       1    ELEV       0
1419        SV              .7     1.4     2.3     2.7     3.2
1420        SQ       0       5      16      28    32.5      37
1421        SE       0       1       2       3     3.5       4
            * DDM   ***** Preserved *****

1422        KK     RB1
1423        KM        ROUTE FLOW FROM BASIN DIVERSION TO COMBINE C52
1424        RS       2    FLOW      -1
1425        RC     .05    .035     .05    1720     .05
1426        RX    1000    1010    1020    1036    1041    1057    1067    1077
1427        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Preserved *****

1428        KK    CDIV
1429        KM        COMBINE FLOWS FROM WA30 AND BASIN 1
1430        HC       2      .12
            * DDM   ***** Updated *****

1431        KK     459
1432        KM   SUB-BASIN 459
1433        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1434        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1435        KM     L =  .35  Kb = .052  Adj. Slope =  251.6
1436        BA    .030
1437        LG    .220    .300   3.330    .710   8.000
1438        UC    .162    .157
1439        UA       0       5      16      30      65      77      84      90      94      97
1440        UA     100
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1441        KK     C52
1442        KM        COMBINE FLOWS FROM SUB-BASIN 52 WA30 AND BASIN 1
1443        HC       2
            * DDM   ***** Preserved *****

1444        KK     R52
1445        KM        ROUTE FLOW FROM SUBBASIN 52 TO C102
1446        RS       2    FLOW      -1
1447        RC     .05    .035     .05    2000     .05
1448        RX    1000    1010    1020    1036    1041    1057    1067    1077
1449        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Updated *****

1450        KK     460
1451        KM   SUB-BASIN 460
1452        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1453        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1454        KM     L =  .62  Kb = .058  Adj. Slope =  194.0
1455        BA    .140
1456        LG    .250    .260   3.740    .690  27.000
1457        UC    .242    .160
1458        UA       0       5      16      30      65      77      84      90      94      97
1459        UA     100
            * DDM   ***** Preserved *****

1460        KK    C102
1461        KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 52 AND 53
1462        HC       2
            * DDM   ***** Preserved *****

1463        KK  BASIN3
1464        KM        RESERVOIR AT CLUBHOUSE LOCATION 1-30 INCH PIPE AT OUTFALL
1465        KM        BOTTOM OF BASIN AT 6 FEET ABOVE 1795 ELEVATION
1466        RS       1    ELEV       0
1467        SA       0       0       0       0     .34    1.59    1.81    1.96    2.13     2.3
            *      0       0       0       0    1.14    3.25    5.52    9.23
1468        SQ       0      22      45    47.4      48      51      57      62      67      73
1469        SE    1795  1797.5    1800  1800.4  1800.5    1801    1802    1803    1804  1805.5
            * DDM   ***** Preserved *****

1470        KK      R3
1471        KM        ROUTE FLOW FROM C102 to C106
1472        RS       4    FLOW      -1
1473        RC     .05     .03     .05    2750   .0375
1474        RX    1000    1010    1020    1052    1086    1118    1128    1138
1475        RY    19.2    18.4      18      10      10      18    18.4    19.2
            * DDM   ***** Updated *****

1476        KK     461
1477        KM   SUB-BASIN 461
1478        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1479        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1480        KM     L =  .83  Kb = .052  Adj. Slope =  181.0
1481        BA    .120
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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1482          LG    .270    .250   4.250    .450  21.000
1483          UC    .271    .250
1484          UA       0       5      16      30      65      77      84      90      94      97
1485          UA     100
              * DDM   ***** Preserved *****

1486          KK    C104
1487          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 54 AND R102
1488          HC       2
              * DDM   ***** Preserved *****

1489          KK    C106
1490          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN C103 AND C104
1491          HC       2
              * DDM   ***** Preserved *****

1492          KK    R106
1493          KM        ROUTE FLOW FROM C106 TO C49
1494          RS       2    FLOW      -1
1495          RC     .05    .035     .05    3950    .033
1496          RX    1000    1010    1020    1030    1050    1060    1070    1080
1497          RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
              * DDM   ***** Updated *****

1498          KK     462
1499          KM   SUB-BASIN 462
1500          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1501          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1502          KM     L =  .97  Kb = .045  Adj. Slope =  297.7
1503          BA    .301
1504          LG    .300    .330   5.300    .240  12.000
1505          UC    .225    .137
1506          UA       0       5      16      30      65      77      84      90      94      97
1507          UA     100
              * DDM   ***** Preserved *****

1508          KK     C56
1509          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 56 AND C106
              *      1       2
1510          HC       2
              * DDM   ***** Updated *****

1511          KK     480
1512          KM   SUB-BASIN 480
1513          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1514          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
1515          KM     L = 1.21  Kb = .042  Adj. Slope =  165.0
1516          BA    .731
1517          LG    .270    .270   3.580    .730  27.000
1518          UC    .325    .148
1519          UA       0       5      16      30      65      77      84      90      94      97
1520          UA     100
              * DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1521          KK    D480
1522          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1523          KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1524          KM   FOR BASIN #: 18 & 26
1525          KM        MAXIMUM VOLUME DIVERSION = 16.5 acre-feet
              *      1
1526          DT   BS480    16.5
1527          DI       0   10000
1528          DQ       0   10000
              * DDM   ***** Preserved *****

1529          KK   RT480
1530          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1531          DR   BS480
              * DDM   ***** Preserved *****

1532          KK   SR480
1533          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1534          KM    16.5 ACRE-FEETx43560/36x3600=5.5cfs
1535          RS       1    STOR       0
1536          SV       0     .01    16.5
1537          SQ       0     5.6     5.6
              * DDM   ***** Preserved *****

1538          KK    C480
1539          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1540          HC       2
              * DDM   ***** Preserved *****

1541          KK    480C
1542          KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1543          HC       3    2.09
              * DDM   ***** Preserved *****

1544          KK   RR480
1545          KM   ROUTE FLOW FROM SUB-BASIN 480 TO SUB-BASIN 500
1546          RS       1    FLOW      -1
1547          RC    .025    .025    .025    6500     .05
1548          RX       0       1       2      28      58      84      85      86
1549          RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
              * DDM   ***** Updated *****

1550          KK     500
1551          KM   SUB-BASIN 500
1552          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1553          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
1554          KM     L = 2.77  Kb = .042  Adj. Slope =  286.8
1555          BA    .930
1556          LG    .350    .400   6.000    .170   9.000
1557          UC    .421    .333
1558          UA       0       3       5       8      12      20      43      75      90      96
1559          UA     100
              * DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1560          KK    500C
1561          KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1562          HC       2    3.02
1563          ZZ
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SCHEMATIC DIAGRAM OF STREAM NETWORK

```
INPUT
 LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

 NO.       (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

 42          10
              V
              V
 52         R10
              V
              V
 58         R12
              .
              .
 64           .          20
              .           .
              .           .
 74         C20............
              .
              .
 77           .          40
              .           .
              .           .
 87           .           .          60
              .           .           .
              .           .           .
 97         60C........................
              V
              V
100        SR60
              V
              V
109         R60
              V
              V
115        RR60
              .
              .
121           .          80
              .           .
              .           .
131         80C............
              V
              V
134         R80
              .
              .
140           .         100
              .           .
              .           .
150        100C............
              V
              V
153        R100
              .
              .
159           .         120
              .           .
              .           .
169        120C............
              V
              V
172        R120
              .
              .
178           .         140
              .           .
              .           .
188           .           .        150
              .           .          V
              .           .          V
198           .           .       R150
              .           .          V
              .           .          V
204           .           .       R152
              .           .          .
              .           .          .
210           .           .          .        160
              .           .          .          .
              .           .          .          .
220           .           .          .          .        180
              .           .          .          .          .
              .           .          .          .          .
230        180C.............................................
              .
              .
233           .         365
              .           V
              .           V
243           .        R365
              .           V
              .           V
250           .        365R
              .           .
              .           .
259           .           .        350
              .           .          .
              .           .          .
272           .           .          .-------->   SF350
269           .           .       D350
              .           .          V
              .           .          V
275           .           .       350R
              .           .          .
              .           .          .
282           .           .          .        353
              .           .          .          .
              .           .          .          .
294           .           .          .          .          .<-------   SF350
292           .           .          .          .       RT350
              .           .          .          .          V
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295          .          .          .          .          V
             .          .          .          .       RR350
             .          .          .          .          .
             .          .          .          .          .
301          .       353C.......................................
             .          V
             .          V
304          .       R353
             .          V
             .          V
313          .       353R
             .          .
             .          .
320          .          .        310
             .          .          .
             .          .          .
330          .       C310............
             .          V
             .          V
333          .       R310
             .          V
             .          V
339          .       R312
             .          .
             .          .
345          .          .        295
             .          .          .
             .          .          .
355          .       295C............
             .          V
             .          V
358          .       295R
             .          .
             .          .
364          .          .        210
             .          .          V
             .          .          V
374          .          .       R210
             .          .          .
             .          .          .
380          .          .          .        240
             .          .          .          .
             .          .          .          .
390          .       240C........................
             .          V
             .          V
393          .      SR240
             .          .
             .          .
402          .          .        220
             .          .          .
             .          .          .
412          .       220C............
             .          V
             .          V
415          .      SR220
             .          .
             .          .
424          .          .        190
             .          .          V
             .          .          V
434          .          .       R190
             .          .          V
             .          .          V
440          .          .       R192
             .          .          .
             .          .          .
446          .          .          .        200
             .          .          .          .
             .          .          .          .
456          .       200C........................
             .          V
             .          V
459          .      SR200
             .          V
             .          V
466          .      200SR
             .          .
             .          .
473       C180............
             V
             V
476      SR180
             V
             V
485       R180
             .
             .
492          .        260
             .          .
             .          .
502       260C............
             V
             V
505       R260
             .
             .
512          .        280
             .          .
             .          .
522       280C............
             V
             V
525       R280
             .
             .
532          .        300
             .          .
             .          .
542       C300............
             .
             .
548          .-------->  DIV30
```

```
545        D300
              .
              .
553           .          .<-------   DIV30
551           .       RTDIV
              .          V
              .          V
554           .       SRDIV
              .          .
              .          .
561        300C............
              .
              .
564           .        305
              .          .
              .          .
577           .          .------->    305D
574           .       D305
              .          .
              .          .
582           .          .          .<-------    305D
580           .          .      RT305
              .          .          V
              .          .          V
583           .          .      SR305
              .          .          .
              .          .          .
590        305C......................
              V
              V
593        R305
              V
              V
600       RR305
              .
              .
607           .        320
              .          .
              .          .
622           .          .------->   BS320
617           .       D320
              .          .
              .          .
627           .          .          .<-------   BS320
625           .          .      RT320
              .          .          V
              .          .          V
628           .          .      SR320
              .          .          .
              .          .          .
634        C320......................
              .
              .
637           .        340
              .          .
              .          .
652           .          .------->   BS340
647           .       D340
              .          .
              .          .
657           .          .          .<-------   BS340
655           .          .      RT340
              .          .          V
              .          .          V
658           .          .      SR340
              .          .          .
              .          .          .
664        C340......................
              .
              .
667           .        355
              .          V
              .          V
677           .       R355
              .          .
              .          .
684           .          .        360
              .          .          .
              .          .          .
698           .          .          .------->   BS360
694           .          .       D360
              .          .          .
              .          .          .
703           .          .          .          .<-------   BS360
701           .          .          .      RT360
              .          .          .          V
              .          .          .          V
704           .          .          .      SR360
              .          .          .          .
              .          .          .          .
710        360C...................................
              .
              .
713           .        370
              .          .
              .          .
723           .          .        395
              .          .          .
              .          .          .
733           .       370C............
              .          V
              .          V
736           .       R370
              .          .
              .          .
743           .          .        380
              .          .          .
              .          .          .
757           .          .          .------->   BS380
753           .          .       D380
              .          .          .
              .          .          .
762           .          .          .          .<-------   BS380
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760          .          .          .       RT380
             .          .          .           V
             .          .          .           V
763          .          .          .       SR380
             .          .          .           .
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769       380C.................................
             .
             .
772          .        390
             .          .
             .          .
786          .          .------->   BS390
782          .       D390
             .          .
             .          .
791          .          .          .<-------   BS390
789          .          .      RT390
             .          .          V
             .          .          V
792          .          .      SR390
             .          .          .
             .          .          .
798          .       390C............
             .          V
             .          V
801          .      RR390
             .          .
             .          .
808          .          .        400
             .          .          .
             .          .          .
822          .          .          .------->   BS400
818          .          .       D400
             .          .          .
             .          .          .
827          .          .          .           .<-------   BS400
825          .          .          .       RT400
             .          .          .           V
             .          .          .           V
828          .          .          .       SR400
             .          .          .           .
             .          .          .           .
834          .          .       C400............
             .          .          .
             .          .          .
837       400C........................
             .
             .
840          .        385
             .          .
             .          .
852          .          .------->   SF385
850          .       D385
             .          V
             .          V
855          .       385R
             .          .
             .          .
862          .          .        420
             .          .          .
             .          .          .
876          .          .          .------->   BS420
872          .          .       D420
             .          .          .
             .          .          .
881          .          .          .           .<-------   BS420
879          .          .          .       RT420
             .          .          .           V
             .          .          .           V
882          .          .          .       SR420
             .          .          .           .
             .          .          .           .
888       420C.................................
             .
             .
891          .        440
             .          V
             .          V
901          .        R70
             .          .
             .          .
907          .          .        441
             .          .          .
             .          .          .
917          .       C108............
             .          .
             .          .
922          .          .------->   SPLIT
920          .       DIV4
             .          V
             .          V
925          .       R108
             .          .
             .          .
931          .          .        442
             .          .          .
             .          .          .
941          .        C67............
             .          .
             .          .
947          .          .------->  BASIN4
944          .       DIV6
             .          .
             .          .
952          .          .          .<-------  BASIN4
950          .          .     RTDIV6
             .          .          V
             .          .          V
953          .          .     RFDIV6
             .          .          .
             .          .          .
959          .      CDIV6............
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962                443
                     .
975                  .-------> WSH66
972            DIV66
                     V
                     V
978            R113
                     .
                     .
984        C114............
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                     .
987                444
                     V
                     V
997                R58
                     .
                     .
1003                 .        445
                     .          .
                     .          .
1013           C107............
                     V
                     V
1016           R107
                     .
                     .
1024                 .          .<-------  SPLIT
1022                 .      RTB2
                     .          V
                     .          V
1025                 .    RSPLIT
                     .          .
                     .          .
1031                 .          .        446
                     .          .          .
                     .          .          .
1041           C109.......................
                     .
                     .
1047                 .-------> WSH404
1044           DIV5
                     V
                     V
1050           R109
                     .
                     .
1056                 .        447
                     .          .
                     .          .
1068                 .          .          .<-------  WSH404
1066                 .          .      RT404
                     .          .          V
                     .          .          V
1069                 .          .       R404
                     .          .          .
                     .          .          .
1075           C110.......................
                     V
                     V
1078           R110
                     .
                     .
1084       C115............
               V
               V
1087       R115
                     .
                     .
1094                 .        448
                     .          .
                     .          .
1104                 .        449
                     .          .
                     .          .
1114           C6364...........
                     V
                     V
1117           R6364
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                     .
1123                 .        450
                     .          .
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1133                 .          .        451
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1145                 .          .          .          .<-------  WSH66
1143                 .          .          .      RT66
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1146                 .          .          .          .        452
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1156                 .          .          .      C6465...........
                     .          .          .          V
                     .          .          .          V
1159                 .          .          .      R6566
                     .          .          .          .
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1165           C116.................................
                     V
                     V
1168           BASIN5
                     V
                     V
1175           R116
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1181                 .        453
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1191            .          .       C117...........
                .          .          .
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1194            .       C118...........
                .          V
                .          V
1197            .       R118
                .          .
                .          .
1206            .          .-------> BASIN6
1203            .       DIV7
                .          .
                .          .
1211            .          .          .<------- BASIN6
1209            .          .     RTDIV7
                .          .          V
                .          .          V
1212            .          .     RFDIV7
                .          .          .
                .          .          .
1218            .      CDIV7...........
                .          .
                .          .
1221            .          .        454
                .          .          .
                .          .          .
1231            .       C119...........
                .          V
                .          V
1234            .       R454
                .          .
                .          .
1241            .          .        415
                .          .          .
                .          .          .
1253            .          .          .          .<-------   SF385
1251            .          .          .      RT385
                .          .          .          V
                .          .          .          V
1254            .          .          .      RR385
                .          .          .          .
                .          .          .          .
1261            .       415C......................
                .          V
                .          V
1264            .       R415
                .          .
                .          .
1271            .          .        455
                .          .          .
                .          .          .
1286            .          .          .------->   BS455
1281            .          .       D455
                .          .          .
                .          .          .
1291            .          .          .          .<-------   BS455
1289            .          .          .      RT455
                .          .          .          V
                .          .          .          V
1292            .          .          .      SR455
                .          .          .          .
                .          .          .          .
1298            .          .       C455...........
                .          .          .
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1301         455C......................
                V
                V
1304        SR440
                V
                V
1313        RR455
                .
                .
1319            .        456
                .          .
                .          .
1332            .          .-------> BASIN1
1329            .       DIV1
                .          .
                .          .
1338            .          .------->   WA30
1335            .       DIV2
                .          V
                .          V
1341            .       R456
                .          .
                .          .
1347            .          .        457
                .          .          .
                .          .          .
1357            .       C101...........
                .          .
                .          .
1363            .          .-------> BASIN2
1360            .       DIV3
                .          .
                .          .
1368            .          .          .<------- BASIN2
1366            .          .     RTDIV3
                .          .          V
                .          .          V
1369            .          .     RFDIV3
                .          .          .
                .          .          .
1375            .      CDIV3...........
                .          V
                .          V
1378            .       R101
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1384          .          .        458
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              .          .          .
1394          .      C103............
              .         V
              .         V
1397          .      R103
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              .          .
1405          .          .      .<-------    WA30
1403          .          .    RT30
              .          .       V
              .          .       V
1406          .          .     R30
              .          .       .
              .          .       .
1414          .          .       .          .<-------  BASIN1
1412          .          .       .       RTB1
              .          .       .          V
              .          .       .          V
1415          .          .       .         B1
              .          .       .          V
              .          .       .          V
1422          .          .       .        RB1
              .          .       .          .
              .          .       .          .
1428          .          .    CDIV............
              .          .       .
              .          .       .
1431          .          .       .        459
              .          .       .          .
              .          .       .          .
1441          .          .     C52............
              .          .       V
              .          .       V
1444          .          .     R52
              .          .       .
              .          .       .
1450          .          .       .        460
              .          .       .          .
              .          .       .          .
1460          .          .    C102............
              .          .       V
              .          .       V
1463          .          .  BASIN3
              .          .       V
              .          .       V
1470          .          .      R3
              .          .       .
              .          .       .
1476          .          .       .        461
              .          .       .          .
              .          .       .          .
1486          .          .    C104............
              .          .       .
              .          .       .
1489          .      C106............
              .         V
              .         V
1492          .      R106
              .          .
              .          .
1498          .          .     462
              .          .       .
              .          .       .
1508          .       C56............
              .          .
              .          .
1511          .          .     480
              .          .       .
              .          .       .
1526          .          .       .-------->  BS480
1521          .          .    D480
              .          .       .
              .          .       .
1531          .          .       .          .<-------  BS480
1529          .          .       .      RT480
              .          .       .          V
              .          .       .          V
1532          .          .       .      SR480
              .          .       .          .
              .          .       .          .
1538          .          .    C480............
              .          .       .
              .          .       .
1541        480C.......................
            V
            V
1544       RR480
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              .
1550          .       500
              .          .
              .          .
1560        500C............
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(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
HYDROGRAPH AT	10	951.	12.27	114.	31.	15.	.70		
ROUTED TO	R10	882.	12.40	114.	31.	15.	.70		
ROUTED TO	R12	833.	12.60	114.	31.	15.	.70		
HYDROGRAPH AT	20	959.	12.43	128.	32.	16.	1.12		
2 COMBINED AT	C20	1663.	12.53	240.	63.	30.	1.82		
HYDROGRAPH AT	40	2582.	12.30	252.	66.	32.	2.23		
HYDROGRAPH AT	60	1553.	12.40	228.	61.	29.	1.75		
3 COMBINED AT	60C	5274.	12.37	708.	188.	90.	5.80		
ROUTED TO	SR60	92.	14.40	92.	89.	70.	5.80		
ROUTED TO	R60	92.	14.40	92.	89.	70.	5.80		
ROUTED TO	RR60	92.	14.53	92.	89.	70.	5.80		
HYDROGRAPH AT	80	1868.	12.27	179.	46.	22.	1.48		
2 COMBINED AT	80C	1942.	12.27	266.	134.	92.	1.48		
ROUTED TO	R80	1919.	12.27	266.	134.	92.	1.48		
HYDROGRAPH AT	100	404.	12.20	58.	15.	7.	.48		
2 COMBINED AT	100C	2300.	12.27	321.	148.	99.	1.96		
ROUTED TO	R100	2292.	12.30	321.	148.	99.	1.96		
HYDROGRAPH AT	120	3232.	12.27	326.	88.	42.	2.20		
2 COMBINED AT	120C	5469.	12.27	636.	229.	141.	4.16		
ROUTED TO	R120	5397.	12.30	636.	229.	140.	4.16		
HYDROGRAPH AT	140	632.	12.13	64.	17.	8.	.60		
HYDROGRAPH AT	150	135.	13.20	47.	13.	6.	.41		
ROUTED TO	R150	134.	13.30	47.	13.	6.	.41		
ROUTED TO	R152	133.	13.50	47.	13.	6.	.41		
HYDROGRAPH AT	160	217.	12.40	35.	9.	4.	.37		
HYDROGRAPH AT	180	785.	12.37	90.	23.	11.	1.00		
5 COMBINED AT	180C	6707.	12.30	857.	286.	168.	6.54		
HYDROGRAPH AT	365	380.	12.27	45.	12.	6.	.41		
ROUTED TO	R365	378.	12.27	45.	12.	6.	.41		
ROUTED TO	365R	375.	12.33	45.	12.	6.	.41		
HYDROGRAPH AT	350	1192.	12.20	104.	27.	13.	.96		
DIVERSION TO	SF350	596.	12.20	52.	14.	7.	.96		
HYDROGRAPH AT	D350	596.	12.20	52.	14.	7.	.96		
ROUTED TO	350R	524.	12.43	52.	14.	7.	.96		
HYDROGRAPH AT	353	401.	12.30	49.	12.	6.	.50		

+	HYDROGRAPH AT	RT350	596.	12.20	52.	14.	7.	.96
+	ROUTED TO	RR350	574.	12.30	52.	14.	7.	.96
+	4 COMBINED AT	353C	1704.	12.33	195.	51.	24.	1.88
+	ROUTED TO	R353	1662.	12.40	195.	51.	24.	1.88
+	ROUTED TO	353R	1637.	12.47	195.	51.	24.	1.88
+	HYDROGRAPH AT	310	376.	12.33	49.	12.	6.	.56
+	2 COMBINED AT	C310	1953.	12.43	242.	62.	30.	2.43
+	ROUTED TO	R310	1936.	12.50	242.	62.	30.	2.43
+	ROUTED TO	R312	1903.	12.53	242.	62.	30.	2.43
+	HYDROGRAPH AT	295	364.	12.30	40.	10.	5.	.38
+	2 COMBINED AT	295C	2113.	12.53	280.	72.	35.	2.81
+	ROUTED TO	295R	2113.	12.53	280.	72.	35.	2.81
+	HYDROGRAPH AT	210	873.	12.20	82.	22.	10.	.58
+	ROUTED TO	R210	818.	12.27	82.	22.	10.	.58
+	HYDROGRAPH AT	240	1405.	12.30	155.	39.	19.	1.40
+	3 COMBINED AT	240C	3626.	12.40	509.	131.	63.	4.79
+	ROUTED TO	SR240	1488.	12.93	441.	114.	55.	4.79
+	HYDROGRAPH AT	220	1126.	12.17	98.	25.	12.	.73
+	2 COMBINED AT	220C	1546.	12.87	532.	138.	67.	5.52
+	ROUTED TO	SR220	1490.	13.03	520.	135.	65.	5.52
+	HYDROGRAPH AT	190	1403.	12.17	116.	31.	15.	.92
+	ROUTED TO	R190	1348.	12.23	116.	31.	15.	.92
+	ROUTED TO	R192	1267.	12.30	116.	31.	15.	.92
+	HYDROGRAPH AT	200	703.	12.20	69.	19.	9.	.54
+	3 COMBINED AT	200C	2625.	12.30	693.	182.	88.	6.97
+	ROUTED TO	SR200	2484.	12.40	688.	179.	86.	6.97
+	ROUTED TO	200SR	1865.	12.67	567.	148.	71.	6.97
+	2 COMBINED AT	C180	6707.	12.30	1418.	434.	239.	13.51
+	ROUTED TO	SR180	142.	19.10	142.	141.	113.	13.51
+	ROUTED TO	R180	142.	19.17	142.	141.	113.	13.51
+	HYDROGRAPH AT	260	418.	12.10	43.	12.	6.	.27
+	2 COMBINED AT	260C	527.	12.10	178.	152.	121.	.27
+	ROUTED TO	R260	515.	12.20	178.	152.	120.	.27
+	HYDROGRAPH AT	280	478.	12.10	42.	12.	6.	.30
+	2 COMBINED AT	280C	945.	12.13	217.	162.	126.	.57
+	ROUTED TO	R280	909.	12.20	217.	162.	125.	.57
+	HYDROGRAPH AT	300	407.	12.10	34.	9.	5.	.30
+	2 COMBINED AT	C300	1243.	12.17	248.	170.	129.	.87

+	DIVERSION TO	DIV30	943.	12.17	68.	17.	8.	.87
+	HYDROGRAPH AT	D300	300.	11.87	180.	153.	121.	.87
+	HYDROGRAPH AT	RTDIV	943.	12.17	68.	17.	8.	.87
+	ROUTED TO	SRDIV	141.	12.60	62.	17.	8.	.87
+	2 COMBINED AT	300C	441.	12.60	241.	170.	129.	.87
+	HYDROGRAPH AT	305	409.	12.27	42.	11.	6.	.38
+	DIVERSION TO	305D	409.	12.27	42.	11.	6.	.38
+	HYDROGRAPH AT	D305	0.	.00	0.	0.	0.	.38
+	HYDROGRAPH AT	RT305	409.	12.27	42.	11.	6.	.38
+	ROUTED TO	SR305	62.	12.93	36.	11.	6.	.38
+	3 COMBINED AT	305C	498.	12.67	275.	180.	135.	1.25
+	ROUTED TO	R305	497.	12.73	275.	180.	134.	1.25
+	ROUTED TO	RR305	494.	12.77	274.	180.	134.	1.25
+	HYDROGRAPH AT	320	1040.	12.17	111.	31.	15.	.87
+	DIVERSION TO	BS320	409.	11.93	21.	6.	3.	.87
+	HYDROGRAPH AT	D320	1040.	12.17	96.	25.	12.	.87
+	HYDROGRAPH AT	RT320	409.	11.93	21.	6.	3.	.87
+	ROUTED TO	SR320	4.	4.17	4.	4.	3.	.87
+	3 COMBINED AT	C320	1351.	12.17	372.	209.	148.	2.12
+	HYDROGRAPH AT	340	1471.	12.17	186.	55.	26.	1.45
+	DIVERSION TO	BS340	1471.	12.17	104.	28.	14.	1.45
+	HYDROGRAPH AT	D340	1199.	12.33	97.	27.	13.	1.45
+	HYDROGRAPH AT	RT340	1471.	12.17	104.	28.	14.	1.45
+	ROUTED TO	SR340	19.	9.00	19.	19.	14.	1.45
+	3 COMBINED AT	C340	2305.	12.33	483.	253.	174.	3.56
+	HYDROGRAPH AT	355	246.	12.10	22.	6.	3.	.17
+	ROUTED TO	R355	214.	12.33	22.	6.	3.	.17
+	HYDROGRAPH AT	360	504.	12.23	84.	25.	12.	.67
+	DIVERSION TO	BS360	504.	12.23	53.	14.	7.	.67
+	HYDROGRAPH AT	D360	306.	12.63	38.	11.	5.	.67
+	HYDROGRAPH AT	RT360	504.	12.23	53.	14.	7.	.67
+	ROUTED TO	SR360	10.	9.83	10.	10.	7.	.67
+	4 COMBINED AT	360C	2512.	12.33	547.	278.	188.	4.41
+	HYDROGRAPH AT	370	398.	12.07	34.	10.	5.	.26
+	HYDROGRAPH AT	395	182.	12.23	25.	7.	3.	.20
+	2 COMBINED AT	370C	515.	12.10	59.	16.	8.	.45
+	ROUTED TO	R370	406.	12.60	59.	16.	8.	.45
+	HYDROGRAPH AT	380	666.	12.27	98.	26.	13.	.97

+	DIVERSION TO	BS380	666.	12.27	56.	14.	7.	.97
+	HYDROGRAPH AT	D380	472.	12.57	46.	12.	6.	.97
+	HYDROGRAPH AT	RT380	666.	12.27	56.	14.	7.	.97
+	ROUTED TO	SR380	10.	11.33	10.	10.	7.	.97
+	4 COMBINED AT	380C	2777.	12.33	653.	313.	208.	5.84
+	HYDROGRAPH AT	390	463.	12.03	33.	10.	5.	.24
+	DIVERSION TO	BS390	95.	11.73	6.	2.	1.	.24
+	HYDROGRAPH AT	D390	463.	12.03	30.	8.	4.	.24
+	HYDROGRAPH AT	RT390	95.	11.73	6.	2.	1.	.24
+	ROUTED TO	SR390	1.	.90	1.	1.	1.	.24
+	2 COMBINED AT	390C	464.	12.03	31.	9.	5.	.24
+	ROUTED TO	RR390	324.	12.50	31.	9.	5.	.24
+	HYDROGRAPH AT	400	351.	12.23	47.	13.	6.	.62
+	DIVERSION TO	BS400	262.	12.10	10.	3.	1.	.62
+	HYDROGRAPH AT	D400	351.	12.23	39.	10.	5.	.62
+	HYDROGRAPH AT	RT400	262.	12.10	10.	3.	1.	.62
+	ROUTED TO	SR400	2.	8.70	2.	2.	1.	.62
+	2 COMBINED AT	C400	353.	12.23	41.	12.	6.	.62
+	3 COMBINED AT	400C	3291.	12.33	719.	332.	218.	6.70
+	HYDROGRAPH AT	385	782.	12.23	87.	24.	12.	.65
+	DIVERSION TO	SF385	195.	12.23	22.	6.	3.	.65
+	HYDROGRAPH AT	D385	586.	12.23	65.	18.	9.	.65
+	ROUTED TO	385R	475.	12.70	65.	18.	9.	.65
+	HYDROGRAPH AT	420	752.	12.20	92.	26.	12.	.85
+	DIVERSION TO	BS420	269.	11.97	15.	4.	2.	.85
+	HYDROGRAPH AT	D420	752.	12.20	83.	22.	10.	.85
+	HYDROGRAPH AT	RT420	269.	11.97	15.	4.	2.	.85
+	ROUTED TO	SR420	13.	11.03	12.	4.	2.	.85
+	4 COMBINED AT	420C	3993.	12.33	858.	368.	237.	10.87
+	HYDROGRAPH AT	440	180.	12.03	12.	3.	2.	.08
+	ROUTED TO	R70	176.	12.07	12.	3.	2.	.08
+	HYDROGRAPH AT	441	16.	12.03	1.	0.	0.	.01
+	2 COMBINED AT	C108	191.	12.07	14.	4.	2.	.09
+	DIVERSION TO	SPLIT	96.	12.07	7.	2.	1.	.09
+	HYDROGRAPH AT	DIV4	96.	12.07	7.	2.	1.	.09
+	ROUTED TO	R108	88.	12.13	7.	2.	1.	.09
+	HYDROGRAPH AT	442	102.	12.10	9.	2.	1.	.10
+	2 COMBINED AT	C67	187.	12.10	15.	4.	2.	.19

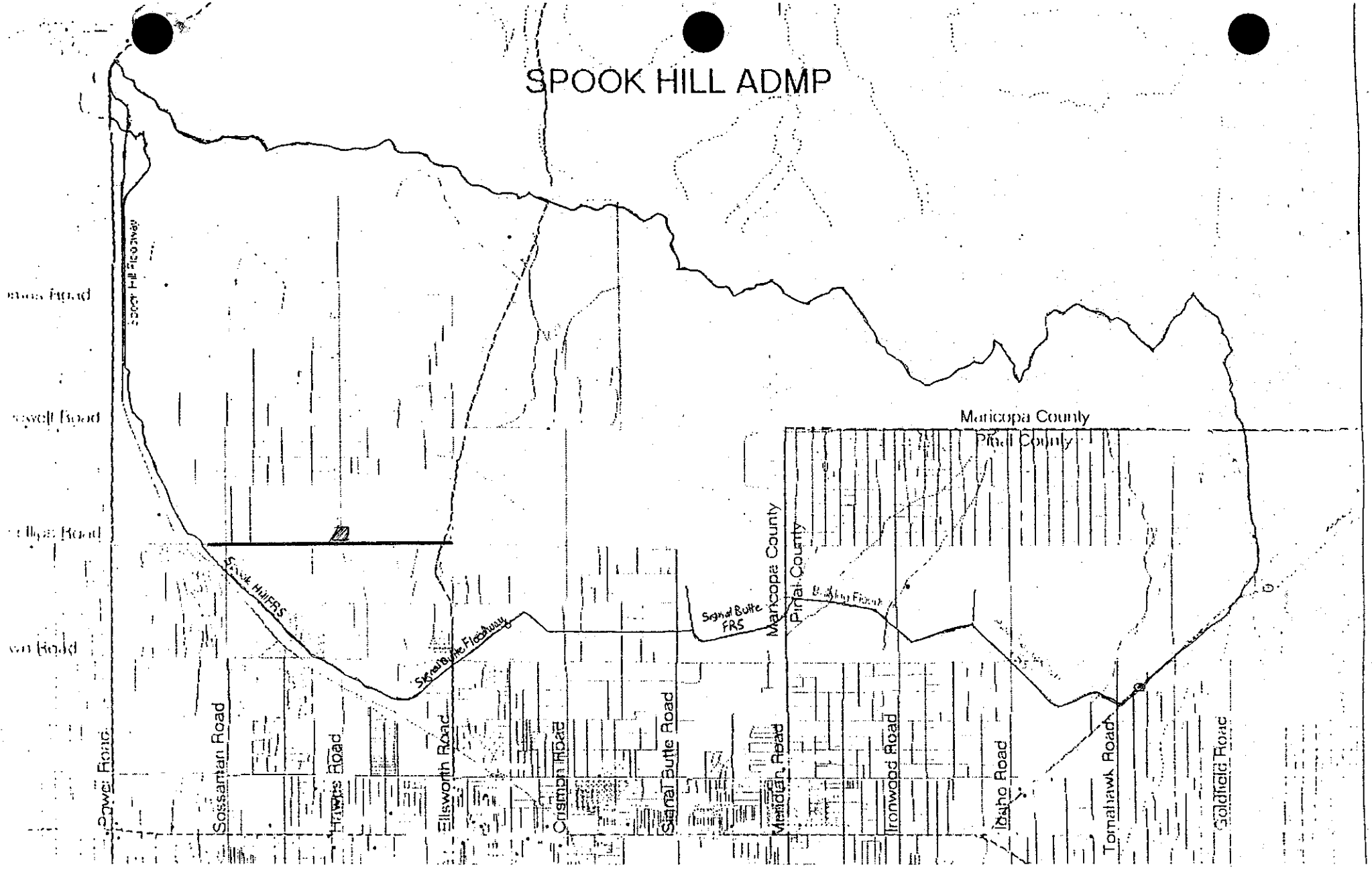
+ DIVERSION TO	BASIN4	115.	12.10	6.	1.	1.	.19
+ HYDROGRAPH AT	DIV6	72.	12.10	10.	3.	1.	.19
+ HYDROGRAPH AT	RTDIV6	115.	12.10	6.	1.	1.	.19
+ ROUTED TO	RFDIV6	1.	11.90	1.	1.	1.	.19
+ 2 COMBINED AT	CDIV6	74.	12.10	10.	4.	2.	.19
+ HYDROGRAPH AT	443	148.	12.07	14.	4.	2.	.08
+ DIVERSION TO	WSH66	78.	11.90	12.	3.	2.	.08
+ HYDROGRAPH AT	DIV66	70.	12.07	3.	1.	0.	.08
+ ROUTED TO	R113	69.	12.07	3.	1.	0.	.08
+ 2 COMBINED AT	C114	140.	12.07	13.	4.	2.	.27
+ HYDROGRAPH AT	444	82.	12.03	5.	1.	1.	.04
+ ROUTED TO	R58	75.	12.07	5.	1.	1.	.04
+ HYDROGRAPH AT	445	296.	12.03	18.	5.	2.	.19
+ 2 COMBINED AT	C107	365.	12.03	22.	6.	3.	.23
+ ROUTED TO	R107	365.	12.07	22.	6.	3.	.23
+ HYDROGRAPH AT	RTB2	96.	12.07	7.	2.	1.	.09
+ ROUTED TO	RSPLIT	95.	12.07	7.	2.	1.	.09
+ HYDROGRAPH AT	446	65.	12.03	6.	2.	1.	.04
+ 3 COMBINED AT	C109	520.	12.07	35.	9.	4.	.27
+ DIVERSION TO	WSH404	35.	11.73	8.	2.	1.	.27
+ HYDROGRAPH AT	DIV5	485.	12.07	27.	7.	3.	.27
+ ROUTED TO	R109	469.	12.10	27.	7.	3.	.27
+ HYDROGRAPH AT	447	138.	12.07	12.	4.	2.	.09
+ HYDROGRAPH AT	RT404	35.	11.73	8.	2.	1.	.27
+ ROUTED TO	R404	35.	11.90	8.	2.	1.	.27
+ 3 COMBINED AT	C110	635.	12.07	46.	13.	6.	.36
+ ROUTED TO	R110	632.	12.10	46.	13.	6.	.36
+ 2 COMBINED AT	C115	764.	12.10	59.	17.	8.	.63
+ ROUTED TO	R115	767.	12.10	59.	17.	8.	.63
+ HYDROGRAPH AT	448	88.	12.03	6.	2.	1.	.05
+ HYDROGRAPH AT	449	80.	12.03	5.	1.	1.	.05
+ 2 COMBINED AT	C6364	166.	12.03	11.	3.	1.	.09
+ ROUTED TO	R6364	137.	12.17	11.	3.	1.	.09
+ HYDROGRAPH AT	450	61.	12.20	6.	2.	1.	.07
+ HYDROGRAPH AT	451	18.	12.17	2.	1.	0.	.03
+ HYDROGRAPH AT	RT66	78.	11.90	12.	3.	2.	.08
+ HYDROGRAPH AT	452	62.	12.03	4.	1.	1.	.04
+ 2 COMBINED AT	C6465	140.	12.03	16.	4.	2.	.04

+	ROUTED TO	R6566	135.	12.10	16.	4.	2.	.04
+	4 COMBINED AT	C116	341.	12.17	35.	9.	4.	.23
+	ROUTED TO	BASIN5	152.	12.47	35.	9.	4.	.23
+	ROUTED TO	R116	150.	12.53	35.	9.	4.	.23
+	HYDROGRAPH AT	453	62.	12.10	7.	2.	1.	.06
+	2 COMBINED AT	C117	169.	12.50	41.	11.	5.	.29
+	2 COMBINED AT	C118	852.	12.10	99.	28.	14.	.92
+	ROUTED TO	R118	842.	12.10	99.	28.	14.	.92
+	DIVERSION TO	BASIN6	243.	12.10	10.	2.	1.	.92
+	HYDROGRAPH AT	DIV7	599.	12.10	89.	25.	13.	.92
+	HYDROGRAPH AT	RTDIV7	243.	12.10	10.	2.	1.	.92
+	ROUTED TO	RFDIV7	1.	11.97	1.	1.	1.	.92
+	2 COMBINED AT	CDIV7	600.	12.10	90.	26.	13.	.92
+	HYDROGRAPH AT	454	157.	12.17	21.	6.	3.	.18
+	2 COMBINED AT	C119	748.	12.13	110.	32.	16.	1.10
+	ROUTED TO	R454	722.	12.20	110.	32.	16.	1.10
+	HYDROGRAPH AT	415	412.	12.17	55.	16.	7.	.45
+	HYDROGRAPH AT	RT385	195.	12.23	22.	6.	3.	.65
+	ROUTED TO	RR385	177.	12.40	22.	6.	3.	.65
+	3 COMBINED AT	415C	1193.	12.20	184.	53.	26.	1.71
+	ROUTED TO	R415	1179.	12.27	184.	53.	26.	1.71
+	HYDROGRAPH AT	455	1346.	12.13	142.	43.	21.	1.11
+	DIVERSION TO	BS455	1346.	12.13	137.	37.	18.	1.11
+	HYDROGRAPH AT	D455	55.	12.77	16.	6.	3.	1.11
+	HYDROGRAPH AT	RT455	1346.	12.13	137.	37.	18.	1.11
+	ROUTED TO	SR455	25.	10.47	25.	25.	18.	1.11
+	2 COMBINED AT	C455	80.	12.77	41.	31.	21.	1.11
+	3 COMBINED AT	455C	4986.	12.37	1049.	441.	280.	13.69
+	ROUTED TO	SR440	772.	13.70	755.	441.	279.	13.69
+	ROUTED TO	RR455	772.	14.03	755.	441.	277.	13.69
+	HYDROGRAPH AT	456	468.	12.07	35.	10.	5.	.26
+	DIVERSION TO	BASIN1	184.	12.07	8.	2.	1.	.26
+	HYDROGRAPH AT	DIV1	284.	12.07	27.	8.	4.	.26
+	DIVERSION TO	WA30	58.	12.07	10.	3.	2.	.26
+	HYDROGRAPH AT	DIV2	226.	12.07	18.	4.	2.	.26
+	ROUTED TO	R456	213.	12.13	18.	4.	2.	.26
+	HYDROGRAPH AT	457	264.	12.07	20.	5.	3.	.19
+	2 COMBINED AT	C101	462.	12.10	38.	10.	5.	.45

+	DIVERSION TO	BASIN2	165.	12.10	7.	2.	1.	.45
+	HYDROGRAPH AT	DIV3	297.	12.10	30.	8.	4.	.45
+	HYDROGRAPH AT	RTDIV3	165.	12.10	7.	2.	1.	.45
+	ROUTED TO	RFDIV3	2.	11.90	2.	2.	1.	.45
+	2 COMBINED AT	CDIV3	299.	12.10	32.	9.	5.	.45
+	ROUTED TO	R101	297.	12.10	32.	9.	5.	.45
+	HYDROGRAPH AT	458	356.	12.03	25.	7.	3.	.19
+	2 COMBINED AT	C103	635.	12.07	56.	16.	8.	.64
+	ROUTED TO	R103	630.	12.07	56.	16.	8.	.64
+	HYDROGRAPH AT	RT30	58.	12.07	10.	3.	2.	.26
+	ROUTED TO	R30	57.	12.10	10.	3.	2.	.26
+	HYDROGRAPH AT	RTB1	184.	12.07	8.	2.	1.	.26
+	ROUTED TO	B1	37.	12.23	8.	2.	1.	.26
+	ROUTED TO	RB1	37.	12.30	8.	2.	1.	.26
+	2 COMBINED AT	CDIV	86.	12.20	17.	5.	3.	.12
+	HYDROGRAPH AT	459	44.	12.03	3.	1.	0.	.03
+	2 COMBINED AT	C52	113.	12.10	20.	6.	3.	.15
+	ROUTED TO	R52	112.	12.17	20.	6.	3.	.15
+	HYDROGRAPH AT	460	214.	12.07	19.	6.	3.	.14
+	2 COMBINED AT	C102	313.	12.07	39.	12.	6.	.29
+	ROUTED TO	BASIN3	71.	12.63	39.	12.	6.	.29
+	ROUTED TO	R3	71.	12.77	39.	12.	6.	.29
+	HYDROGRAPH AT	461	161.	12.10	17.	5.	2.	.12
+	2 COMBINED AT	C104	213.	12.10	55.	17.	8.	.41
+	2 COMBINED AT	C106	835.	12.07	110.	32.	16.	1.05
+	ROUTED TO	R106	797.	12.13	110.	32.	16.	1.05
+	HYDROGRAPH AT	462	538.	12.07	40.	11.	5.	.30
+	2 COMBINED AT	C56	1254.	12.10	149.	42.	21.	1.35
+	HYDROGRAPH AT	480	1050.	12.10	96.	29.	14.	.73
+	DIVERSION TO	BS480	455.	11.90	27.	8.	4.	.73
+	HYDROGRAPH AT	D480	1050.	12.10	78.	21.	10.	.73
+	HYDROGRAPH AT	RT480	455.	11.90	27.	8.	4.	.73
+	ROUTED TO	SR480	6.	3.90	6.	6.	4.	.73
+	2 COMBINED AT	C480	1056.	12.10	84.	27.	14.	.73
	3 COMBINED AT	480C	2504.	12.10	937.	521.	319.	2.09
	ROUTED TO	RR480	2342.	12.13	934.	521.	319.	2.09
+	HYDROGRAPH AT	500	1073.	12.27	122.	33.	16.	.93
+	2 COMBINED AT	500C	3230.	12.17	1046.	549.	333.	3.02

*** NORMAL END OF HEC-1 ***

SPOOK HILL ADMP



ALTERNATIVE 23 - REFLECTS IMPLEMENTATION OF McKELLIPS RD INTERCEPTOR CHANNEL EXTENDING FROM JUST EAST OF ELLSWORTH ROAD TO THE SPOOK HILL FRS.
ORIGINAL SUB-BASINS 340, 360, 380, AND 400 ARE SUBDIVIDED INTO 340,341, 342, 360, 361, 380, 381, 400, AND 401.
CONCEPTUAL DETENTION BASINS ARE ALSO INCLUDED AT THE INTERSECTIONS OF McKELLIPS/HAWES
MODEL IS CREATED FROM THE BASE EXISTING MODEL S24CE10.DAT
GENERATED BY SC ON 06-14-00 FILE: S24CE23.DAT

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1****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*              JUN   1998              *
*            VERSION 4.1               *
*                                      *
*  RUN DATE   15JUN00  TIME  07:42:03  *
*                                      *
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****************************************
*                                      *
*    U.S. ARMY CORPS OF ENGINEERS      *
*    HYDROLOGIC ENGINEERING CENTER     *
*          609 SECOND STREET           *
*       DAVIS, CALIFORNIA 95616        *
*          (916) 756-1104              *
*                                      *
****************************************
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X     X  XXXXXXX   XXXXX          X
X     X  X        X     X        XX
X     X  X        X              X
XXXXXXX  XXXX     X        XXXXX X
X     X  X        X              X
X     X  X        X     X        X
X     X  XXXXXXX   XXXXX         XXX
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THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM


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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

   1          ID   EXISTING LAND USE CALCULATIONS WERE BASED ON 1 YR. FROM 11/5/99
   2          ID   FOR LAS SENDAS       AND LANDISCOR JAN.1999 AERIAL PHOTOGPRAPHS
   3          ID
   4          ID   ALL DAMS WERE ANALYZED WITH NO STORAGE BELOW PRINCIPLE SPILLWAY ELEVATIONS
   5          ID
   6          ID   A CONSERVATIVE ESTIMATE WAS USED FOR THE LOCATION OF THE CENTROID FOR
   7          ID   PRECIPITATION VALUES
   8          ID
   9          ID   ALL CHANNEL ROUTING INFORMATION WAS OBTAINED FROM MCFCD SPOOK HILL   SIGNAL
  10          ID   BUTTE        AND BULLDOG FLOODWAY PLANS
  11          ID
  12          ID   ANALYSIS PREPARED BY WOOD/PATEL - JCD; 11/05/99; FILE:  SPHEX1.DAT
  13          ID
  14          ID   MODEL UPDATE WITH LAS SENDAS WEST BASINS & ALL RETENTION BASINS
  15          ID   DRAINING BACK INTO THE SYSTEM WITHIN 36 HOURS
  16          ID   BY: JCD; 1/4/2000            FILE: SPHEX1RV.DAT
  17          ID
  18          ID   CURRENT MODEL UPDATED WITH ALL PREVIOUS MODEL RUNS
  19          ID   NOTED ABOVE, AND COUNTY COMMENTS DATED MARCH 20, 2000
  20          ID   BY: MW; 04/06/2000       FILE:  S24CE0.DAT
  21          ID
  22          ID   MODEL UPDATED TO ALIGN SUB-BASIN CONCENTRATION POINTS WITH PASS MOUNTAIN
  23          ID   DIVERSION.  NEW BOUNDARIES CREATED FOR SUB-BASINS 240, 220, & 200
  24          ID   ANALYSIS PERFORMED BY WOOD/PATEL; MW;  ON 05/12/2000;  FILE: S24CE10.DAT
  25          ID
  26          ID  ******************************************************************
  27          ID   ALTERNATIVE 23 - REFLECTS IMPLEMENTATION OF McKELLIPS RD INTERCEPTOR CHANNEL
  28          ID   EXTENDING FROM JUST EAST OF ELLSWORTH ROAD TO THE SPOOK HILL FRS.
  29          ID   ORIGINAL SUB-BASINS 340, 360, 380, AND 400 ARE SUBDIVIDED INTO 340,341,
  30          ID   342, 360, 361, 380, 381, 400, AND 401.
  31          ID   CONCEPTUAL DETENTION BASINS ARE ALSO INCLUDED AT THE INTERSECTIONS OF
  32          ID   McKELLIPS/HAWES
  33          ID   MODEL IS CREATED FROM THE BASE EXISTING MODEL S24CE10.DAT
  34          ID   GENERATED BY SC ON 06-14-00            FILE: S24CE23.DAT
  35          ID  ******************************************************************
  36          ID
  37          ID
              *DIAGRAM
  38          IT       2                    1500
  39          IO       3
  40          IN      15
  41          JD    3.81    0.01
  42          PC    .000    .002    .005    .008    .011    .014    .017    .020    .023    .026
  43          PC    .029    .032    .035    .038    .041    .044    .048    .052    .056    .060
  44          PC    .064    .068    .072    .076    .080    .085    .090    .095    .100    .105
  45          PC    .110    .115    .120    .126    .133    .140    .147    .155    .163    .172
  46          PC    .181    .191    .203    .218    .236    .257    .283    .387    .663    .707
  47          PC    .735    .758    .776    .791    .804    .815    .825    .834    .842    .849
  48          PC    .856    .863    .869    .875    .881    .887    .893    .898    .903    .908
  49          PC    .913    .918    .922    .926    .930    .934    .938    .942    .946    .950
  50          PC    .953    .956    .959    .962    .965    .968    .971    .974    .977    .980
  51          PC    .983    .986    .989    .992    .995    .998   1.000
  52          JD    3.58   10.00
  53          JD    3.43   30.00
  54          JD    3.28   60.00
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  55          JD    3.22   90.00
  56          JD    3.18  120.00
  57          JD    3.14  150.00
  58          JD    3.05  300.00
  59          JD    2.97  500.00
              * DDM   ***** Updated *****

  60          KK      10
  61          KM   SUB-BASIN 10
  62          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
  63          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
  64          KM     L = 2.00  Kb = .044  Adj. Slope =  165.0
  65          BA    .702
  66          LG    .350    .320   7.600    .090  15.000
  67          UC    .421    .302
  68          UA       0       3       5       8      12      20      43      75      90      96
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 69          UA     100
             * DDM   ***** Preserved *****

 70          KK     R10
 71          KM   ROUTING OF FLOW FROM SUB-BASIN 10 TO R12
 72          RS       4    FLOW      -1
 73          RC    .045     .03    .045    8700    .021
 74          RX       0       1       2      17      27      42      43      44
 75          RY       5       5       5       0       0       5       5       5
             * DDM   ***** Preserved *****

 76          KK     R12
 77          KM   ROUTING OF FLOW FROM R12 TO SUB-BASIN 20
 78          RS       6    FLOW      -1
 79          RC    .045     .03    .045    4500     .01
 80          RX       0       1      30    37.5    57.5      65      94      95
 81          RY       3     2.5     2.5       0       0     2.5     2.5       3
             * DDM   ***** Updated *****

 82          KK      20
 83          KM   SUB-BASIN 20
 84          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 85          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
 86          KM     L = 2.50  Kb = .041  Adj. Slope =   88.0
 87          BA   1.120
 88          LG    .350    .390   5.800    .190   1.000
 89          UC    .658    .454
 90          UA       0       3       5       8      12      20      43      75      90      96
 91          UA     100
             * DDM   ***** Preserved *****

 92          KK     C20
 93          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 10 AND 20
 94          HC       2
             * DDM   ***** Updated *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 95          KK      40
 96          KM   SUB-BASIN 40
 97          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 98          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
 99          KM     L = 3.08  Kb = .036  Adj. Slope =  189.0
100          BA   2.233
101          LG    .340    .340   4.900    .280   5.000
102          UC    .496    .264
103          UA       0       3       5       8      12      20      43      75      90      96
104          UA     100
             * DDM   ***** Updated *****

105          KK      60
106          KM   SUB-BASIN 60
107          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
108          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .990
109          KM     L = 4.19  Kb = .038  Adj. Slope =  209.6
110          BA   1.746
111          LG    .330    .350   5.800    .190   9.000
112          UC    .596    .477
113          UA       0       3       5       8      12      20      43      75      90      96
114          UA     100
             * DDM   ***** Preserved *****

115          KK     60C
116          KM   HYDROGRAPH COMBINATION FOR APACHE JUNCTION FRS
             *      1       2
117          HC       3
             * DDM   ***** Preserved *****

118          KK    SR60
119          KM   APACHE JUNCTION FRS AS-BUILT PLANS 12/19/88
120          KM   OUTLET PIPE=30"RCP; L=136.6'; INLET INV.=1783.5; OUTLET INV.=1783
121          KM   EMERGENCY SPILLWAY ELEV.=1799.77'; PRINCIPLE SPILLWAY ELEV.=1793.5'
122          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 100 ACRE-FEET
123          RS       1    STOR       0
124          SV       0       1     100     200     300     400
125          SQ       0      71      81      87    91.5      94
126          SE    83.5    93.5      96    97.7      99   99.77
             * DDM   ***** Preserved *****

127          KK     R60
128          KM        ROUTE FLOW THROUGH BULLDOG FLOODWAY FROM APACHE JUNCTION FRS
129          RS       1    FLOW      -1
130          RC    .016    .016    .016    2850    .012
131          RX       0       1       2     2.1     5.6     5.7       6       7
132          RY     3.5     3.5     3.5       0       0     3.5     3.5     3.5
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

133          KK    RR60
134          KM   ROUTE FLOW FROM BULLDOG FLOODWAY TO SUB-BASIN 80
135          RS       4    FLOW      -1
136          RC    .016    .016    .016    3500    .005
137          RX       0       1       2     2.1     7.1     7.2       8       9
138          RY     3.5     3.5     3.5       0       0     3.5     3.5     3.5
             * DDM   ***** Updated *****

139          KK      80
140          KM   SUB-BASIN 80
141          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
142          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .991
143          KM     L = 2.69  Kb = .039  Adj. Slope =  229.8
144          BA   1.475
145          LG    .330    .330   5.600    .210   4.000
146          UC    .433    .259
147          UA       0       3       5       8      12      20      43      75      90      96
148          UA     100
             * DDM   ***** Preserved *****
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149          KK     80C
150          KM   HYDROGRAPH COMBINATION FOR FLOW FROM APACHE JUNCTION FRS & SUB-BASIN 80
151          HC       2   1.475
             * DDM   ***** Preserved *****

152          KK     R80
153          KM   ROUTE FLOW FROM SUB-BASIN 80 TO SUB-BASIN 100
154          RS       1    FLOW      -1
155          RC    .025    .016    .025    1200    .003
156          RX       0       2       6     6.1    41.1    41.2    56.2    58.2
157          RY     5.5     4.5     4.5       0       0     4.5     4.5     5.5
             * DDM   ***** Updated *****

158          KK     100
159          KM   SUB-BASIN 100
160          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
161          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
162          KM     L = 1.94  Kb = .046  Adj. Slope =  108.0
163          BA    .484
164          LG    .320    .290   5.100    .260   3.000
165          UC    .533    .473
166          UA       0       5      16      30      65      77      84      90      94      97
167          UA     100
             * DDM   ***** Preserved *****

168          KK    100C
169          KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 80 & 100
170          HC       2
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE  5

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

171          KK    R100
172          KM   ROUTE FLOW FROM SUB-BASIN 100 TO SUB-BASIN 120
173          RS       1    FLOW      -1
174          RC    .016    .016    .016     940    .005
175          RX       0       1       2     2.1    52.1    52.2      53      54
176          RY     4.5     4.5     4.5       0       0     4.5     4.5     4.5
             * DDM   ***** Updated *****

177          KK     120
178          KM   SUB-BASIN 120
179          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
180          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
181          KM     L = 3.07  Kb = .037  Adj. Slope =  239.0
182          BA   2.202
183          LG    .330    .280   6.800    .130  11.000
184          UC    .429    .226
185          UA       0       3       5       8      12      20      43      75      90      96
186          UA     100
             * DDM   ***** Preserved *****

187          KK    120C
188          KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 100 & 120
189          HC       2
             * DDM   ***** Preserved *****

190          KK    R120
191          KM   ROUTE FLOW FROM SUB-BASIN 120 TO SIGNAL BUTTE FRS
192          RS       1    FLOW      -1
193          RC    .025    .016    .025    2100    .005
194          RX       0       6      10    10.1    60.1    60.2    74.2    80.2
195          RY       8       5       5       0       0       5       5       8
             * DDM   ***** Updated *****

196          KK     140
197          KM   SUB-BASIN 140
198          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
199          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
200          KM     L = 1.61  Kb = .044  Adj. Slope =  149.0
201          BA    .598
202          LG    .310    .280   4.200    .440   5.000
203          UC    .421    .278
204          UA       0       5      16      30      65      77      84      90      94      97
205          UA     100
             * DDM   ***** Updated *****

206          KK     150
207          KM   SUB-BASIN 150
208          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
209          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
210          KM     L = 1.50  Kb = .047  Adj. Slope =  315.0
211          BA    .408
212          LG    .350    .360   5.100    .260   7.000
213          UC   1.579   1.417
214          UA       0       3       5       8      12      20      43      75      90      96
1                                    HEC-1 INPUT                                          PAGE  6

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

215          UA     100
             * DDM   ***** Preserved *****

216          KK    R150
217          KM   ROUTING OF FLOW FROM SUB-BASIN 150 TO R152
218          RS       3    FLOW      -1
219          RC    .045     .04    .045    3100    .032
220          RX       0       1       2      23      33      54      55      56
221          RY       7       7       7       0       0       7       7       7
             * DDM   ***** Preserved *****

222          KK    R152
223          KM   ROUTING OF FLOW FROM R152 TO SUB-BASIN 160
224          RS       6    FLOW      -1
225          RC    .045     .03    .045    5900    .019
226          RX       0       1       2       8      33      39      40      41
227          RY       2       2       2       0       0       2       2       2
             * DDM   ***** Updated *****

228          KK     160
229          KM   SUB-BASIN 160
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230          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
231          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
232          KM     L = 2.10  Kb = .047  Adj. Slope =  129.0
233          BA    .369
234          LG    .340    .330   4.150    .440   1.000
235          UC    .587    .655
236          UA       0       3       5       8      12      20      43      75      90      96
237          UA     100
             * DDM   ***** Updated *****

238          KK     180
239          KM   SUB-BASIN 180
240          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
241          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
242          KM     L = 2.42  Kb = .041  Adj. Slope =  140.0
243          BA   1.000
244          LG    .350    .350   4.150    .430    .000
245          UC    .571    .403
246          UA       0       3       5       8      12      20      43      75      90      96
247          UA     100
             * DDM   ***** Preserved *****

248          KK    180C
249          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
250          HC       5
             * DDM   ***** Updated *****

251          KK     210
252          KM   SUB-BASIN 210
253          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
254          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
255          KM     L = 1.84  Kb = .045  Adj. Slope =  315.0
256          BA    .583
257          LG    .350    .350   7.000    .120   5.000
1                                        HEC-1 INPUT                                          PAGE  7

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

258          UC    .321    .232
259          UA       0       3       5       8      12      20      43      75      90      96
260          UA     100
             * DDM   ***** Preserved *****

261          KK    R210
262          KM   ROUTING OF FLOW FROM SUB-BASIN 210 TO SUB-BASIN 220
263          RS       2    FLOW      -1
264          RC    .045     .03    .045    5100    .022
265          RX       0       1       2      14      34      46      47      48
266          RY       4       4       4       0       0       4       4       4
             * DDM   ***** Updated *****

267          KK     240
268          KM   SUB-BASIN 240
269          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
270          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .992
271          KM     L = 3.50  Kb = .039  Adj. Slope =  298.6
272          BA   1.398
273          LG    .350    .370   5.200    .240   2.000
274          UC    .471    .361
275          UA       0       3       5       8      12      20      43      75      90      96
276          UA     100
             * DDM   ***** Preserved *****

277          KK    240C
278          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
279          HC       2
             * DDM   ***** Preserved *****

280          KK   SR240
281          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
282          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
283          RS       1    STOR       0
284          SA    1.38    14.2    36.5
285          SE     1.7       5      11
286          SS       5      42       3     1.5
             * DDM   ***** Updated *****

287          KK     220
288          KM   SUB-BASIN 220
289          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
290          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
291          KM     L = 1.92  Kb = .043  Adj. Slope =  315.0
292          BA    .725
293          LG    .350    .350   7.000    .120   4.000
294          UC    .317    .209
295          UA       0       3       5       8      12      20      43      75      90      96
296          UA     100
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE  8

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

297          KK    220C
298          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
299          HC       2
             * DDM   ***** Preserved *****

300          KK   SR220
301          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
302          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
303          RS       1    STOR       0
304          SA     .78     4.1    13.7
305          SE       1       3      10
306          SS       3      65       3     1.5
             * DDM   ***** Updated *****

307          KK     190
308          KM   SUB-BASIN 190
309          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
310          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
311          KM     L = 1.91  Kb = .042  Adj. Slope =  315.0
312          BA    .918
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313          LG    .350    .390   5.800    .190   8.000
314          UC    .321    .185
315          UA       0       3       5       8      12      20      43      75      90      96
316          UA     100
             * DDM   ***** Preserved *****

317          KK    R190
318          KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
319          RS       2    FLOW      -1
320          RC    .045     .03    .045    4740     .03
321          RX       0       1       2      17      37      52      53      54
322          RY       5       5       5       0       0       5       5       5
             * DDM   ***** Preserved *****

323          KK    R192
324          KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
325          RS       2    FLOW      -1
326          RC    .045    .035    .045    2200    .018
327          RX       0       1      50      59      79      88     137     138
328          RY     3.5       3       3       0       0       3       3     3.5
             * DDM   ***** Updated *****

329          KK     200
330          KM   SUB-BASIN 200
331          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
332          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
333          KM     L = 1.58  Kb = .045  Adj. Slope =  305.6
334          BA    .535
335          LG    .350    .390   5.700    .200  10.000
336          UC    .300    .200
337          UA       0       3       5       8      12      20      43      75      90      96
338          UA     100
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

339          KK    200C
340          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 220 & 200
341          HC       3
             * DDM   ***** Preserved *****

342          KK   SR200
343          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
344          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
345          RS       1    STOR       0
346          SA    2.56     3.1     9.4
347          SE       0       3      10
348          SS       3     112       3     1.5
             * DDM   ***** Preserved *****

349          KK    R200
350          KM   ROUTE FLOW FROM SUB-BASIN 200 TO SIGNAL BUTTE FRS
351          RS       1    FLOW      -1
352          RC    .035    .025    .035    1300    .005
353          RX       0       1       2      17     117     132     133     134
354          RY       5       5       5       0       0       5       5       5
             * DDM   ***** Preserved *****

355          KK    C180
356          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
             *      1       2
357          HC       2
             * DDM   ***** Preserved *****

358          KK   SR180
359          KM   SIGNAL BUTTE FRS DATED 1/28/85
360          KM   OUTLET PIPE=36"RCP; L= 147';  {INLET INV.=1690; OUTLET INV.=1687
361          KM   EMERGENCY SPILLWAY ELEV.=1712.4; PRINCIPLE SPILLWAY ELEV.=1701
362          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 250 ACRE-FEET
363          RS       1    STOR       0
364          SV       0       1     250     500     750    1060
365          SQ       0   106.5   125.5   137.5     146     160
366          SE      90     101   104.5     107     109   112.4
             * DDM   ***** Preserved *****

367          KK    R180
368          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
369          KM   ROUTE FLOW FROM SIGNAL BUTTE FRS TO SUB-BASIN 260
370          RS       3    FLOW      -1
371          RC    .035    .025    .035    1500    .003
372          RX       0       1       2    22.6    38.6    59.2      60      61
373          RY     9.3     9.3     9.3       0       0     9.3     9.3     9.3
             * DDM   ***** Updated *****

374          KK     260
375          KM   SUB-BASIN 260
376          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
377          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
378          KM     L =  .81  Kb = .049  Adj. Slope =   68.0
379          BA    .267
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

380          LG    .300    .170   6.800    .160  15.000
381          UC    .363    .215
382          UA       0       5      16      30      65      77      84      90      94      97
383          UA     100
             * DDM   ***** Preserved *****

384          KK    260C
385          KM   HYDROGRAPH COMBINATION FOR OUTFLOW OF SIGNAL BUTTE FRS & SUB-BASIN 260
386          HC       2    .267
             * DDM   ***** Preserved *****

387          KK    R260
388          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
389          KM   ROUTE FLOW FROM SUB-BASIN 260 TO SUB-BASIN 280
390          RS       3    FLOW      -1
391          RC    .035    .025    .035    2300    .003
392          RX       0       1       2    23.4    43.4    64.8      65      66
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393          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Updated *****

394          KK     280
395          KM   SUB-BASIN 280
396          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
397          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
398          KM     L =  .77  Kb = .049  Adj. Slope =   84.0
399          BA    .304
400          LG    .300    .250   5.300    .290  15.000
401          UC    .333    .175
402          UA       0       5      16      30      65      77      84      90      94      97
403          UA     100
             * DDM   ***** Preserved *****

404          KK    280C
405          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 260 & SUB-BASIN 280
406          HC       2
             * DDM   ***** Preserved *****

407          KK    R280
408          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
409          KM   ROUTE FLOW FROM SUB-BASIN 280 TO SUB-BASIN 300
410          RS       2    FLOW      -1
411          RC    .035    .025    .035    2500    .003
412          RX       0       1       2    23.4    43.4    64.8      65      66
413          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Updated *****

414          KK     300
415          KM   SUB-BASIN 300
416          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
417          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
418          KM     L = 2.28  Kb = .041  Adj. Slope =  127.0
419          BA    .988
420          LG    .340    .320   4.500    .370   7.000
421          UC    .538    .362
422          UA       0       5      16      30      65      77      84      90      94      97
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

423          UA     100
             * DDM   ***** Preserved *****

424          KK    300C
425          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 280 & 300
426          HC       2
             * DDM   ***** Preserved *****

427          KK    R300
428          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
429          KM   ROUTE FLOW FROM SUB-BASIN 300 TO START OF FLOODWAY CONCRETE CHANNEL
430          RS       2    FLOW      -1
431          RC    .035    .025    .035    2200    .003
432          RX       0       1       2    23.4    55.4    76.8      77      78
433          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Preserved *****

434          KK   RR300
435          KM   CHANNEL GEOMETRY FOR SPOOK HILL FRS OBTAINED FROM AS-BUILTS PLANS.
436          KM   CONTINUE TO ROUTE FLOW WITHIN CONCRETE CHANNEL TO SPOOK HILL FRS
437          RS       2    FLOW      -1
438          RC    .016    .016    .016    6050   .0146
439          RX       0       1       2     2.1    16.1    16.2      17      18
440          RY     7.5     7.5     7.5       0       0     7.5     7.5     7.5
             *        1       2
             * DDM   ***** Updated *****

441          KK     350
442          KM   SUB-BASIN 350
443          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
444          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
445          KM     L = 2.22  Kb = .042  Adj. Slope =  315.0
446          BA    .970
447          LG    .350    .350   4.550    .340   4.000
448          UC    .367    .234
449          UA       0       3       5       8      12      20      43      75      90      96
450          UA     100
             * DDM   ***** Preserved *****

451          KK    D350
452          KM   DIVERT FLOW FROM SUB-BASIN 350. FOR MODELING PURPOSES THE SPLIT FLOW WILL
453          KM   BE ROUTED BETWEEN SUB-BASINS 355 & 310. THE MAIN FLOW WILL ROUTED TO 310
454          DT   SF350
455          DI       0   10000
456          DQ       0    6000
             * DDM   ***** Preserved *****

457          KK    350R
458          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING
459          KM   ROUTING OF MAIN FLOW FROM DIVERSION OF SUB-BASIN 350 TO SUB-BASIN 310
460          RS       7    FLOW      -1
461          RC    .045    .035    .045    5150    .025
462          RX       0       1      40      46      56      62     102     103
463          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

464          KK     310
465          KM   SUB-BASIN 310
466          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
467          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
468          KM     L = 2.70  Kb = .045  Adj. Slope =  283.5
469          BA    .555
470          LG    .350    .350   3.910    .480    .000
471          UC    .483    .511
472          UA       0       3       5       8      12      20      43      75      90      96
473          UA     100
             * DDM   ***** Preserved *****
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474          KK    C310
475          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 350 & 310
476          HC       2     .943
             * DDM   ***** Preserved *****

477          KK    R310
478          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
479          KM   ROUTING OF FLOW FROM SUB-BASIN 310 TO 320
480          RS      11     FLOW      -1
481          RC    .045    .035    .045   10050    .022
482          RX       0       1      40      46      56      62     102     103
483          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

484          KK     320
485          KM   SUB-BASIN 320
486          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
487          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
488          KM     L = 2.20  Kb = .042  Adj. Slope =  132.0
489          BA    .972
490          LG    .310    .300   4.550    .360  14.000
491          UC    .508    .333
492          UA       0       5      16      30      65      77      84      90      94      97
493          UA     100
             * DDM   ***** Preserved *****

494          KK    D320
495          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
496          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
497          KM   SIERRA HEIGHTS       FALCON RIDGE    & MARBLE CREEK
498          KM        MAXIMUM VOLUME DIVERSION = 12.27acre-feet
             *      1
499          DT   BS320   12.27
500          DI       0   10000
501          DQ       0   10000
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

502          KK   RT320
503          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
504          DR   BS320
             * DDM   ***** Preserved *****

505          KK   SR320
506          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
507          KM   12.27 ACRE-FEETx43560/36x3600=4.1cfs
             *      1
508          RS       1    STOR       0
509          SV       0     .01    12.3
510          SQ       0     4.2     4.2
             * DDM   ***** Preserved *****

511          KK    C320
512          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
513          HC       4
             *
             *
             * BEGINNING OF ALTERNATIVE 15 REVISIONS WHICH INCLUDE AN INTERCEPTOR CHANNEL
             * ALONG McKELLIPS RD.
             *
             *
             * DDM   ***** Updated *****

514          KK     340
515          KM   SUB-BASIN 340
516          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
517          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
518          KM     L = 1.78  Kb = .047  Adj. Slope =   99.0
519          BA   1.024
520          LG    .250    .250   4.200    .540  26.000
521          UC    .546    .296
522          UA       0       5      16      30      65      77      84      90      94      97
523          UA     100
             * DDM   ***** Preserved *****

524          KK    D340
525          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
526          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
527          KM   GRANDVIEW ESTATES    BOULDER MOUNTAIN & 33% OF MESA HIGHLANDS
528          KM        MAXIMUM VOLUME DIVERSION =39.2 acre feet
             *      1
529          DT   BS340    39.2
530          DI       0   10000
531          DQ       0   10000
             * DDM   ***** Preserved *****

532          KK   RT340
533          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
534          DR   BS340
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

535          KK   SR340
536          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
537          KM    39.2 ACRE-FEETx43560\36x3600=13.2cfs
             *      1
538          RS       1    STOR       0
539          SV       0     .01    39.2
540          SQ       0    13.2    13.2
             * DDM   ***** Preserved *****

541          KK    C340
542          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
543          HC       3
             * DDM   ***** Updated *****
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393          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Updated *****

394          KK     280
395          KM   SUB-BASIN 280
396          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
397          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
398          KM     L =  .77  Kb = .049  Adj. Slope =   84.0
399          BA    .304
400          LG    .300    .250   5.300    .290  15.000
401          UC    .333    .175
402          UA       0       5      16      30      65      77      84      90      94      97
403          UA     100
             * DDM   ***** Preserved *****

404          KK    280C
405          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 260 & SUB-BASIN 280
406          HC       2
             * DDM   ***** Preserved *****

407          KK    R280
408          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
409          KM   ROUTE FLOW FROM SUB-BASIN 280 TO SUB-BASIN 300
410          RS       2    FLOW      -1
411          RC    .035    .025    .035    2500    .003
412          RX       0       1       2    23.4    43.4    64.8      65      66
413          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Updated *****

414          KK     300
415          KM   SUB-BASIN 300
416          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
417          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
418          KM     L = 2.28  Kb = .041  Adj. Slope =  127.0
419          BA    .988
420          LG    .340    .320   4.500    .370   7.000
421          UC    .538    .362
422          UA       0       5      16      30      65      77      84      90      94      97
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

423          UA     100
             * DDM   ***** Preserved *****

424          KK    300C
425          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 280 & 300
426          HC       2
             * DDM   ***** Preserved *****

427          KK    R300
428          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
429          KM   ROUTE FLOW FROM SUB-BASIN 300 TO START OF FLOODWAY CONCRETE CHANNEL
430          RS       2    FLOW      -1
431          RC    .035    .025    .035    2200    .003
432          RX       0       1       2    23.4    55.4    76.8      77      78
433          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Preserved *****

434          KK   RR300
435          KM   CHANNEL GEOMETRY FOR SPOOK HILL FRS OBTAINED FROM AS-BUILTS PLANS.
436          KM   CONTINUE TO ROUTE FLOW WITHIN CONCRETE CHANNEL TO SPOOK HILL FRS
437          RS       2    FLOW      -1
438          RC    .016    .016    .016    6050   .0146
439          RX       0       1       2     2.1    16.1    16.2      17      18
440          RY     7.5     7.5     7.5       0       0     7.5     7.5     7.5
             *      1       2
             * DDM   ***** Updated *****

441          KK     350
442          KM   SUB-BASIN 350
443          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
444          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
445          KM     L = 2.22  Kb = .042  Adj. Slope =  315.0
446          BA    .970
447          LG    .350    .350   4.550    .340   4.000
448          UC    .367    .234
449          UA       0       3       5       8      12      20      43      75      90      96
450          UA     100
             * DDM   ***** Preserved *****

451          KK    D350
452          KM   DIVERT FLOW FROM SUB-BASIN 350. FOR MODELING PURPOSES THE SPLIT FLOW WILL
453          KM   BE ROUTED BETWEEN SUB-BASINS 355 & 310. THE MAIN FLOW WILL ROUTED TO 310
454          DT   SF350
455          DI       0   10000
456          DQ       0    6000
             * DDM   ***** Preserved *****

457          KK    350R
458          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING
459          KM   ROUTING OF MAIN FLOW FROM DIVERSION OF SUB-BASIN 350 TO SUB-BASIN 310
460          RS       7    FLOW      -1
461          RC    .045    .035    .045    5150    .025
462          RX       0       1      40      46      56      62     102     103
463          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

464          KK     310
465          KM   SUB-BASIN 310
466          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
467          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
468          KM     L = 2.70  Kb = .045  Adj. Slope =  283.5
469          BA    .555
470          LG    .350    .350   3.910    .480    .000
471          UC    .483    .511
472          UA       0       3       5       8      12      20      43      75      90      96
473          UA     100
             * DDM   ***** Preserved *****
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474          KK    C310
475          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 350 & 310
476          HC       2    .943
             * DDM   ***** Preserved *****

477          KK    R310
478          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
479          KM   ROUTING OF FLOW FROM SUB-BASIN 310 TO 320
480          RS      11    FLOW      -1
481          RC    .045    .035    .045   10050    .022
482          RX       0       1      40      46      56      62     102     103
483          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

484          KK     320
485          KM   SUB-BASIN 320
486          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
487          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
488          KM     L = 2.20  Kb = .042  Adj. Slope =  132.0
489          BA    .972
490          LG    .310    .300   4.550    .360  14.000
491          UC    .508    .333
492          UA       0       5      16      30      65      77      84      90      94      97
493          UA     100
             * DDM   ***** Preserved *****

494          KK    D320
495          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
496          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
497          KM   SIERRA HEIGHTS       FALCON RIDGE    & MARBLE CREEK
498          KM        MAXIMUM VOLUME DIVERSION = 12.27acre-feet
             *      1
499          DT   BS320   12.27
500          DI       0   10000
501          DQ       0   10000
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

502          KK   RT320
503          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
504          DR   BS320
             * DDM   ***** Preserved *****

505          KK   SR320
506          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
507          KM   12.27 ACRE-FEETx43560/36x3600=4.1cfs
             *      1
508          RS       1    STOR       0
509          SV       0     .01    12.3
510          SQ       0     4.2     4.2
             * DDM   ***** Preserved *****

511          KK    C320
512          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
513          HC       4
             *
             *
             * BEGINNING OF ALTERNATIVE 15 REVISIONS WHICH INCLUDE AN INTERCEPTOR CHANNEL
             * ALONG McKELLIPS RD.
             *
             *
             * DDM   ***** Updated *****

514          KK     340
515          KM   SUB-BASIN 340
516          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
517          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
518          KM     L = 1.78  Kb = .047  Adj. Slope =   99.0
519          BA   1.024
520          LG    .250    .250   4.200    .540  26.000
521          UC    .546    .296
522          UA       0       5      16      30      65      77      84      90      94      97
523          UA     100
             * DDM   ***** Preserved *****

524          KK    D340
525          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
526          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
527          KM   GRANDVIEW ESTATES    BOULDER MOUNTAIN & 33% OF MESA HIGHLANDS
528          KM        MAXIMUM VOLUME DIVERSION =39.2 acre feet
             *      1
529          DT   BS340    39.2
530          DI       0   10000
531          DQ       0   10000
             * DDM   ***** Preserved *****

532          KK   RT340
533          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
534          DR   BS340
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

535          KK   SR340
536          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
537          KM    39.2 ACRE-FEETx43560\36x3600=13.2cfs
             *      1
538          RS       1    STOR       0
539          SV       0     .01    39.2
540          SQ       0    13.2    13.2
             * DDM   ***** Preserved *****

541          KK    C340
542          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
543          HC       3
             * DDM   ***** Updated *****
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544          KK     360
545          KM   SUB-BASIN 360
546          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
547          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
548          KM     L = 1.21  Kb = .062  Adj. Slope =  104.0
549          BA    .315
550          LG    .220    .250   4.100    .640  29.000
551          UC    .504    .389
552          UA      0       5      16      30      65      77      84      90      94      97
553          UA    100
             * DDM   ***** Preserved *****

554          KK    D360
555          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
556          KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
557          KM        MAXIMUM VOLUME DIVERSION = 15.7 acre-feet
             *      1
558          DT   BS360    15.7
559          DI       0   10000
560          DQ       0   10000
             * DDM   ***** Preserved *****

561          KK   RT360
562          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
563          DR   BS360
             * DDM   ***** Preserved *****

564          KK   SR360
565          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
566          KM    15.7 ACRE-FEETx43560/36x3600=5.3 cfs
567          RS       1    STOR       0
568          SV       0     .01    15.7
569          SQ       0     5.3     5.3
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 15

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


570          KK    360C
571          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
572          HC       3
             * DDM   ***** Updated *****

573          KK     380
574          KM   SUB-BASIN 380
575          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
576          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
577          KM     L =  .67  Kb = .078  Adj. Slope =  119.0
578          BA    .268
579          LG    .180    .250   4.100    .710  19.000
580          UC    .392    .201
581          UA      0       5      16      30      65      77      84      90      94      97
582          UA    100
             * DDM   ***** Preserved *****

583          KK    D380
584          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
585          KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
586          KM        MAXIMUM VOLUME DIVERSION  = 7.1 acre-feet
             *      1
587          DT   BS380     7.1
588          DI       0   10000
589          DQ       0   10000
             * DDM   ***** Preserved *****

590          KK   RT380
591          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
592          DR   BS380
             * DDM   ***** Preserved *****

593          KK   SR380
594          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
595          KM    7.1  ACRE-FEETx43560\36x3600=2.4 cfs
596          RS       1    STOR       0
597          SV       0     .01     7.1
598          SQ       0     2.4     2.4
             * DDM   ***** Preserved *****

599          KK    380C
600          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
601          HC       3
             * DDM   ***** Updated *****

602          KK     400
603          KM   SUB-BASIN 400
604          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
605          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
606          KM     L =  .30  Kb = .112  Adj. Slope =  107.0
607          BA    .053
608          LG    .200    .250   4.000    .740    .000
609          UC    .321    .213
610          UA      0       5      16      30      65      77      84      90      94      97
1                                    HEC-1 INPUT                                          PAGE 16

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

611          UA    100
             * DDM   ***** Preserved *****

612          KK    D400
613          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
614          KM   DETENTION/RETENTION BASIN LOCATED WITHIN SAGUARO VISTA SUBDIVISION
615          KM        MAXIMUM VOLUME DIVERSION = 1.6 ACRE-FEET
             *      1
616          DT   BS400     1.6
617          DI       0   10000
618          DQ       0   10000
             * DDM   ***** Preserved *****

619          KK   RT400
620          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
621          DR   BS400
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            * DDM   ***** Preserved *****

 622        KK   SR400
 623        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
 624        KM     1.6 ACRE-FEETx43560/36x3600 = 0.5 cfs
 625        RS       1    STOR       0
 626        SV       0     .01     1.6
 627        SQ       0     0.5     0.5
            * DDM   ***** Preserved *****

 628        KK    C400
 629        KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
 630        HC       2
            * DDM   ***** Updated *****

 631        KK    400C
 632        KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
 633        HC       2
            * DDM   ***** Preserved *****

 634        KK   RT350
 635        KM   RETRIEVE SPLIT FLOW FROM DIVERSION OF SUB-BASIN 350
 636        DR   SF350
            * DDM   ***** Preserved *****

 637        KK   RR350
 638        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
 639        KM   ROUTING OF FLOW FROM SPLIT OF SUB-BASIN 350 TO 355
 640        RS       7    FLOW      -1
 641        RC    .045    .035    .045    6050    .025
 642        RX       0       1      40      46      56      62     102     103
 643        RY       3       2       .2      0       0       2       2       3
            * DDM   ***** Updated *****
1                                    HEC-1 INPUT                                          PAGE 17

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 644        KK     355
 645        KM   SUB-BASIN 355
 646        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 647        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
 648        KM     L = 3.00  Kb = .044  Adj. Slope =  284.0
 649        BA    .659
 650        LG    .340    .340   4.450    .370   4.000
 651        UC    .488    .509
 652        UA       0       3       5       8      12      20      43      75      90      96
 653        UA     100
            * DDM   ***** Preserved *****

 654        KK    C355
 655        KM   HYDROGRAPH COMBINATION OF SUB-BASIN 355 AND THE SPLIT FLOW FROM SUB-BASIN 350
 656        HC       2    1.24
            * DDM   ***** Preserved *****

 657        KK    R355
 658        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
 659        KM   ROUTING OF FLOW FROM SUB-BASIN 355 TO SUB-BASIN 361
 660        RS       6    FLOW      -1
 661        RC    .045    .035    .045    5868   0.021
 662        RX       0       1      40      46      56      62     102     103
 663        RY       3       2       2       0       0       2       2       3
            * DDM   ***** Updated *****

 664        KK     361
 665        KM   SUB-BASIN 361
 666        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 667        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
 668        KM     L = 1.03  Kb = .047  Adj. Slope =  142.0
 669        BA    .359
 670        LG    .270    .250   4.100    .540  24.000
 671        UC    .329    .198
 672        UA       0       5      16      30      65      77      84      90      94      97
 673        UA     100
            * DDM   ***** Preserved *****

 674        KK    D361
 675        KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
 676        KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
 677        KM        MAXIMUM VOLUME DIVERSION = 12.9 acre-feet
            *      1
 678        DT   BS361    12.9
 679        DI       0   10000
 680        DQ       0   10000
            * DDM   ***** Preserved *****

 681        KK   RT361
 682        KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
 683        DR   BS361
            * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 18

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 684        KK   SR361
 685        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
 686        KM    12.9 ACRE-FEETx43560/36x3600=4.3 cfs
 687        RS       1    STOR       0
 688        SV       0     .01    12.9
 689        SQ       0     4.3     4.3
            * DDM   ***** Preserved *****

 690        KK    361C
 691        KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
 692        HC       3
            * DDM   ***** Updated *****

 693        KK     342
 694        KM   SUB-BASIN 342
 695        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 696        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
 697        KM     L = 1.01  Kb = .048  Adj. Slope =  213.1
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698          BA    .298
699          LG    .310    .280   3.950    .530  16.000
700          UC    .279    .180
701          UA       0       5      16      30      65      77      84      90      94      97
702          UA     100
             *

703          KK   D3421
704          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
705          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
706          KM   GRANDVIEW ESTATES    BOULDER MOUNTAIN & 33% OF MESA HIGHLANDS
707          KM        MAXIMUM VOLUME DIVERSION  =8.4 Acre feet
             *      1
708          DT  BS3421     8.4
709          DI       0   10000
710          DQ       0   10000
             * DDM   ***** Preserved *****

711          KK  RT3421
712          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
713          DR  BS3421
             * DDM   ***** Preserved *****

714          KK  SR3421
715          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
716          KM     8.4 ACRE-FEETx43560\36x3600=2.8 cfs
             *      1
717          RS       1    STOR       0
718          SV       0     .01     8.4
719          SQ       0     2.8     2.8
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

720          KK    C342
721          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
722          HC       2
             *

723          KK    R342
724          KM   ROUTING OF FLOW FROM SUB-BASIN 342 TO 341
725          RS       7    FLOW      -1
726          RC    0.05    0.03    0.05    2198  0.0118
727          RX       0     0.1     0.2       4       9      13     213   213.1
728          RY     3.0     1.5     1.0       0       0     1.0     2.0     3.0
             *

729          KK     341
730          KM   SUB-BASIN 341
731          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
732          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
733          KM     L = 1.01  Kb = .048  Adj. Slope =  123.0
734          BA    .229
735          LG    .250    .250   3.910    .600  34.000
736          UC    .346    .266
737          UA       0       5      16      30      65      77      84      90      94      97
738          UA     100
             *
             * DDM   ***** Preserved *****

739          KK    D341
740          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
741          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
742          KM   GRANDVIEW ESTATES    BOULDER MOUNTAIN & 33% OF MESA HIGHLANDS
743          KM        MAXIMUM VOLUME DIVERSION  =8.4 Acre feet
             *
744          DT   BS341     8.4
745          DI       0   10000
746          DQ       0   10000
             * DDM   ***** Preserved *****

747          KK   RT341
748          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
749          DR   BS341
             * DDM   ***** Preserved *****

750          KK   SR341
751          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
752          KM     8.4 ACRE-FEETx43560\36x3600=2.8 cfs
             *
753          RS       1    STOR       0
754          SV       0     .01     8.4
755          SQ       0     2.8     2.8
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

756          KK    C341
757          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
758          HC       3
             * DDM   ***** Preserved *****

759          KK   RR341
760          KM   ROUTING OF FLOW FROM SUB-BASIN 341 TO 361
761          KM   ARTIFICIALLY HIGH VALUE FOR NSTPS IS USED TO PRESERVE PEAK INFLOW
762          RS      50    FLOW      -1
763          RC   0.050   0.030   0.050    4143  0.0126
764          RX       0     0.1     0.2       4       9      13     213   213.1
765          RY     3.0     1.5     1.0       0       0     1.0     2.0     3.0
             * DDM   ***** Preserved *****

766          KK   361CC
767          KM   HYDROGRAPH COMBINATION AT McKELLIPS ROAD INTERCEPTOR CHANNEL
768          HC       2
             *

769          KK   D3612
770          KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN AT NE CORNER OF ELLSWORTH
771          KM   AND  McKELLIPS ROAD
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772          KM   MAXIMUM VOLUME OF DIVERSION IS 50 ACRE FEET
773          DT  BS3612      50
774          DI       0     500    5000
775          DQ       0       0    4500
             *

776          KK  RT3612
777          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
778          DR  BS3612
             *

779          KK  SR3612
780          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS
781          KM    50.0 ACRE-FEETx43560/36x3600=16.8 cfs
782          RS       1    STOR       0
783          SV       0     .01      50
784          SQ       0    16.8    16.8
             *

785          KK   C3612
786          KM   HYDROGRAPH COMBINATION AT McKELLIPS RD CHANNEL
787          HC       2
             * DDM   ***** Preserved *****

788          KK   RR361
789          KM   ROUTING OF FLOW FROM SUB-BASIN 361 TO 381
790          KM   A VALUE OF 5 WAS USED FOR NSTPS TO KEEP OUTFLOW AT OR BELOW INFLOW
791          RS       5    FLOW      -1
792          RC   0.050   0.030   0.050    3854  0.0156
793          RX       0     0.1     0.2       8      28      36     236   236.1
794          RY     3.5     2.5       2       0       0       2       3     3.5
             * DDM   ***** Updated *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

795          KK     370
796          KM   SUB-BASIN 370
797          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
798          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
799          KM     L = 2.90  Kb = .044  Adj. Slope =  294.6
800          BA    .667
801          LG    .340    .320   4.650    .330   9.000
802          UC    .454    .455
803          UA       0       3       5       8      12      20      43      75      90      96
804          UA     100
             * DDM   ***** Updated *****

805          KK     395
806          KM   SUB-BASIN 395
807          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
808          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
809          KM     L = 1.60  Kb = .051  Adj. Slope =  215.8
810          BA    .198
811          LG    .330    .320   4.900    .300  10.000
812          UC    .383    .468
813          UA       0       3       5       8      12      20      43      75      90      96
814          UA     100
             * DDM   ***** Preserved *****

815          KK    370C
816          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
817          HC       2
             * DDM   ***** Preserved *****

818          KK    R370
819          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
820          KM   ROUTING OF FLOW FROM SUB-BASINS 370 AND 395 TO SUB-BASIN 381.
821          RS      10    FLOW      -1
822          RC    .045    .035    .045    8633   0.022
823          RX       0       1      40      46      56      62     102     103
824          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

825          KK     381
826          KM   SUB-BASIN 381
827          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
828          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
829          KM     L = 1.65  Kb = .043  Adj. Slope =  119.0
830          BA    .726
831          LG    .310    .280   4.200    .490  13.000
832          UC    .463    .282
833          UA       0       5      16      30      65      77      84      90      94      97
834          UA     100
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

835          KK    D381
836          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
837          KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
838          KM        MAXIMUM VOLUME DIVERSION  =21.5 acre-feet
             *      1
839          DT   BS381    21.5
840          DI       0   10000
841          DQ       0   10000
             * DDM   ***** Preserved *****

842          KK   RT381
843          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
844          DR   BS381
             * DDM   ***** Preserved *****

845          KK   SR381
846          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
847          KM   21.5  ACRE-FEETx43560/36x3600=7.2 cfs
848          RS       1    STOR       0
849          SV       0     .01    21.5
850          SQ       0     7.2     7.2
             * DDM   ***** Preserved *****
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851          KK    381C
852          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
853          HC       4
             *
             * DDM   ***** Preserved *****

854          KK   RR381
855          KM   ROUTING OF FLOW FROM SUB-BASIN 381 TO 401
856          RS       5    FLOW      -1
857          RC    0.05    0.03    0.05    2992  0.0134
858          RX       0     0.1     0.2       8      33      41     241   241.1
859          RY     3.5     2.5       2       0       0       2       3     3.5
             * DDM   ***** Updated *****

860          KK     390
861          KM   SUB-BASIN 390
862          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
863          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
864          KM     L =  .70  Kb = .050  Adj. Slope =  299.4
865          BA    .244
866          LG    .300    .250   4.700    .380  18.000
867          UC    .204    .107
868          UA       0       5      16      30      65      77      84      90      94      97
869          UA     100
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 23

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

870          KK    D390
871          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
872          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THUNDER MOUNTAIN ESTATES
873          KM        MAXIMUM VOLUME DIVERSION  = 3.5 acre-feet
             *      1
874          DT   BS390     3.5
875          DI       0   10000
876          DQ       0   10000
             * DDM   ***** Preserved *****

877          KK   RT390
878          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
879          DR   BS390
             * DDM   ***** Preserved *****

880          KK   SR390
881          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
882          KM     3.5 ACRE-FEETx43560/36x3600=1.2cfs
883          RS       1    STOR       0
884          SV       0     .01     3.5
885          SQ       0     1.2     1.2
             * DDM   ***** Preserved *****

886          KK    390C
887          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
888          HC       2
             * DDM   ***** Preserved *****

889          KK   RR390
890          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
891          KM   FROM SUB-BASIN 390 TO SUB-BASIN 401
892          RS      14    FLOW      -1
893          RC    .045    .045    .045    8800    .020
894          RX       0       1      40      46      56      62     102     103
895          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

896          KK     401
897          KM   SUB-BASIN 401
898          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
899          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
900          KM     L = 1.71  Kb = .051  Adj. Slope =   97.0
901          BA    .605
902          LG    .280    .250   4.150    .570  12.000
903          UC    .604    .433
904          UA       0       5      16      30      65      77      84      90      94      97
905          UA     100
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 24

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

906          KK    D401
907          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
908          KM   DETENTION/RETENTION BASIN LOCATED WITHIN SAGUARO VISTA SUBDIVISION
909          KM        MAXIMUM VOLUME DIVERSION = 4.0 ACRE-FEET
             *      1
910          DT   BS401     4.0
911          DI       0   10000
912          DQ       0   10000
             * DDM   ***** Preserved *****

913          KK   RT401
914          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
915          DR   BS401
             * DDM   ***** Preserved *****

916          KK   SR401
917          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
918          KM     4.0 ACRE-FEETx43560/36x3600= 1.3 cfs
919          RS       1    STOR       0
920          SV       0     .01     4.0
921          SQ       0     1.3     1.3
             * DDM   ***** Preserved *****

922          KK    C401
923          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
924          HC       5
             *
             *
             * END OF ALTERNATIVE 15 REVISIONS
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                *
                * DDM   ***** Updated *****

925             KK     385
926             KM   SUB-BASIN 385
927             KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
928             KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
929             KM     L = 2.30  Kb = .044  Adj. Slope =  303.0
930             BA    .647
931             LG    .350    .370   5.600    .210  13.000
932             UC    .375    .311
933             UA       0       3       5       8      12      20      43      75      90      96
934             UA     100
                * DDM   ***** Preserved *****

935             KK    D385
936             KM   DIVERT FLOW INTO SUB-BASINS 415 & 420
937             DT   SF385
938             DI       0   10000
939             DQ       0    2500
                * DDM   ***** Preserved *****
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LINE            ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

940             KK    385R
941             KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
942             KM   ROUTING OF FLOW DIVERSION FROM SUB-BASIN 385 INTO SUB-BASIN 420
943             RS      14    FLOW      -1
944             RC    .045     .04    .045   10250    .022
945             RX       0       1      40      46      56      62     102     103
946             RY       3       2       2       0       0       2       2       3
                * DDM   ***** Updated *****

947             KK     420
948             KM   SUB-BASIN 420
949             KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
950             KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .995
951             KM     L = 1.91  Kb = .042  Adj. Slope =  120.0
952             BA    .849
953             LG    .310    .270   3.880    .580  12.000
954             UC    .512    .325
955             UA       0       5      16      30      65      77      84      90      94      97
956             UA     100
                * DDM   ***** Preserved *****

957             KK    D420
958             KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
959             KM   DETENTION/RETENTION BASINS LOCATED WITHIN GRAY FOX SUBDIVISION
960             KM        MAXIMUM VOLUME DIVERSION = 8.65 acre-feet
                *
961             DT   BS420    8.65
962             DI       0   10000
963             DQ       0   10000
                * DDM   ***** Preserved *****

964             KK   RT420
965             KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
966             DR   BS420
                * DDM   ***** Preserved *****

967             KK   SR420
968             KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
969             KM   38.55 ACRE-FEETx43560/36x3600=13cfs
970             RS       1    STOR       0
971             SV       0     .01   38.55
972             SQ       0      13      13
                * DDM   ***** Preserved *****

973             KK    420C
974             KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
975             HC       4   10.87
                * DDM   ***** Updated *****
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LINE            ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

976             KK     440
977             KM   SUB-BASIN 440
978             KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
979             KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
980             KM     L =  .40  Kb = .039  Adj. Slope =  315.0
981             BA    .080
982             LG    .190    .380   6.400    .140  13.000
983             UC    .129    .077
984             UA       0       3       5       8      12      20      43      75      90      96
985             UA     100
                * DDM   ***** Preserved *****

986             KK     R70
987             KM   ROUTE FLOW FROM SUB-BASIN 440 TO C108
988             RS       1    FLOW      -1
989             RC     .05    .035     .05    2250     .08
990             RX    1000    1025    1050    1070    1075    1095    1120    1145
991             RY      30    22.9    15.7      10      10    15.7    22.9      30
                * DDM   ***** Updated *****

992             KK     441
993             KM   SUB-BASIN 441
994             KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
995             KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
996             KM     L =  .28  Kb = .069  Adj. Slope =  315.0
997             BA    .010
998             LG    .300    .250   5.600    .220   5.000
999             UC    .150    .225
1000            UA       0       5      16      30      65      77      84      90      94      97
1001            UA     100
                * DDM   ***** Preserved *****

1002            KK    C108
1003            KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 440 & 441
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1004        HC       2
            * DDM   ***** Preserved *****

1005        KK    DIV4
1006        KM        SPLIT FLOW WITH TWO 42 INCH PIPES TO WEST AND SOUTH
            *      1
1007        DT   SPLIT
1008        DI       0      14      40      82     120     154     180
1009        DQ       0       7      20      41      60      77      90
            * DDM   ***** Preserved *****

1010        KK    R108
1011        KM        ROUTE FLOW FROM SUB-BASIN C108 TO C67
1012        RS       2    FLOW      -1
1013        RC     .05    .035     .05    3200      .1
1014        RX    1000    1025    1050    1070    1075    1095    1120    1145
1015        RY      30    22.9    15.7      10      10    15.7    22.9      30
            * DDM   ***** Updated *****
1                                       HEC-1 INPUT                                                    PAGE 27

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1016        KK     442
1017        KM   SUB-BASIN 442
1018        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1019        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1020        KM     L =  .83  Kb = .055  Adj. Slope =  274.2
1021        BA    .100
1022        LG    .300    .270   3.290    .770   5.000
1023        UC    .258    .264
1024        UA       0       5      16      30      65      77      84      90      94      97
1025        UA     100
            * DDM   ***** Preserved *****

1026        KK     C67
1027        KM   COMBINE FLOW FROM SUB-BASIN 442 & DIV4
1028        HC       2
            * DDM   ***** Preserved *****

1029        KK    DIV6
1030        KM        OFFLINE BASIN WITH 25 FOOT WEIR SET AT 2.5 FEET ABOVE BOTTOM OF CHANNEL
1031        KM        FLOW CONTINUES BEYOND BASIN THROUGH 2-30" PIPES
            *      1
1032        DT  BASIN4
1033        DI       0      10      32      44    79.9   132.5     198   272.9   356.8
1034        DQ       0       0       0       0    23.9    67.5     124   190.9   266.8
            * DDM   ***** Preserved *****

1035        KK  RTDIV6
1036        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1037        DR  BASIN4
            * DDM   ***** Preserved *****

1038        KK  RFDIV6
1039        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1040        KM     3.3 ACRE-FEETx43560/36x3600=1.1cfs
            *      1
1041        RS       1    STOR       0
1042        SV       0     .01     3.3
1043        SQ       0     1.1     1.1
            * DDM   ***** Preserved *****

1044        KK   CDIV6
1045        KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1046        HC       2
            * DDM   ***** Updated *****

1047        KK     443
1048        KM   SUB-BASIN 443
1049        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1050        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1051        KM     L =  .71  Kb = .050  Adj. Slope =  315.0
1052        BA    .080
1053        LG    .250    .190   8.000    .080  10.000
1054        UC    .196    .194
1055        UA       0       5      16      30      65      77      84      90      94      97
1                                       HEC-1 INPUT                                                    PAGE 28

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1056        UA     100
            * DDM   ***** Preserved *****

1057        KK   DIV66
1058        KM        DIVERT FLOW INTO 3 NATURAL WASHES WITH ONE 24" PIPE IN EACH WASH.
1059        KM        EACH PIPE CAPACITY BASED ON 4 FEET OF HEAD
1060        DT   WSH66
1061        DI       0      78     100     200
1062        DQ       0      78      78      78
            * DDM   ***** Preserved *****

1063        KK    R113
1064        KM        ROUTE FLOW FROM C113 TO C114
1065        RS       1    FLOW      -1
1066        RC    .019    .019    .019    1300    .029
1067        RX    1000    1004    1008    1012    1018    1022    1026    1030
1068        RY      17   15.33   12.67      10      10   12.67   15.33      17
            * DDM   ***** Preserved *****

1069        KK    C114
1070        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 67 AND C113
1071        HC       2
            * DDM   ***** Updated *****

1072        KK     444
1073        KM   SUB-BASIN 444
1074        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1075        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1076        KM     L =  .33  Kb = .034  Adj. Slope =  315.0
1077        BA    .040
1078        LG    .130    .350   4.450    .320   1.000
1079        UC    .112    .084
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1080        UA       0       3       5       8      12      20      43      75      90      96
1081        UA     100
            * DDM   ***** Preserved *****

1082        KK     R58
1083        KM   ROUTE FLOW FROM SUB-BASIN 444 TO C107
1084        RS       1    FLOW      -1
1085        RC     .05    .035     .05    2370   .0516
1086        RX    1000    1010    1020    1050    1055    1085    1095    1105
1087        RY      19      18      17      10      10      17      18      19
            * DDM   ***** Updated *****

1088        KK     445
1089        KM   SUB-BASIN 445
1090        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1091        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1092        KM     L =  .82  Kb = .036  Adj. Slope =  315.0
1093        BA    .190
1094        LG    .170    .320   3.470    .590   3.000
1095        UC    .192    .130
1096        UA       0       5      16      30      65      77      84      90      94      97
1097        UA     100
            * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 29

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1098        KK    C107
1099        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 444 & 445
1100        HC       2
            * DDM   ***** Preserved *****

1101        KK    R107
1102        KM        ROUTE FLOW FROM C107 TO C109
1103        RS       1    FLOW      -1
1104        RC     .05    .035     .05     700   .0516
1105        RX    1000    1010    1020    1050    1055    1085    1095    1105
1106        RY      19      18      17      10      10      17      18      19
            * DDM   ***** Preserved *****

1107        KK    RTB2
1108        KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
            *      1
1109        DR   SPLIT
            * DDM   ***** Preserved *****

1110        KK  RSPLIT
1111        KM        ROUTE FLOW FROM SPLIT TO C109
1112        RS       1    FLOW      -1
1113        RC     .05    .035     .05     800     .05
1114        RX    1000    1025    1050    1070    1075    1095    1120    1145
1115        RY      30    22.9    15.7      10      10    15.7    22.9      30
            * DDM   ***** Updated *****

1116        KK     446
1117        KM   SUB-BASIN 446
1118        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1119        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1120        KM     L =  .46  Kb = .061  Adj. Slope =  303.9
1121        BA    .040
1122        LG    .270    .250   4.500    .400  19.000
1123        UC    .183    .189
1124        UA       0       5      16      30      65      77      84      90      94      97
1125        UA     100
            * DDM   ***** Preserved *****

1126        KK    C109
1127        KM        COMBINE HYDROGRAPHS FROM COMBINES C107 AND C108
1128        HC       3
            * DDM   ***** Preserved *****

1129        KK    DIV5
1130        KM        DIVERT FLOW INTO WASHES TOWARDS WEST
1131        KM        DIVERSION THROUGH 36" PIPE WITH 3 FEET OF HEAD
            *      1
1132        DT  WSH404
1133        DI       0    40.7    71.2   121.6     190     276   379.4   500.6
1134        DQ       0      35      35      35      35      35      35      35
            * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 30

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1135        KK    R109
1136        KM        ROUTE FLOW FROM C109 TO C110
1137        RS       1    FLOW      -1
1138        RC    .019    .019    .019    3080     .05
1139        RX    1000    1005    1010    1015    1025    1030    1035    1040
1140        RY   13.75    12.5   11.25      10      10   11.25    12.5   13.75
            * DDM   ***** Updated *****

1141        KK     447
1142        KM   SUB-BASIN 447
1143        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1144        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1145        KM     L =  .49  Kb = .056  Adj. Slope =  221.0
1146        BA    .090
1147        LG    .250    .270   3.350    .870  30.000
1148        UC    .208    .145
1149        UA       0       5      16      30      65      77      84      90      94      97
1150        UA     100
            * DDM   ***** Preserved *****

1151        KK   RT404
1152        KM        RETRIEVE DIVERTED FLOW FOR WASH 109
1153        DR  WSH404
            * DDM   ***** Preserved *****

1154        KK    R404
1155        KM        ROUTE FLOW FROM C110 TO C110
1156        RS       5    FLOW      -1
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1157          RC    .019    .019    .019    3540     .03
1158          RX    1000    1012    1016    1020    1025    1029    1033    1045
1159          RY      15      12      11      10      10      11      12      15
              * DDM   ***** Preserved *****

1160          KK    C110
1161          KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 447 AND R404
1162          HC       3
              * DDM   ***** Preserved *****

1163          KK    R110
1164          KM        ROUTE FLOW FROM C110 TO C115
1165          RS       1    FLOW      -1
1166          RC    .019    .019    .019     580   .0291
1167          RX    1000    1012    1016    1020    1035    1039    1043    1055
1168          RY      15      12      11      10      10      11      12      15
              * DDM   ***** Preserved *****

1169          KK    C115
1170          KM        COMBINE HYDROGRAPHS FROM C114 AND C110
1171          HC       2
              * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 31

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1172          KK    R115
1173          KM        ROUTE FLOW FROM C115 TO C119
1174          RS       1    FLOW      -1
1175          RC    .019    .019    .019    2125    .029
1176          RC    .019    .019    .019     580   .0291
1177          RX    1000    1012    1016    1020    1035    1039    1043    1055
1178          RY      15      12      11      10      10      11      12      15
              * DDM   ***** Updated *****

1179          KK     448
1180          KM   SUB-BASIN 448
1181          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1182          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1183          KM     L =  .36  Kb = .042  Adj. Slope =  315.0
1184          BA    .045
1185          LG    .170    .310   4.200    .390  11.000
1186          UC    .133    .102
1187          UA       0       5      16      30      65      77      84      90      94      97
1188          UA     100
              * DDM   ***** Updated *****

1189          KK     449
1190          KM   SUB-BASIN 449
1191          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1192          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1193          KM     L =  .40  Kb = .054  Adj. Slope =  315.0
1194          BA    .050
1195          LG    .260    .280   3.500    .640   6.000
1196          UC    .167    .134
1197          UA       0       5      16      30      65      77      84      90      94      97
1198          UA     100
              * DDM   ***** Preserved *****

1199          KK   C6364
1200          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 448 & 449
1201          HC       2
              * DDM   ***** Preserved *****

1202          KK   R6364
1203          KM   ROUTE FLOW FROM C116 AND SUB-BASINS 448 AND 449
1204          RS       4    FLOW      -1
1205          RC     .05    .035     .05    4375   .0333
1206          RX    1000    1027    1053    1080    1090    1117    1143    1170
1207          RY      15   13.33   11.67      10      10   11.67   13.33      15
              * DDM   ***** Updated *****

1208          KK     450
1209          KM   SUB-BASIN 450
1210          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1211          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1212          KM     L =  .85  Kb = .057  Adj. Slope =  210.5
1213          BA    .070
1214          LG    .340    .350   3.630    .570   4.000
1215          UC    .296    .383
1                                   HEC-1 INPUT                                          PAGE 32

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1216          UA       0       3       5       8      12      20      43      75      90      96
1217          UA     100
              * DDM   ***** Updated *****

1218          KK     451
1219          KM   SUB-BASIN 451
1220          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1221          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1222          KM     L =  .57  Kb = .063  Adj. Slope =  175.0
1223          BA    .025
1224          LG    .340    .340   3.290    .750   3.000
1225          UC    .271    .453
1226          UA       0       3       5       8      12      20      43      75      90      96
1227          UA     100
              * DDM   ***** Preserved *****

1228          KK    RT66
1229          KM        RETRIEVE DIVERTED FLOW FROM SUB-BASIN 66
1230          DR   WSH66
              * DDM   ***** Updated *****

1231          KK     452
1232          KM   SUB-BASIN 452
1233          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1234          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1235          KM     L =  .43  Kb = .055  Adj. Slope =  315.0
1236          BA    .040
1237          LG    .260    .280   3.700    .550   9.000
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1238        UC    .171    .166
1239        UA       0       5      16      30      65      77      84      90      94      97
1240        UA     100
            * DDM   ***** Preserved *****

1241        KK   C6465
1242        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 443 AND 452
1243        HC       2
            * DDM   ***** Preserved *****

1244        KK   R6566
1245        KM        ROUTE FLOW FROM DIVERSIONS 65 AND 66 TO C116
1246        RS       2    FLOW      -1
1247        RC     .05    .035     .05    2435   .0282
1248        RX    1000    1045    1090    1150    1160    1220    1265    1310
1249        RY      25      23      20      10      10      20      23      25
            * DDM   ***** Preserved *****

1250        KK    C116
1251        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 450 & 451 AND R6364 & R6465
1252        HC       4
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1253        KK  BASIN5
1254        KM        RESERVOIR WITHIN PARCEL 31      2-48 INCH PIPES AT OUTFALL
1255        KM        BASIN 5 FEET DEEP
1256        RS       1    ELEV       0
1257        SV       0     4.5     9.9
1258        SQ       0      69     190
1259        SE       0     2.5       5
            * DDM   ***** Preserved *****

1260        KK    R116
1261        KM   ROUTE FLOW FROM C116 TO C117
1262        RS       2    FLOW      -1
1263        RC     .05    .035     .05    1300   .0333
1264        RX    1000    1100    1200    1300    1320    1420    1520    1620
1265        RY      13      12      11      10      10      11      12      13
            * DDM   ***** Updated *****

1266        KK     453
1267        KM   SUB-BASIN 453
1268        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1269        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1270        KM     L =  .58  Kb = .058  Adj. Slope =  138.0
1271        BA    .060
1272        LG    .290    .300   3.290    .820  18.000
1273        UC    .275    .284
1274        UA       0       5      16      30      65      77      84      90      94      97
1275        UA     100
            * DDM   ***** Preserved *****

1276        KK    C117
1277        KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 453 AND R116
1278        HC       2
            * DDM   ***** Preserved *****

1279        KK    C118
1280        KM   COMBINE HYDROGRAPHS FROM R115 AND C117
1281        HC       2
            * DDM   ***** Preserved *****

1282        KK    R118
1283        KM        ROUTE FLOW FROM C118 TO  DIV7
1284        RS       1    FLOW      -1
1285        RC    .019    .019    .019    1500    .024
1286        RX    1000    1012    1016    1020    1035    1039    1043    1055
1287        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Preserved *****

1288        KK    DIV7
1289        KM        OFFLINE BASIN AT NORTH MOUNTAIN RIDGE   FLOWS ENTER BASIN OVER
1290        KM        30' WEIR SET AT 5.3' ABOVE THE CHANNEL BOTTOM
            *      1
1291        DT  BASIN6
1292        DI       0     363     487     563     645     844
1293        DQ       0       3      47      83     125     244
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1294        KK  RTDIV7
1295        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1296        DR  BASIN6
            * DDM   ***** Preserved *****

1297        KK  RFDIV7
1298        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1299        KM     3.6 ACRE-FEETx43560/36x3600=1.2cfs
1300        RS       1    STOR       0
1301        SV       0     .01     3.6
1302        SQ       0     1.2     1.2
            * DDM   ***** Preserved *****

1303        KK   CDIV7
1304        KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1305        HC       2
            * DDM   ***** Updated *****

1306        KK     454
1307        KM   SUB-BASIN 454
1308        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1309        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1310        KM     L = 1.23  Kb = .051  Adj. Slope =  163.0
1311        BA    .180
1312        LG    .300    .310   3.780    .560  14.000
1313        UC    .379    .395
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1314        UA       0       5      16      30      65      77      84      90      94      97
1315        UA     100
            * DDM   ***** Preserved *****

1316        KK    C119
1317        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 454 AND C119
            *      1       2
1318        HC       2
            * DDM   ***** Preserved *****

1319        KK    R454
1320        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1321        KM   ROUTE FLOW FROM C119 TO 415C
1322        RS       2    FLOW      -1
1323        RC    .045    .035    .045    2200    .009
1324        RX       0      .5       1      33      42      67    67.5      68
1325        RY       5       4       4       0       0       6       6       6
            * DDM   ***** Updated *****

1326        KK     415
1327        KM   SUB-BASIN 415
1328        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1329        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
1330        KM     L = 2.10  Kb = .046  Adj. Slope =  266.0
1331        BA    .448
1332        LG    .310    .270   4.250    .480  15.000
1333        UC    .404    .387
1334        UA       0       5      16      30      65      77      84      90      94      97
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1335        UA     100
            * DDM   ***** Preserved *****

1336        KK   RT385
1337        KM   RETRIEVE FLOW FROM DIVERSION OF SUB-BASIN 385 INTO SUB-BASIN 415
1338        DR   SF385
            * DDM   ***** Preserved *****

1339        KK   RR385
1340        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1341        KM   ROUTING OF SPLIT FLOW FROM SUB-BASIN 385 TO SUB-BASIN 415
1342        RS       5    FLOW      -1
1343        RC    .045     .04    .045    5878    .024
1344        RX       0       1      40      46      56      62     102     103
1345        RY       3       2       2       0       0       2       2       3
            * DDM   ***** Preserved *****

1346        KK    415C
1347        KM   HYDROGRAPH COMBINATION OF SUB-BASINS 415, R454 & SPLIT FLOW FROM 385
1348        HC       3    1.71
            * DDM   ***** Preserved *****

1349        KK    R415
1350        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1351        KM   ROUTING OF FLOW FROM 415C TO 455C
1352        RS       2    FLOW      -1
1353        RC    .045     .03    .045    4100    .024
1354        RX       0      .5       1       8      16      23    23.5      24
1355        RY       8       8       8       0       0       8       8       8
            * DDM   ***** Updated *****

1356        KK     455
1357        KM   SUB-BASIN 455
1358        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1359        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
1360        KM     L = 1.70  Kb = .041  Adj. Slope =  146.0
1361        BA   1.111
1362        LG    .270    .280   3.700    .640  24.000
1363        UC    .421    .204
1364        UA       0       5      16      30      65      77      84      90      94      97
1365        UA     100
            * DDM   ***** Preserved *****

1366        KK    D455
1367        KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1368        KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1369        KM   FOR BASIN #: 30      34      43      47&58
1370        KM        MAXIMUM VOLUME DIVERSION = 74.1 acre-feet
            *      1
1371        DT   BS455    74.1
1372        DI       0   10000
1373        DQ       0   10000
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1374        KK   RT455
1375        KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1376        DR   BS455
            * DDM   ***** Preserved *****

1377        KK   SR455
1378        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1379        KM    74.1 ACRE-FEETx43560/36x3600=25cfs
1380        RS       1    STOR       0
1381        SV       0     .01    74.1
1382        SQ       0      25      25
            * DDM   ***** Preserved *****

1383        KK    C455
1384        KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 455 AND DIVERTED BASIN STORAGE OF 455
1385        HC       2
            * DDM   ***** Preserved *****

1386        KK    455C
1387        KM  HYDROGRAPH COMBINATION OF 420C, R415 AND C455
            *      1       2
1388        HC       3
            * DDM   ***** Preserved *****
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KK   SR440
KM   SPOOK HILL FRS PLANS DATED 6/15/77
KM   OUTLET PIPE=7'x7.5'RCBC; L=70 INLET INV.=1566; OUTLET INV.=1566
KM   EMERGENCY SPILLWAY ELEV.=1582; PRINCIPLE SPILLWAY ELEV.=1577.5
KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 200 ACRE-FEET
RS       1    STOR       0
SV       0      10     100     300     500     680
SQ       0     640     720     780     825     860
SE      66    77.5      79    80.2    81.2      82
* DDM   ***** Preserved *****

KK   RR455
KM   ROUTE FLOW FROM SPOOK HILL FRS TO SUB-BASIN 462
RS       9    FLOW      -1
RC    .035    .025    .035    9200    .002
RX       0       1       2      28      58      84      85      86
RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
* DDM   ***** Updated *****

KK     456
KM   SUB-BASIN 456
KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
KM     L =  .94  Kb = .045  Adj. Slope =  315.0
BA    .260
LG    .300    .380   5.600    .200  12.000
UC    .217    .139
UA       0       5      16      30      65      77      84      90      94      97
UA     100
* DDM   ***** Preserved *****
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

KK    DIV1
KM        DIVERT FLOW INTO OFFLINE DETENTION BASIN
KM        WEIR FOR BASIN SET AT 4 FEET ABOVE CHANNEL BOTTOM
*      1
DT  BASIN1
DI       0    11.1   127.9   234.4   577.7   789.9  1025.5  1280.9  1555.7
DQ       0       0       0    47.7     248   381.8   533.6   701.5     884
* DDM   ***** Preserved *****

KK    DIV2
KM        SPLIT OUT FLOW FOR WASHES THAT FLOW TO THE SOUTH FROM
KM        WASHES THAT DRAIN TO THE WES, SOUTHERN WASHES FED BY 30" & 24" PIPE
DT    WA30
DI       0    11.1   127.9   189.6   329.7     408   491.9   579.4   671.7
DQ       0    11.1    38.4    48.2      63    69.5      76      81      86
* DDM   ***** Preserved *****

KK    R456
KM        ROUTE FLOW FROM SUB-BASIN 51 TO C101
RS       2    FLOW      -1
RC     .05    .035     .05    3800    .044
RX    1000    1010    1020    1036    1041    1057    1067    1077
RY   14.88   14.44      14      10      10      14   14.44   14.88
* DDM   ***** Updated *****

KK     457
KM   SUB-BASIN 457
KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
KM     L = 1.01  Kb = .045  Adj. Slope =  308.8
BA    .190
LG    .270    .330   3.950    .460   6.000
UC    .237    .195
UA       0       5      16      30      65      77      84      90      94      97
UA     100
* DDM   ***** Preserved *****

KK    C101
KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 50 AND 51
HC       2
* DDM   ***** Preserved *****

KK    DIV3
KM        RESERVOIR AT THE EDGE OF THE PROPERTY   FLOW FROM CHANNEL
KM        DIVERTED  INTO OFFLINE BASIN A 25' WEIR SET AT ELEVATION 1808 FT
*      1
DT  BASIN2
DI       0      36      70     110     180   313.5     402   500.9
DQ       0       0       0       0       0    67.5     124   190.9
* DDM   ***** Preserved *****
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

KK  RTDIV3
KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
DR  BASIN2
* DDM   ***** Preserved *****

KK  RFDIV3
KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
KM     5.0 ACRE-FEETx43560/36x3600=1.7cfs
RS       1    STOR       0
SV       0     .01       5
SQ       0     1.7     1.7
* DDM   ***** Preserved *****

KK   CDIV3
KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
HC       2
* DDM   ***** Preserved *****

KK    R101
KM        ROUTE FLOW FROM SUBBASIN C101 TO C103
RS       1    FLOW      -1
RC     .05    .035     .05    1450     .05
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1467          RX    1000    1010    1020    1036    1041    1057    1067    1077
1468          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Updated *****

1469          KK     458
1470          KM   SUB-BASIN 458
1471          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1472          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1473          KM     L =  .76  Kb = .048  Adj. Slope =  299.0
1474          BA    .190
1475          LG    .290    .330   5.800    .190   6.000
1476          UC    .204    .131
1477          UA       0       5      16      30      65      77      84      90      94      97
1478          UA     100
              * DDM   ***** Preserved *****

1479          KK    C103
1480          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 55 AND C101
1481          HC       2
              * DDM   ***** Preserved *****

1482          KK    R103
1483          KM        ROUTE FLOW FROM SUBBASIN C103 TO C106
1484          RS       1    FLOW      -1
1485          RC     .05    .035     .05     900     .03
1486          RX    1000    1010    1020    1030    1050    1060    1070    1080
1487          RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
              * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                                    PAGE 39

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1488          KK    RT30
1489          KM        RETRIEVE DIVERTED FLOW FOR WASH BELOW 30 INCH PIPE
1490          DR    WA30
              * DDM   ***** Preserved *****

1491          KK     R30
1492          KM        ROUTE FLOW FROM WASH DIVERSION TO COMBINE C52
1493          RS       1    FLOW      -1
1494          RC     .05    .035     .05    1630     .05
1495          RX    1000    1010    1020    1036    1041    1057    1067    1077
1496          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Preserved *****

1497          KK    RTB1
1498          KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
              *      1       2
1499          DR  BASIN1
              * DDM   ***** Preserved *****

1500          KK      B1
1501          KM        ROUTE FLOW THROUGH OFFLINE DETENTION BASIN
1502          KM        FLOW OUTLETS THROUGH A 30 INCH OUTLET PIPE
              *      1       2
1503          RS       1    ELEV       0
1504          SV              .7     1.4     2.3     2.7     3.2
1505          SQ       0       5      16      28    32.5      37
1506          SE       0       1       2       3     3.5       4
              * DDM   ***** Preserved *****

1507          KK     RB1
1508          KM        ROUTE FLOW FROM BASIN DIVERSION TO COMBINE C52
1509          RS       2    FLOW      -1
1510          RC     .05    .035     .05    1720     .05
1511          RX    1000    1010    1020    1036    1041    1057    1067    1077
1512          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Preserved *****

1513          KK    CDIV
1514          KM        COMBINE FLOWS FROM WA30 AND BASIN 1
1515          HC       2     .12
              * DDM   ***** Updated *****

1516          KK     459
1517          KM   SUB-BASIN 459
1518          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1519          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1520          KM     L =  .35  Kb = .052  Adj. Slope =  251.6
1521          BA    .030
1522          LG    .220    .300   3.330    .710   8.000
1523          UC    .162    .157
1524          UA       0       5      16      30      65      77      84      90      94      97
1525          UA     100
              * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                                    PAGE 40

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1526          KK     C52
1527          KM        COMBINE FLOWS FROM SUB-BASIN 52 WA30 AND BASIN 1
1528          HC       2
              * DDM   ***** Preserved *****

1529          KK     R52
1530          KM        ROUTE FLOW FROM SUBBASIN 52 TO C102
1531          RS       2    FLOW      -1
1532          RC     .05    .035     .05    2000     .05
1533          RX    1000    1010    1020    1036    1041    1057    1067    1077
1534          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Updated *****

1535          KK     460
1536          KM   SUB-BASIN 460
1537          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1538          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1539          KM     L =  .62  Kb = .058  Adj. Slope =  194.0
1540          BA    .140
1541          LG    .250    .260   3.740    .690  27.000
1542          UC    .242    .160
1543          UA       0       5      16      30      65      77      84      90      94      97
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1544        UA     100
            * DDM   ***** Preserved *****

1545        KK    C102
1546        KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 52 AND 53
1547        HC       2
            * DDM   ***** Preserved *****

1548        KK  BASIN3
1549        KM        RESERVOIR AT CLUBHOUSE LOCATION 1-30 INCH PIPE AT OUTFALL
1550        KM        BOTTOM OF BASIN AT 6 FEET ABOVE 1795 ELEVATION
1551        RS       1    ELEV       0
1552        SA       0       0       0       0     .34    1.59    1.81    1.96    2.13     2.3
            *      0       0       0       0    1.14    3.25    5.52    9.23
1553        SQ       0      22      45    47.4      48      51      57      62      67      73
1554        SE    1795  1797.5    1800  1800.4  1800.5    1801    1802    1803    1804  1805.5
            * DDM   ***** Preserved *****

1555        KK      R3
1556        KM        ROUTE FLOW FROM C102 to C106
1557        RS       4    FLOW      -1
1558        RC     .05     .03     .05    2750   .0375
1559        RX    1000    1010    1020    1052    1086    1118    1128    1138
1560        RY    19.2    18.4      18      10      10      18    18.4    19.2
            * DDM   ***** Updated *****

1561        KK     461
1562        KM   SUB-BASIN 461
1563        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1564        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1565        KM     L =  .83  Kb = .052  Adj. Slope =  181.0
1566        BA    .120
```



```
LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1567        LG    .270    .250   4.250    .450  21.000
1568        UC    .271    .250
1569        UA       0       5      16      30      65      77      84      90      94      97
1570        UA     100
            * DDM   ***** Preserved *****

1571        KK    C104
1572        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 54 AND R102
1573        HC       2
            * DDM   ***** Preserved *****

1574        KK    C106
1575        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN C103 AND C104
1576        HC       2
            * DDM   ***** Preserved *****

1577        KK    R106
1578        KM        ROUTE FLOW FROM C106 TO C49
1579        RS       2    FLOW      -1
1580        RC     .05    .035     .05    3950    .033
1581        RX    1000    1010    1020    1030    1050    1060    1070    1080
1582        RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
            * DDM   ***** Updated *****

1583        KK     462
1584        KM   SUB-BASIN 462
1585        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1586        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1587        KM     L =  .97  Kb = .045  Adj. Slope =  297.7
1588        BA    .301
1589        LG    .300    .330   5.300    .240  12.000
1590        UC    .225    .137
1591        UA       0       5      16      30      65      77      84      90      94      97
1592        UA     100
            * DDM   ***** Preserved *****

1593        KK     C56
1594        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 56 AND C106
            *      1       2
1595        HC       2
            * DDM   ***** Updated *****

1596        KK     480
1597        KM   SUB-BASIN 480
1598        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1599        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
1600        KM     L = 1.21  Kb = .042  Adj. Slope =  165.0
1601        BA    .731
1602        LG    .270    .270   3.580    .730  27.000
1603        UC    .325    .148
1604        UA       0       5      16      30      65      77      84      90      94      97
1605        UA     100
            * DDM   ***** Preserved *****
```



```
LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1606        KK    D480
1607        KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1608        KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1609        KM   FOR BASIN #: 18 & 26
1610        KM        MAXIMUM VOLUME DIVERSION = 16.5 acre-feet
            *      1
1611        DT   BS480    16.5
1612        DI       0   10000
1613        DQ       0   10000
            * DDM   ***** Preserved *****

1614        KK   RT480
1615        KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1616        DR   BS480
            * DDM   ***** Preserved *****

1617        KK   SR480
1618        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1619        KM    16.5 ACRE-FEETx43560/36x3600=5.5cfs
```

```
1620          RS       1    STOR       0
1621          SV       0     .01    16.5
1622          SQ       0     5.6     5.6
              * DDM   ***** Preserved *****

1623          KK    C480
1624          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1625          HC       2
              * DDM   ***** Preserved *****

1626          KK    480C
1627          KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1628          HC       3    2.09
              * DDM   ***** Preserved *****

1629          KK   RR480
1630          KM   ROUTE FLOW FROM SUB-BASIN 480 TO SUB-BASIN 500
1631          RS       1    FLOW      -1
1632          RC    .025    .025    .025    6500     .05
1633          RX       0       1       2      28      58      84      85      86
1634          RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
              * DDM   ***** Updated *****

1635          KK     500
1636          KM   SUB-BASIN 500
1637          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1638          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
1639          KM     L = 2.77  Kb = .042  Adj. Slope =  286.8
1640          BA    .930
1641          LG    .350    .400   6.000    .170   9.000
1642          UC    .421    .333
1643          UA       0       3       5       8      12      20      43      75      90      96
1644          UA     100
              * DDM   ***** Preserved *****
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1645          KK    500C
1646          KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1647          HC       2    3.02
1648          ZZ
```

SCHEMATIC DIAGRAM OF STREAM NETWORK

```
INPUT
 LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW
 NO.       (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

 60          10
              V
              V
 70         R10
              V
              V
 76         R12
              .
              .
 82           .          20
              .           .
              .           .
 92         C20............
              .
              .
 95           .          40
              .           .
              .           .
105           .           .          60
              .           .           .
              .           .           .
115         60C........................
              V
              V
118        SR60
              V
              V
127         R60
              V
              V
133        RR60
              .
              .
139           .          80
              .           .
              .           .
149         80C............
              V
              V
152         R80
              .
              .
158           .         100
              .           .
              .           .
168        100C............
              V
              V
171        R100
              .
              .
177           .         120
              .           .
              .           .
187        120C............
              V
              V
190        R120
              .
              .
196           .         140
              .           .
              .           .
206           .           .         150
              .           .           V
              .           .           V
216           .           .        R150
              .           .           V
              .           .           V
222           .           .        R152
              .           .           .
              .           .           .
228           .           .           .        160
              .           .           .          .
              .           .           .          .
238           .           .           .          .         180
              .           .           .          .           .
              .           .           .          .           .
248        180C.............................................
              .
              .
251           .         210
              .           V
              .           V
261           .        R210
              .           .
              .           .
267           .           .         240
              .           .           .
              .           .           .
277           .        240C............
              .           V
              .           V
280           .       SR240
              .           .
              .           .
287           .           .         220
              .           .           .
              .           .           .
297           .        220C............
              .           V
              .           V
300           .       SR220
              .           .
              .           .
307           .           .         190
```

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                .          .          V
                .          .          V
317             .          .       R190
                .          .          V
                .          .          V
323             .          .       R192
                .          .          .
                .          .          .
329             .          .          .        200
                .          .          .          .
                .          .          .          .
339             .       200C.......................
                .          V
                .          V
342             .      SR200
                .          V
                .          V
349             .       R200
                .          .
                .          .
355          C180............
                V
                V
358         SR180
                V
                V
367          R180
                .
                .
374             .        260
                .          .
                .          .
384          260C............
                V
                V
387          R260
                .
                .
394             .        280
                .          .
                .          .
404          280C............
                V
                V
407          R280
                .
                .
414             .        300
                .          .
                .          .
424          300C............
                V
                V
427          R300
                V
                V
434         RR300
                .
                .
441             .        350
                .          .
                .          .
454             .          .-------->   SF350
451             .       D350
                .          V
                .          V
457             .       350R
                .          .
                .          .
464             .          .        310
                .          .          .
                .          .          .
474             .       C310............
                .          V
                .          V
477             .       R310
                .          .
                .          .
484             .          .        320
                .          .          .
                .          .          .
499             .          .          .-------->   BS320
494             .          .       D320
                .          .          .
                .          .          .
504             .          .          .          .<-------   BS320
502             .          .          .      RT320
                .          .          .          V
                .          .          .          V
505             .          .          .      SR320
                .          .          .          .
                .          .          .          .
511          C320.................................
                .
                .
514             .        340
                .          .
                .          .
529             .          .-------->   BS340
524             .       D340
                .          .
                .          .
534             .          .          .<-------   BS340
532             .          .       RT340
                .          .          V
                .          .          V
535             .          .       SR340
                .          .          .
                .          .          .
541          C340........................
                .
                .
544             .        360
```

```
                .          .
                .          .
558             .          .-------->  BS360
554             .       D360
                .          .
                .          .
563             .          .         .<-------   BS360
561             .          .      RT360
                .          .          V
                .          .          V
564             .          .      SR360
                .          .          .
                .          .          .
570          360C.......................
                .
                .
573             .        380
                .          .
                .          .
587             .          .-------->  BS380
583             .       D380
                .          .
                .          .
592             .          .         .<-------   BS380
590             .          .      RT380
                .          .          V
                .          .          V
593             .          .      SR380
                .          .          .
                .          .          .
599          380C.......................
                .
                .
602             .        400
                .          .
                .          .
616             .          .-------->  BS400
612             .       D400
                .          .
                .          .
621             .          .         .<-------   BS400
619             .          .      RT400
                .          .          V
                .          .          V
622             .          .      SR400
                .          .          .
                .          .          .
628             .       C400............
                .          .
                .          .
631          400C............
                .
                .
636             .          .<-------   SF350
634             .       RT350
                .          V
                .          V
637             .       RR350
                .          .
                .          .
644             .          .        355
                .          .          .
                .          .          .
654             .       C355............
                .          V
                .          V
657             .       R355
                .          .
                .          .
664             .          .        361
                .          .          .
                .          .          .
678             .          .          .-------->  BS361
674             .          .       D361
                .          .          .
                .          .          .
683             .          .          .         .<-------   BS361
681             .          .          .      RT361
                .          .          .          V
                .          .          .          V
684             .          .          .      SR361
                .          .          .          .
                .          .          .          .
690             .       361C.......................
                .          .
                .          .
693             .          .        342
                .          .          .
                .          .          .
708             .          .          .-------->  BS3421
703             .          .      D3421
                .          .          .
                .          .          .
713             .          .          .         .<-------  BS3421
711             .          .          .     RT3421
                .          .          .          V
                .          .          .          V
714             .          .          .     SR3421
                .          .          .          .
                .          .          .          .
720             .          .       C342............
                .          .          V
                .          .          V
723             .          .       R342
                .          .          .
                .          .          .
729             .          .          .        341
                .          .          .          .
                .          .          .          .
744             .          .          .          .-------->  BS341
739             .          .          .       D341
                .          .          .          .
                .          .          .          .
```

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749                                                  .<-------   BS341
747                                              RT341
                                                     V
                                                     V
750                                              SR341
                                                     .
                                                     .
756                        C341.......................
                              V
                              V
759                        RR341
                              .
                              .
766                 361CC............
                              .
                              .
773                           .-------> BS3612
769                 D3612
                              .
                              .
778                           .<-------  BS3612
776                      RT3612
                              V
                              V
779                      SR3612
                              .
                              .
785                 C3612............
                         V
                         V
788                 RR361
                              .
                              .
795                           .         370
                              .           .
                              .           .
805                           .           .         395
                              .           .           .
                              .           .           .
815                           .        370C............
                              .           V
                              .           V
818                           .        R370
                              .           .
                              .           .
825                           .           .         381
                              .           .           .
                              .           .           .
839                           .           .           .-------> BS381
835                           .           .        D381
                              .           .           .
                              .           .           .
844                           .           .           .          .<-------   BS381
842                           .           .           .      RT381
                              .           .           .          V
                              .           .           .          V
845                           .           .           .      SR381
                              .           .           .          .
                              .           .           .          .
851                  381C.................................
                         V
                         V
854                 RR381
                              .
                              .
860                           .         390
                              .           .
                              .           .
874                           .           .-------> BS390
870                           .        D390
                              .           .
                              .           .
879                           .           .           .<-------   BS390
877                           .           .       RT390
                              .           .           V
                              .           .           V
880                           .           .       SR390
                              .           .           .
                              .           .           .
886                           .        390C............
                              .           V
                              .           V
889                           .       RR390
                              .           .
                              .           .
896                           .           .         401
                              .           .           .
                              .           .           .
910                           .           .           .-------> BS401
906                           .           .        D401
                              .           .           .
                              .           .           .
915                           .           .           .          .<-------   BS401
913                           .           .           .      RT401
                              .           .           .          V
                              .           .           .          V
916                           .           .           .      SR401
                              .           .           .          .
                              .           .           .          .
922          C401.............................................
                              .
925                           .        385
                              .           .
                              .           .
937                           .           .-------> SF385
935                           .        D385
                              .           V
                              .           V
940                           .        385R
                              .           .
                              .           .
947                           .           .         420
```

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                .          .          .
                .          .          .
961             .          .          .-------->  BS420
957             .          .       D420
                .          .          .
                .          .          .
966             .          .          .          .<-------  BS420
964             .          .          .      RT420
                .          .          .          V
                .          .          .          V
967             .          .          .      SR420
                .          .          .          .
                .          .          .          .
973         420C...................................
                .
                .
976             .       440
                .         V
                .         V
986             .       R70
                .         .
                .         .
992             .         .        441
                .         .          .
                .         .          .
1002            .      C108............
                .         .
                .         .
1007            .         .-------->  SPLIT
1005            .      DIV4
                .         V
                .         V
1010            .      R108
                .         .
                .         .
1016            .         .        442
                .         .          .
                .         .          .
1026            .       C67............
                .         .
                .         .
1032            .         .-------->  BASIN4
1029            .      DIV6
                .         .
                .         .
1037            .         .          .<-------  BASIN4
1035            .         .     RTDIV6
                .         .          V
                .         .          V
1038            .         .     RFDIV6
                .         .          .
                .         .          .
1044            .     CDIV6............
                .         .
                .         .
1047            .         .        443
                .         .          .
                .         .          .
1060            .         .          .-------->  WSH66
1057            .         .      DIV66
                .         .          V
                .         .          V
1063            .         .      R113
                .         .          .
                .         .          .
1069            .      C114............
                .         .
                .         .
1072            .         .        444
                .         .          V
                .         .          V
1082            .         .        R58
                .         .          .
                .         .          .
1088            .         .          .        445
                .         .          .          .
                .         .          .          .
1098            .         .      C107............
                .         .          V
                .         .          V
1101            .         .      R107
                .         .          .
                .         .          .
1109            .         .          .          .<-------  SPLIT
1107            .         .          .      RTB2
                .         .          .          V
                .         .          .          V
1110            .         .          .     RSPLIT
                .         .          .          .
                .         .          .          .
1116            .         .          .          .        446
                .         .          .          .          .
                .         .          .          .          .
1126            .         .      C109........................
                .         .          .
                .         .          .
1132            .         .          .-------->  WSH404
1129            .         .      DIV5
                .         .          V
                .         .          V
1135            .         .      R109
                .         .          .
                .         .          .
1141            .         .          .        447
                .         .          .          .
                .         .          .          .
1153            .         .          .          .          .<-------  WSH404
1151            .         .          .          .      RT404
                .         .          .          .          V
                .         .          .          .          V
1154            .         .          .          .      R404
                .         .          .          .          .
                .         .          .          .          .
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```
1160          .          .        C110.......................
              .          .          V
              .          .          V
1163          .          .        R110
              .          .          .
              .          .          .
1169          .       C115............
              .          V
              .          V
1172          .       R115
              .          .
              .          .
1179          .          .        448
              .          .          .
              .          .          .
1189          .          .          .        449
              .          .          .          .
              .          .          .          .
1199          .          .      C6364............
              .          .          V
              .          .          V
1202          .          .      R6364
              .          .          .
              .          .          .
1208          .          .          .        450
              .          .          .          .
              .          .          .          .
1218          .          .          .          .        451
              .          .          .          .          .
              .          .          .          .          .
1230          .          .          .          .          .          .<-------   WSH66
1228          .          .          .          .       RT66
              .          .          .          .          .
              .          .          .          .          .
1231          .          .          .          .          .          .        452
              .          .          .          .          .          .          .
              .          .          .          .          .          .          .
1241          .          .          .          .       C6465............
              .          .          .          .          V
              .          .          .          .          V
1244          .          .          .          .       R6566
              .          .          .          .          .
              .          .          .          .          .
1250          .          .        C116.................................
              .          .          V
              .          .          V
1253          .          .      BASIN5
              .          .          V
              .          .          V
1260          .          .        R116
              .          .          .
              .          .          .
1266          .          .          .        453
              .          .          .          .
              .          .          .          .
1276          .          .        C117............
              .          .          .
              .          .          .
1279          .       C118............
              .          V
              .          V
1282          .       R118
              .          .
              .          .
1291          .          .-------> BASIN6
1288          .       DIV7
              .          .
              .          .
1296          .          .          .<-------  BASIN6
1294          .          .      RTDIV7
              .          .          V
              .          .          V
1297          .          .      RFDIV7
              .          .          .
              .          .          .
1303          .      CDIV7............
              .          .
              .          .
1306          .          .        454
              .          .          .
              .          .          .
1316          .       C119............
              .          V
              .          V
1319          .       R454
              .          .
              .          .
1326          .          .        415
              .          .          .
              .          .          .
1338          .          .          .          .<-------   SF385
1336          .          .          .       RT385
              .          .          .          V
              .          .          .          V
1339          .          .          .       RR385
              .          .          .          .
              .          .          .          .
1346          .       415C........................
              .          V
              .          V
1349          .       R415
              .          .
              .          .
1356          .          .        455
              .          .          .
              .          .          .
1371          .          .          .-------> BS455
1366          .          .        D455
              .          .          .
              .          .          .
1376          .          .          .          .<-------   BS455
1374          .          .          .       RT455
              .          .          .          V
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                                                  V
1377                                            SR455
                                                    .
                                                    .
1383                                      C455............
                                                    .
                                                    .
1386                  455C.......................
                        V
                        V
1389                SR440
                        V
                        V
1398                RR455
                        .
                        .
1404                    .        456
                        .          .
                        .          .
1417                    .          .-------> BASIN1
1414                    .      DIV1
                        .          .
                        .          .
1423                    .          .------->   WA30
1420                    .      DIV2
                        .          V
                        .          V
1426                    .      R456
                        .          .
                        .          .
1432                    .          .        457
                        .          .          .
                        .          .          .
1442                    .      C101............
                        .          .
                        .          .
1448                    .          .-------> BASIN2
1445                    .      DIV3
                        .          .
                        .          .
1453                    .          .          .<-------  BASIN2
1451                    .          .     RTDIV3
                        .          .          V
                        .          .          V
1454                    .          .     RFDIV3
                        .          .          .
                        .          .          .
1460                    .     CDIV3............
                        .          V
                        .          V
1463                    .      R101
                        .          .
                        .          .
1469                    .          .        458
                        .          .          .
                        .          .          .
1479                    .      C103............
                        .          V
                        .          V
1482                    .      R103
                        .          .
                        .          .
1490                    .          .          .<-------   WA30
1488                    .          .       RT30
                        .          .          V
                        .          .          V
1491                    .          .        R30
                        .          .          .
                        .          .          .
1499                    .          .          .          .<-------  BASIN1
1497                    .          .          .       RTB1
                        .          .          .          V
                        .          .          .          V
1500                    .          .          .         B1
                        .          .          .          V
                        .          .          .          V
1507                    .          .          .        RB1
                        .          .          .          .
                        .          .          .          .
1513                    .          .       CDIV............
                        .          .          .
                        .          .          .
1516                    .          .          .        459
                        .          .          .          .
                        .          .          .          .
1526                    .          .        C52............
                        .          .          V
                        .          .          V
1529                    .          .        R52
                        .          .          .
                        .          .          .
1535                    .          .          .        460
                        .          .          .          .
                        .          .          .          .
1545                    .          .       C102............
                        .          .          V
                        .          .          V
1548                    .          .     BASIN3
                        .          .          V
                        .          .          V
1555                    .          .         R3
                        .          .          .
                        .          .          .
1561                    .          .          .        461
                        .          .          .          .
                        .          .          .          .
1571                    .          .       C104............
                        .          .          .
                        .          .          .
1574                    .      C106............
                        .          V
                        .          V
1577                    .      R106
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                .          .
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1583            .          .        462
                .          .          .
                .          .          .
1593            .        C56...........
                .          .
                .          .
1596            .          .        480
                .          .          .
                .          .          .
1611            .          .          .-------->   BS480
1606            .          .       D480
                .          .          .
                .          .          .
1616            .          .          .          .<-------   BS480
1614            .          .          .      RT480
                .          .          .          V
                .          .          .          V
1617            .          .          .      SR480
                .          .          .          .
                .          .          .          .
1623            .          .       C480...........
                .          .          .
                .          .          .
1626         480C........................
                V
                V
1629        RR480
                .
                .
1635            .        500
                .          .
                .          .
1645         500C............
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(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT	10	951.	12.27	114.	31.	15.	.70		
+	ROUTED TO	R10	882.	12.40	114.	31.	15.	.70		
+	ROUTED TO	R12	833.	12.60	114.	31.	15.	.70		
+	HYDROGRAPH AT	20	959.	12.43	128.	32.	16.	1.12		
+	2 COMBINED AT	C20	1663.	12.53	240.	63.	30.	1.82		
+	HYDROGRAPH AT	40	2582.	12.30	252.	66.	32.	2.23		
+	HYDROGRAPH AT	60	1553.	12.40	228.	61.	29.	1.75		
+	3 COMBINED AT	60C	5274.	12.37	708.	188.	90.	5.80		
+	ROUTED TO	SR60	92.	14.40	92.	89.	70.	5.80		
+	ROUTED TO	R60	92.	14.40	92.	89.	70.	5.80		
+	ROUTED TO	RR60	92.	14.53	92.	89.	70.	5.80		
+	HYDROGRAPH AT	80	1868.	12.27	179.	46.	22.	1.48		
+	2 COMBINED AT	80C	1942.	12.27	266.	134.	92.	1.48		
+	ROUTED TO	R80	1919.	12.27	266.	134.	92.	1.48		
+	HYDROGRAPH AT	100	404.	12.20	58.	15.	7.	.48		
+	2 COMBINED AT	100C	2300.	12.27	321.	148.	99.	1.96		
+	ROUTED TO	R100	2292.	12.30	321.	148.	99.	1.96		
+	HYDROGRAPH AT	120	3232.	12.27	326.	88.	42.	2.20		
+	2 COMBINED AT	120C	5469.	12.27	636.	229.	141.	4.16		
+	ROUTED TO	R120	5397.	12.30	636.	229.	140.	4.16		
+	HYDROGRAPH AT	140	632.	12.13	64.	17.	8.	.60		
+	HYDROGRAPH AT	150	135.	13.20	47.	13.	6.	.41		
+	ROUTED TO	R150	134.	13.30	47.	13.	6.	.41		
+	ROUTED TO	R152	133.	13.50	47.	13.	6.	.41		
+	HYDROGRAPH AT	160	217.	12.40	35.	9.	4.	.37		
+	HYDROGRAPH AT	180	785.	12.37	90.	23.	11.	1.00		
+	5 COMBINED AT	180C	6707.	12.30	857.	286.	168.	6.54		
+	HYDROGRAPH AT	210	870.	12.20	80.	21.	10.	.58		
+	ROUTED TO	R210	815.	12.27	80.	21.	10.	.58		
+	HYDROGRAPH AT	240	1405.	12.30	155.	39.	19.	1.40		
+	2 COMBINED AT	240C	2185.	12.30	233.	60.	29.	1.98		
+	ROUTED TO	SR240	634.	12.77	186.	49.	23.	1.98		
+	HYDROGRAPH AT	220	1126.	12.17	98.	25.	12.	.73		
+	2 COMBINED AT	220C	1138.	12.20	279.	73.	35.	2.71		
+	ROUTED TO	SR220	914.	12.43	272.	71.	34.	2.71		

+ HYDROGRAPH AT	190	1403.	12.17	116.	31.	15.	.92
+ ROUTED TO	R190	1348.	12.23	116.	31.	15.	.92
+ ROUTED TO	R192	1267.	12.30	116.	31.	15.	.92
+ HYDROGRAPH AT	200	806.	12.17	69.	19.	9.	.54
+ 3 COMBINED AT	200C	2624.	12.27	447.	119.	57.	4.16
+ ROUTED TO	SR200	2493.	12.37	442.	115.	55.	4.16
+ ROUTED TO	R200	2473.	12.40	441.	115.	55.	4.16
+ 2 COMBINED AT	C180	8912.	12.30	1279.	396.	221.	10.69
+ ROUTED TO	SR180	140.	18.27	140.	139.	112.	10.69
+ ROUTED TO	R180	140.	18.33	140.	139.	112.	10.69
+ HYDROGRAPH AT	260	418.	12.10	43.	12.	6.	.27
+ 2 COMBINED AT	260C	527.	12.10	177.	150.	119.	.27
+ ROUTED TO	R260	515.	12.20	177.	150.	119.	.27
+ HYDROGRAPH AT	280	478.	12.10	42.	12.	6.	.30
+ 2 COMBINED AT	280C	945.	12.13	216.	160.	124.	.57
+ ROUTED TO	R280	909.	12.20	216.	160.	123.	.57
+ HYDROGRAPH AT	300	875.	12.20	109.	29.	14.	.99
+ 2 COMBINED AT	300C	1769.	12.20	321.	187.	137.	1.56
+ ROUTED TO	R300	1733.	12.27	321.	187.	136.	1.56
+ ROUTED TO	RR300	1699.	12.33	321.	187.	136.	1.56
+ HYDROGRAPH AT	350	1192.	12.20	103.	27.	13.	.97
+ DIVERSION TO	SF350	715.	12.20	62.	16.	8.	.97
+ HYDROGRAPH AT	D350	477.	12.20	41.	11.	5.	.97
+ ROUTED TO	350R	414.	12.43	41.	11.	5.	.97
+ HYDROGRAPH AT	310	376.	12.33	49.	12.	6.	.56
+ 2 COMBINED AT	C310	749.	12.40	89.	23.	11.	.94
+ ROUTED TO	R310	679.	12.77	89.	23.	11.	.94
+ HYDROGRAPH AT	320	965.	12.20	123.	34.	17.	.97
+ DIVERSION TO	BS320	377.	11.97	21.	6.	3.	.97
+ HYDROGRAPH AT	D320	965.	12.20	109.	28.	14.	.97
+ HYDROGRAPH AT	RT320	377.	11.97	21.	6.	3.	.97
+ ROUTED TO	SR320	4.	4.13	4.	4.	3.	.97
+ 4 COMBINED AT	C320	2601.	12.33	516.	240.	162.	3.47
+ HYDROGRAPH AT	340	1056.	12.20	143.	43.	21.	1.02
+ DIVERSION TO	BS340	1056.	12.20	71.	20.	9.	1.02
+ HYDROGRAPH AT	D340	945.	12.30	85.	23.	11.	1.02
+ HYDROGRAPH AT	RT340	1056.	12.20	71.	20.	9.	1.02
+ ROUTED TO	SR340	13.	8.37	13.	13.	9.	1.02

+ 3 COMBINED AT	C340	3515.	12.30	609.	275.	183.	4.50
+ HYDROGRAPH AT	360	283.	12.20	45.	14.	7.	.31
+ DIVERSION TO	BS360	283.	12.20	29.	8.	4.	.31
+ HYDROGRAPH AT	D360	173.	12.53	20.	6.	3.	.31
+ HYDROGRAPH AT	RT360	283.	12.20	29.	8.	4.	.31
+ ROUTED TO	SR360	5.	8.80	5.	5.	4.	.31
+ 3 COMBINED AT	360C	3517.	12.30	632.	286.	189.	4.81
+ HYDROGRAPH AT	380	321.	12.13	32.	9.	5.	.27
+ DIVERSION TO	BS380	276.	12.07	13.	4.	2.	.27
+ HYDROGRAPH AT	D380	321.	12.13	21.	6.	3.	.27
+ HYDROGRAPH AT	RT380	276.	12.07	13.	4.	2.	.27
+ ROUTED TO	SR380	2.	8.20	2.	2.	2.	.27
+ 3 COMBINED AT	380C	3718.	12.30	654.	293.	193.	5.08
+ HYDROGRAPH AT	400	58.	12.10	4.	1.	1.	.05
+ DIVERSION TO	BS400	58.	12.10	3.	1.	0.	.05
+ HYDROGRAPH AT	D400	21.	12.33	1.	0.	0.	.05
+ HYDROGRAPH AT	RT400	58.	12.10	3.	1.	0.	.05
+ ROUTED TO	SR400	1.	11.87	1.	1.	0.	.05
+ 2 COMBINED AT	C400	22.	12.33	2.	1.	1.	.05
+ 2 COMBINED AT	400C	3719.	12.30	655.	294.	194.	5.13
+ HYDROGRAPH AT	RT350	715.	12.20	62.	16.	8.	.97
+ ROUTED TO	RR350	630.	12.43	62.	16.	8.	.97
+ HYDROGRAPH AT	355	500.	12.33	69.	18.	9.	.66
+ 2 COMBINED AT	C355	1080.	12.40	130.	34.	16.	1.24
+ ROUTED TO	R355	1013.	12.60	130.	34.	16.	1.24
+ HYDROGRAPH AT	361	499.	12.10	49.	15.	7.	.36
+ DIVERSION TO	BS361	475.	12.07	23.	7.	3.	.36
+ HYDROGRAPH AT	D361	486.	12.13	30.	8.	4.	.36
+ HYDROGRAPH AT	RT361	475.	12.07	23.	7.	3.	.36
+ ROUTED TO	SR361	4.	8.30	4.	4.	3.	.36
+ 3 COMBINED AT	361C	1101.	12.57	162.	46.	23.	1.60
+ HYDROGRAPH AT	342	420.	12.07	36.	10.	5.	.30
+ DIVERSION TO	BS3421	358.	12.00	15.	4.	2.	.30
+ HYDROGRAPH AT	D3421	418.	12.10	23.	6.	3.	.30
+ HYDROGRAPH AT	RT3421	358.	12.00	15.	4.	2.	.30
+ ROUTED TO	SR3421	3.	8.57	3.	3.	2.	.30
+ 2 COMBINED AT	C342	420.	12.10	26.	9.	5.	.30
+ ROUTED TO	R342	298.	12.33	26.	9.	5.	.30

+	HYDROGRAPH AT	341	284.	12.13	35.	11.	5.	.23
+	DIVERSION TO	BS341	246.	12.03	15.	4.	2.	.23
+	HYDROGRAPH AT	D341	284.	12.13	25.	7.	3.	.23
+	HYDROGRAPH AT	RT341	246.	12.03	15.	4.	2.	.23
+	ROUTED TO	SR341	3.	4.57	3.	3.	2.	.23
+	3 COMBINED AT	C341	475.	12.33	53.	18.	10.	.53
+	ROUTED TO	RR341	448.	12.60	53.	18.	10.	.53
+	2 COMBINED AT	361CC	1520.	12.60	212.	64.	33.	2.13
+	DIVERSION TO	BS3612	1020.	12.60	76.	19.	9.	2.13
+	HYDROGRAPH AT	D3612	500.	12.13	137.	45.	24.	2.13
+	HYDROGRAPH AT	RT3612	1020.	12.60	76.	19.	9.	2.13
+	ROUTED TO	SR3612	17.	12.13	17.	17.	9.	2.13
+	2 COMBINED AT	C3612	517.	12.13	153.	61.	33.	2.13
+	ROUTED TO	RR361	517.	12.57	153.	61.	33.	2.13
+	HYDROGRAPH AT	370	588.	12.30	79.	21.	10.	.67
+	HYDROGRAPH AT	395	182.	12.23	25.	7.	3.	.20
+	2 COMBINED AT	370C	758.	12.30	103.	28.	13.	.87
+	ROUTED TO	R370	673.	12.60	103.	28.	13.	.87
+	HYDROGRAPH AT	381	749.	12.17	84.	24.	11.	.73
+	DIVERSION TO	BS381	749.	12.17	41.	11.	5.	.73
+	HYDROGRAPH AT	D381	658.	12.27	48.	13.	6.	.73
+	HYDROGRAPH AT	RT381	749.	12.17	41.	11.	5.	.73
+	ROUTED TO	SR381	7.	9.87	7.	7.	5.	.73
+	4 COMBINED AT	381C	1431.	12.57	305.	106.	57.	3.72
+	ROUTED TO	RR381	1399.	12.70	305.	106.	57.	3.72
+	HYDROGRAPH AT	390	463.	12.03	33.	10.	5.	.24
+	DIVERSION TO	BS390	95.	11.73	6.	2.	1.	.24
+	HYDROGRAPH AT	D390	463.	12.03	30.	8.	4.	.24
+	HYDROGRAPH AT	RT390	95.	11.73	6.	2.	1.	.24
+	ROUTED TO	SR390	1.	.90	1.	1.	1.	.24
+	2 COMBINED AT	390C	464.	12.03	31.	9.	5.	.24
+	ROUTED TO	RR390	324.	12.50	31.	9.	5.	.24
+	HYDROGRAPH AT	401	448.	12.23	67.	19.	9.	.61
+	DIVERSION TO	BS401	44.	11.80	6.	2.	1.	.61
+	HYDROGRAPH AT	D401	448.	12.23	65.	17.	8.	.61
+	HYDROGRAPH AT	RT401	44.	11.80	6.	2.	1.	.61
+	ROUTED TO	SR401	1.	.93	1.	1.	1.	.61
+	5 COMBINED AT	C401	5043.	12.40	1042.	423.	262.	9.70

+	HYDROGRAPH AT	385	782.	12.23	87.	24.	12.	.65
+	DIVERSION TO	SF385	195.	12.23	22.	6.	3.	.65
	HYDROGRAPH AT	D385	586.	12.23	65.	18.	9.	.65
+	ROUTED TO	385R	475.	12.70	65.	18.	9.	.65
+	HYDROGRAPH AT	420	752.	12.20	92.	26.	12.	.85
+	DIVERSION TO	BS420	269.	11.97	15.	4.	2.	.85
+	HYDROGRAPH AT	D420	752.	12.20	83.	22.	10.	.85
+	HYDROGRAPH AT	RT420	269.	11.97	15.	4.	2.	.85
+	ROUTED TO	SR420	13.	11.03	12.	4.	2.	.85
+	4 COMBINED AT	420C	5790.	12.37	1184.	460.	281.	10.87
+	HYDROGRAPH AT	440	180.	12.03	12.	3.	2.	.08
+	ROUTED TO	R70	176.	12.07	12.	3.	2.	.08
+	HYDROGRAPH AT	441	16.	12.03	1.	0.	0.	.01
+	2 COMBINED AT	C108	191.	12.07	14.	4.	2.	.09
+	DIVERSION TO	SPLIT	96.	12.07	7.	2.	1.	.09
+	HYDROGRAPH AT	DIV4	96.	12.07	7.	2.	1.	.09
+	ROUTED TO	R108	88.	12.13	7.	2.	1.	.09
+	HYDROGRAPH AT	442	102.	12.10	9.	2.	1.	.10
	2 COMBINED AT	C67	187.	12.10	15.	4.	2.	.19
+	DIVERSION TO	BASIN4	115.	12.10	6.	1.	1.	.19
+	HYDROGRAPH AT	DIV6	72.	12.10	10.	3.	1.	.19
+	HYDROGRAPH AT	RTDIV6	115.	12.10	6.	1.	1.	.19
+	ROUTED TO	RFDIV6	1.	11.90	1.	1.	1.	.19
+	2 COMBINED AT	CDIV6	74.	12.10	10.	4.	2.	.19
+	HYDROGRAPH AT	443	148.	12.07	14.	4.	2.	.08
+	DIVERSION TO	WSH66	78.	11.90	12.	3.	2.	.08
+	HYDROGRAPH AT	DIV66	70.	12.07	3.	1.	0.	.08
+	ROUTED TO	R113	69.	12.07	3.	1.	0.	.08
+	2 COMBINED AT	C114	140.	12.07	13.	4.	2.	.27
+	HYDROGRAPH AT	444	82.	12.03	5.	1.	1.	.04
+	ROUTED TO	R58	75.	12.07	5.	1.	1.	.04
+	HYDROGRAPH AT	445	296.	12.03	18.	5.	2.	.19
+	2 COMBINED AT	C107	365.	12.03	22.	6.	3.	.23
+	ROUTED TO	R107	365.	12.07	22.	6.	3.	.23
	HYDROGRAPH AT	RTB2	96.	12.07	7.	2.	1.	.09
	ROUTED TO	RSPLIT	95.	12.07	7.	2.	1.	.09
+	HYDROGRAPH AT	446	65.	12.03	6.	2.	1.	.04
+	3 COMBINED AT	C109	520.	12.07	35.	9.	4.	.27

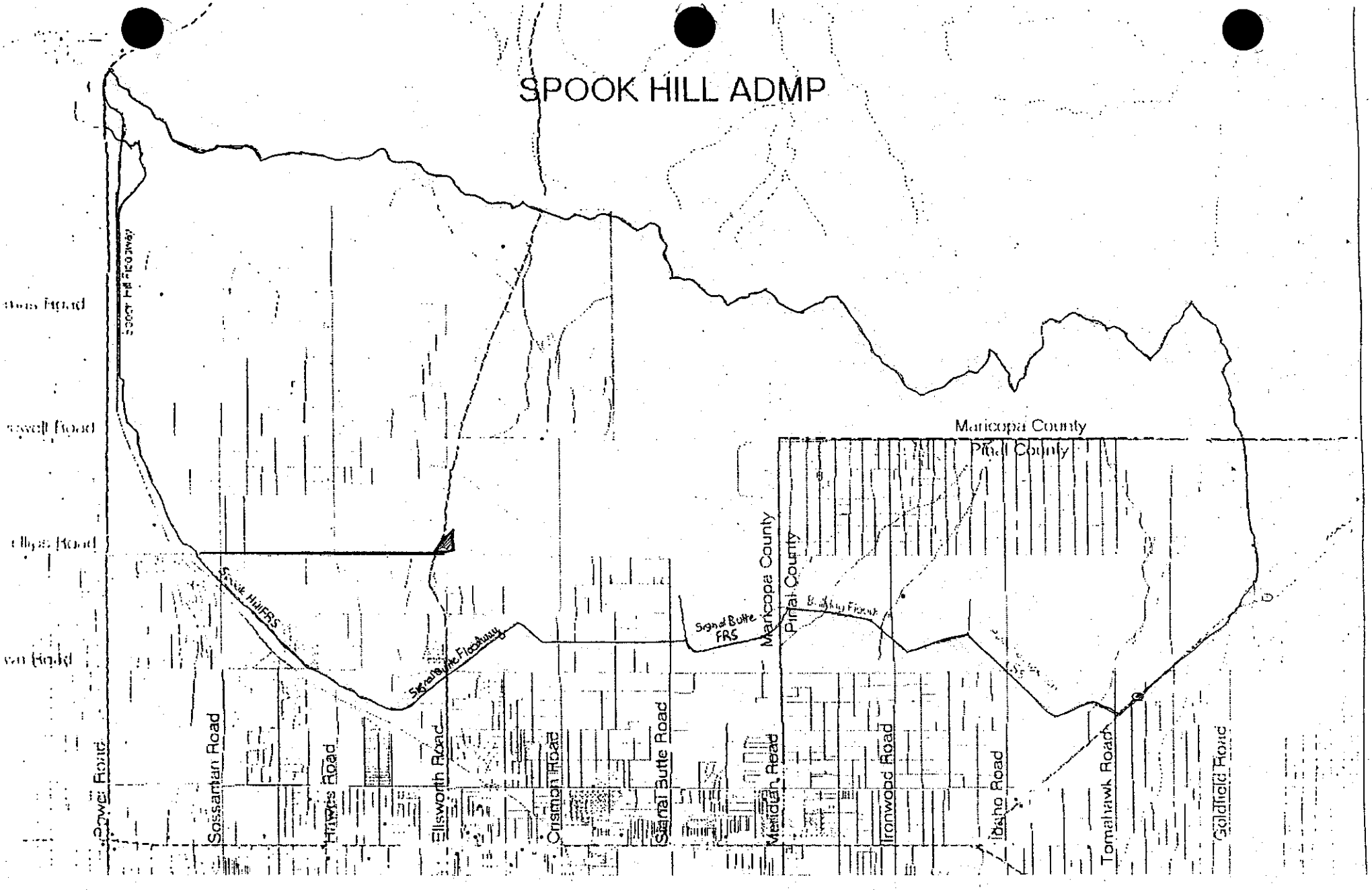
+	DIVERSION TO	WSH404	35.	11.73	8.	2.	1.	.27
+	HYDROGRAPH AT	DIV5	485.	12.07	27.	7.	3.	.27
	ROUTED TO	R109	469.	12.10	27.	7.	3.	.27
+	HYDROGRAPH AT	447	138.	12.07	12.	4.	2.	.09
+	HYDROGRAPH AT	RT404	35.	11.73	8.	2.	1.	.27
+	ROUTED TO	R404	35.	11.90	8.	2.	1.	.27
+	3 COMBINED AT	C110	635.	12.07	46.	13.	6.	.36
+	ROUTED TO	R110	632.	12.10	46.	13.	6.	.36
+	2 COMBINED AT	C115	764.	12.10	59.	17.	8.	.63
+	ROUTED TO	R115	767.	12.10	59.	17.	8.	.63
+	HYDROGRAPH AT	448	88.	12.03	6.	2.	1.	.05
+	HYDROGRAPH AT	449	80.	12.03	5.	1.	1.	.05
+	2 COMBINED AT	C6364	166.	12.03	11.	3.	1.	.09
+	ROUTED TO	R6364	137.	12.17	11.	3.	1.	.09
+	HYDROGRAPH AT	450	61.	12.20	6.	2.	1.	.07
+	HYDROGRAPH AT	451	18.	12.17	2.	1.	0.	.03
+	HYDROGRAPH AT	RT66	78.	11.90	12.	3.	2.	.08
+	HYDROGRAPH AT	452	62.	12.03	4.	1.	1.	.04
	2 COMBINED AT	C6465	140.	12.03	16.	4.	2.	.04
+	ROUTED TO	R6566	135.	12.10	16.	4.	2.	.04
+	4 COMBINED AT	C116	341.	12.17	35.	9.	4.	.23
+	ROUTED TO	BASIN5	152.	12.47	35.	9.	4.	.23
+	ROUTED TO	R116	150.	12.53	35.	9.	4.	.23
+	HYDROGRAPH AT	453	62.	12.10	7.	2.	1.	.06
+	2 COMBINED AT	C117	169.	12.50	41.	11.	5.	.29
+	2 COMBINED AT	C118	852.	12.10	99.	28.	14.	.92
+	ROUTED TO	R118	842.	12.10	99.	28.	14.	.92
+	DIVERSION TO	BASIN6	243.	12.10	10.	2.	1.	.92
+	HYDROGRAPH AT	DIV7	599.	12.10	89.	25.	13.	.92
+	HYDROGRAPH AT	RTDIV7	243.	12.10	10.	2.	1.	.92
+	ROUTED TO	RFDIV7	1.	11.97	1.	1.	1.	.92
+	2 COMBINED AT	CDIV7	600.	12.10	90.	26.	13.	.92
+	HYDROGRAPH AT	454	157.	12.17	21.	6.	3.	.18
+	2 COMBINED AT	C119	748.	12.13	110.	32.	16.	1.10
	ROUTED TO	R454	722.	12.20	110.	32.	16.	1.10
+	HYDROGRAPH AT	415	412.	12.17	55.	16.	7.	.45
+	HYDROGRAPH AT	RT385	195.	12.23	22.	6.	3.	.65
+	ROUTED TO	RR385	177.	12.40	22.	6.	3.	.65

+ 3 COMBINED AT	415C	1193.	12.20	184.	53.	26.	1.71
+ ROUTED TO	R415	1179.	12.27	184.	53.	26.	1.71
+ HYDROGRAPH AT	455	1346.	12.13	142.	43.	21.	1.11
+ DIVERSION TO	BS455	1346.	12.13	137.	37.	18.	1.11
+ HYDROGRAPH AT	D455	55.	12.77	16.	6.	3.	1.11
+ HYDROGRAPH AT	RT455	1346.	12.13	137.	37.	18.	1.11
+ ROUTED TO	SR455	25.	10.47	25.	25.	18.	1.11
+ 2 COMBINED AT	C455	80.	12.77	41.	31.	21.	1.11
+ 3 COMBINED AT	455C	6791.	12.37	1373.	532.	324.	13.69
+ ROUTED TO	SR440	809.	13.83	794.	531.	323.	13.69
+ ROUTED TO	RR455	809.	14.13	794.	531.	321.	13.69
+ HYDROGRAPH AT	456	468.	12.07	35.	10.	5.	.26
+ DIVERSION TO	BASIN1	184.	12.07	8.	2.	1.	.26
+ HYDROGRAPH AT	DIV1	284.	12.07	27.	8.	4.	.26
+ DIVERSION TO	WA30	58.	12.07	10.	3.	2.	.26
+ HYDROGRAPH AT	DIV2	226.	12.07	18.	4.	2.	.26
+ ROUTED TO	R456	213.	12.13	18.	4.	2.	.26
+ HYDROGRAPH AT	457	264.	12.07	20.	5.	3.	.19
+ 2 COMBINED AT	C101	462.	12.10	38.	10.	5.	.45
+ DIVERSION TO	BASIN2	165.	12.10	7.	2.	1.	.45
+ HYDROGRAPH AT	DIV3	297.	12.10	30.	8.	4.	.45
+ HYDROGRAPH AT	RTDIV3	165.	12.10	7.	2.	1.	.45
+ ROUTED TO	RFDIV3	2.	11.90	2.	2.	1.	.45
+ 2 COMBINED AT	CDIV3	299.	12.10	32.	9.	5.	.45
+ ROUTED TO	R101	297.	12.10	32.	9.	5.	.45
+ HYDROGRAPH AT	458	356.	12.03	25.	7.	3.	.19
+ 2 COMBINED AT	C103	635.	12.07	56.	16.	8.	.64
+ ROUTED TO	R103	630.	12.07	56.	16.	8.	.64
+ HYDROGRAPH AT	RT30	58.	12.07	10.	3.	2.	.26
+ ROUTED TO	R30	57.	12.10	10.	3.	2.	.26
+ HYDROGRAPH AT	RTB1	184.	12.07	8.	2.	1.	.26
+ ROUTED TO	B1	37.	12.23	8.	2.	1.	.26
+ ROUTED TO	RB1	37.	12.30	8.	2.	1.	.26
+ 2 COMBINED AT	CDIV	86.	12.20	17.	5.	3.	.12
+ HYDROGRAPH AT	459	44.	12.03	3.	1.	0.	.03
+ 2 COMBINED AT	C52	113.	12.10	20.	6.	3.	.15
+ ROUTED TO	R52	112.	12.17	20.	6.	3.	.15
+ HYDROGRAPH AT	460	214.	12.07	19.	6.	3.	.14

+	2 COMBINED AT	C102	313.	12.07	39.	12.	6.	.29
+	ROUTED TO	BASIN3	71.	12.63	39.	12.	6.	.29
+	ROUTED TO	R3	71.	12.77	39.	12.	6.	.29
+	HYDROGRAPH AT	461	161.	12.10	17.	5.	2.	.12
+	2 COMBINED AT	C104	213.	12.10	55.	17.	8.	.41
+	2 COMBINED AT	C106	835.	12.07	110.	32.	16.	1.05
+	ROUTED TO	R106	797.	12.13	110.	32.	16.	1.05
+	HYDROGRAPH AT	462	538.	12.07	40.	11.	5.	.30
+	2 COMBINED AT	C56	1254.	12.10	149.	42.	21.	1.35
+	HYDROGRAPH AT	480	1050.	12.10	96.	29.	14.	.73
+	DIVERSION TO	BS480	455.	11.90	27.	8.	4.	.73
+	HYDROGRAPH AT	D480	1050.	12.10	78.	21.	10.	.73
+	HYDROGRAPH AT	RT480	455.	11.90	27.	8.	4.	.73
+	ROUTED TO	SR480	6.	3.90	6.	6.	4.	.73
+	2 COMBINED AT	C480	1056.	12.10	84.	27.	14.	.73
+	3 COMBINED AT	480C	2511.	12.10	970.	614.	365.	2.09
+	ROUTED TO	RR480	2348.	12.13	968.	614.	365.	2.09
+	HYDROGRAPH AT	500	1073.	12.27	122.	33.	16.	.93
	2 COMBINED AT	500C	3238.	12.20	1079.	642.	379.	3.02

*** NORMAL END OF HEC-1 ***

SPOOK HILL ADMP



ALTERNATIVE 24 - REFLECTS IMPLEMENTATION OF McKELLIPS RD INTERCEPTOR CHANNEL EXTENDING FROM JUST EAST OF ELLSWORTH ROAD TO THE SPOOK HILL FRS.
ORIGINAL SUB-BASINS 340, 360, 380, AND 400 ARE SUBDIVIDED INTO 340,341, 342, 360, 361, 380, 381, 400, AND 401.
CONCEPTUAL DETENTION BASINS ARE ALSO INCLUDED AT THE INTERSECTIONS OF McKELLIPS/ELLSWORTH.
MODEL IS CREATED FROM THE BASE EXISTING MODEL S24CE10.DAT
GENERATED BY SC ON 06-14-00 FILE: S24CE24.DAT

```
1****************************************                    ****************************************
*                                      *                    *                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *                    *   U.S. ARMY CORPS OF ENGINEERS       *
*             JUN  1998                *                    *   HYDROLOGIC ENGINEERING CENTER      *
*           VERSION 4.1                *                    *         609 SECOND STREET            *
*                                      *                    *      DAVIS, CALIFORNIA 95616         *
*  RUN DATE   14JUN00  TIME  19:02:27  *                    *          (916) 756-1104              *
*                                      *                    *                                      *
****************************************                    ****************************************

                                        X     X  XXXXXXX   XXXXX           X
                                        X     X  X        X     X         XX
                                        X     X  X        X               X
                                        XXXXXXX  XXXX     X        XXXXX  X
                                        X     X  X        X               X
                                        X     X  X        X     X         X
                                        X     X  XXXXXXX   XXXXX         XXX

THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL   LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

1                                          HEC-1 INPUT                                                PAGE  1

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  1           ID   EXISTING LAND USE CALCULATIONS WERE BASED ON 1 YR. FROM 11/5/99
  2           ID   FOR LAS SENDAS       AND LANDISCOR JAN.1999 AERIAL PHOTOGPRAPHS
  3           ID
  4           ID   ALL DAMS WERE ANALYZED WITH NO STORAGE BELOW PRINCIPLE SPILLWAY ELEVATIONS
  5           ID
  6           ID   A CONSERVATIVE ESTIMATE WAS USED FOR THE LOCATION OF THE CENTROID FOR
  7           ID   PRECIPITATION VALUES
  8           ID
  9           ID   ALL CHANNEL ROUTING INFORMATION WAS OBTAINED FROM MCFCD SPOOK HILL   SIGNAL
 10           ID   BUTTE        AND BULLDOG FLOODWAY PLANS
 11           ID
 12           ID   ANALYSIS PREPARED BY WOOD/PATEL - JCD; 11/05/99; FILE:  SPHEX1.DAT
 13           ID
 14           ID   MODEL UPDATE WITH LAS SENDAS WEST BASINS & ALL RETENTION BASINS
 15           ID   DRAINING BACK INTO THE SYSTEM WITHIN 36 HOURS
 16           ID   BY: JCD; 1/4/2000            FILE: SPHEX1RV.DAT
 17           ID
 18           ID   CURRENT MODEL UPDATED WITH ALL PREVIOUS MODEL RUNS
 19           ID   NOTED ABOVE, AND COUNTY COMMENTS DATED MARCH 20, 2000
 20           ID   BY: MW; 04/06/2000       FILE:  S24CE0.DAT
 21           ID
 22           ID   MODEL UPDATED TO ALIGN SUB-BASIN CONCENTRATION POINTS WITH PASS MOUNTAIN
 23           ID   DIVERSION.  NEW BOUNDARIES CREATED FOR SUB-BASINS 240, 220, & 200
 24           ID   ANALYSIS PERFORMED BY WOOD/PATEL; MW;  ON 05/12/2000;  FILE: S24CE10.DAT
 25           ID
 26           ID  ***********************************************************************
 27           ID   ALTERNATIVE 24 - REFLECTS IMPLEMENTATION OF McKELLIPS RD INTERCEPTOR CHANNEL
 28           ID   EXTENDING FROM JUST EAST OF ELLSWORTH ROAD TO THE SPOOK HILL FRS.
 29           ID   ORIGINAL SUB-BASINS 340, 360, 380, AND 400 ARE SUBDIVIDED INTO 340,341,
 30           ID   342, 360, 361, 380, 381, 400, AND 401.
 31           ID   CONCEPTUAL DETENTION BASINS ARE ALSO INCLUDED AT THE INTERSECTIONS OF
 32           ID                      McKELLIPS/ELLSWORTH.
 33           ID   MODEL IS CREATED FROM THE BASE EXISTING MODEL S24CE10.DAT
 34           ID   GENERATED BY SC ON 06-14-00          FILE: S24CE24.DAT
 35           ID  ***********************************************************************
 36           ID
 37           ID
              *DIAGRAM
 38           IT       2                    1500
 39           IO       3
 40           IN      15
 41           JD    3.81    0.01
 42           PC    .000    .002    .005    .008    .011    .014    .017    .020    .023    .026
 43           PC    .029    .032    .035    .038    .041    .044    .048    .052    .056    .060
 44           PC    .064    .068    .072    .076    .080    .085    .090    .095    .100    .105
 45           PC    .110    .115    .120    .126    .133    .140    .147    .155    .163    .172
 46           PC    .181    .191    .203    .218    .236    .257    .283    .387    .663    .707
 47           PC    .735    .758    .776    .791    .804    .815    .825    .834    .842    .849
 48           PC    .856    .863    .869    .875    .881    .887    .893    .898    .903    .908
 49           PC    .913    .918    .922    .926    .930    .934    .938    .942    .946    .950
 50           PC    .953    .956    .959    .962    .965    .968    .971    .974    .977    .980
 51           PC    .983    .986    .989    .992    .995    .998   1.000
 52           JD    3.58   10.00
 53           JD    3.43   30.00
 54           JD    3.28   60.00
1                                          HEC-1 INPUT                                                PAGE  2

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 55           JD    3.22   90.00
 56           JD    3.18  120.00
 57           JD    3.14  150.00
 58           JD    3.05  300.00
 59           JD    2.97  500.00
              * DDM   ***** Updated *****

 60           KK      10
 61           KM   SUB-BASIN 10
 62           KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 63           KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
 64           KM     L = 2.00  Kb = .044  Adj. Slope =  165.0
 65           BA    .702
 66           LG    .350    .320   7.600    .090  15.000
 67           UC    .421    .302
 68           UA       0       3       5       8      12      20      43      75      90      96
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 69          UA     100
             * DDM   ***** Preserved *****

 70          KK     R10
 71          KM   ROUTING OF FLOW FROM SUB-BASIN 10 TO R12
 72          RS       4    FLOW      -1
 73          RC    .045     .03    .045    8700     .021
 74          RX       0       1       2      17       27      42      43      44
 75          RY       5       5       5       0        0       5       5       5
             * DDM   ***** Preserved *****

 76          KK     R12
 77          KM   ROUTING OF FLOW FROM R12 TO SUB-BASIN 20
 78          RS       6    FLOW      -1
 79          RC    .045     .03    .045    4500      .01
 80          RX       0       1      30    37.5     57.5      65      94      95
 81          RY       3     2.5     2.5       0        0     2.5     2.5       3
             * DDM   ***** Updated *****

 82          KK      20
 83          KM   SUB-BASIN 20
 84          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 85          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
 86          KM     L = 2.50  Kb = .041  Adj. Slope =   88.0
 87          BA   1.120
 88          LG    .350    .390   5.800    .190   1.000
 89          UC    .658    .454
 90          UA       0       3       5       8      12      20      43      75      90      96
 91          UA     100
             * DDM   ***** Preserved *****

 92          KK     C20
 93          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 10 AND 20
 94          HC       2
             * DDM   ***** Updated *****
1                                    HEC-1 INPUT                                          PAGE  3

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 95          KK      40
 96          KM   SUB-BASIN 40
 97          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 98          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
 99          KM     L = 3.08  Kb = .036  Adj. Slope =  189.0
100          BA   2.233
101          LG    .340    .340   4.900    .280   5.000
102          UC    .496    .264
103          UA       0       3       5       8      12      20      43      75      90      96
104          UA     100
             * DDM   ***** Updated *****

105          KK      60
106          KM   SUB-BASIN 60
107          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
108          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .990
109          KM     L = 4.19  Kb = .038  Adj. Slope =  209.6
110          BA   1.746
111          LG    .330    .350   5.800    .190   9.000
112          UC    .596    .477
113          UA       0       3       5       8      12      20      43      75      90      96
114          UA     100
             * DDM   ***** Preserved *****

115          KK     60C
116          KM   HYDROGRAPH COMBINATION FOR APACHE JUNCTION FRS
             *      1       2
117          HC       3
             * DDM   ***** Preserved *****

118          KK    SR60
119          KM   APACHE JUNCTION FRS AS-BUILT PLANS 12/19/88
120          KM   OUTLET PIPE=30"RCP; L=136.6'; INLET INV.=1783.5; OUTLET INV.=1783
121          KM   EMERGENCY SPILLWAY ELEV.=1799.77'; PRINCIPLE SPILLWAY ELEV.=1793.5'
122          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 100 ACRE-FEET
123          RS       1    STOR       0
124          SV       0       1     100     200     300     400
125          SQ       0      71      81      87    91.5      94
126          SE    83.5    93.5      96    97.7      99   99.77
             * DDM   ***** Preserved *****

127          KK     R60
128          KM        ROUTE FLOW THROUGH BULLDOG FLOODWAY FROM APACHE JUNCTION FRS
129          RS       1    FLOW      -1
130          RC    .016    .016    .016    2850     .012
131          RX       0       1       2     2.1      5.6     5.7       6       7
132          RY     3.5     3.5     3.5       0        0     3.5     3.5     3.5
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE  4

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

133          KK    RR60
134          KM   ROUTE FLOW FROM BULLDOG FLOODWAY TO SUB-BASIN 80
135          RS       4    FLOW      -1
136          RC    .016    .016    .016    3500     .005
137          RX       0       1       2     2.1      7.1     7.2       8       9
138          RY     3.5     3.5     3.5       0        0     3.5     3.5     3.5
             * DDM   ***** Updated *****

139          KK      80
140          KM   SUB-BASIN 80
141          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
142          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .991
143          KM     L = 2.69  Kb = .039  Adj. Slope =  229.8
144          BA   1.475
145          LG    .330    .330   5.600    .210   4.000
146          UC    .433    .259
147          UA       0       3       5       8      12      20      43      75      90      96
148          UA     100
             * DDM   ***** Preserved *****
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149          KK     80C
150          KM   HYDROGRAPH COMBINATION FOR FLOW FROM APACHE JUNCTION FRS & SUB-BASIN 80
151          HC       2   1.475
             * DDM   ***** Preserved *****

152          KK     R80
153          KM   ROUTE FLOW FROM SUB-BASIN 80 TO SUB-BASIN 100
154          RS       1    FLOW      -1
155          RC    .025    .016    .025    1200    .003
156          RX       0       2       6     6.1    41.1    41.2    56.2    58.2
157          RY     5.5     4.5     4.5       0       0     4.5     4.5     5.5
             * DDM   ***** Updated *****

158          KK     100
159          KM   SUB-BASIN 100
160          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
161          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
162          KM     L = 1.94  Kb = .046  Adj. Slope =  108.0
163          BA    .484
164          LG    .320    .290   5.100    .260   3.000
165          UC    .533    .473
166          UA       0       5      16      30      65      77      84      90      94      97
167          UA     100
             * DDM   ***** Preserved *****

168          KK    100C
169          KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 80 & 100
170          HC       2
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

171          KK    R100
172          KM   ROUTE FLOW FROM SUB-BASIN 100 TO SUB-BASIN 120
173          RS       1    FLOW      -1
174          RC    .016    .016    .016     940    .005
175          RX       0       1       2     2.1    52.1    52.2      53      54
176          RY     4.5     4.5     4.5       0       0     4.5     4.5     4.5
             * DDM   ***** Updated *****

177          KK     120
178          KM   SUB-BASIN 120
179          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
180          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
181          KM     L = 3.07  Kb = .037  Adj. Slope =  239.0
182          BA   2.202
183          LG    .330    .280   6.800    .130  11.000
184          UC    .429    .226
185          UA       0       3       5       8      12      20      43      75      90      96
186          UA     100
             * DDM   ***** Preserved *****

187          KK    120C
188          KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 100 & 120
189          HC       2
             * DDM   ***** Preserved *****

190          KK    R120
191          KM   ROUTE FLOW FROM SUB-BASIN 120 TO SIGNAL BUTTE FRS
192          RS       1    FLOW      -1
193          RC    .025    .016    .025    2100    .005
194          RX       0       6      10    10.1    60.1    60.2    74.2    80.2
195          RY       8       5       5       0       0       5       5       8
             * DDM   ***** Updated *****

196          KK     140
197          KM   SUB-BASIN 140
198          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
199          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
200          KM     L = 1.61  Kb = .044  Adj. Slope =  149.0
201          BA    .598
202          LG    .310    .280   4.200    .440   5.000
203          UC    .421    .278
204          UA       0       5      16      30      65      77      84      90      94      97
205          UA     100
             * DDM   ***** Updated *****

206          KK     150
207          KM   SUB-BASIN 150
208          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
209          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
210          KM     L = 1.50  Kb = .047  Adj. Slope =  315.0
211          BA    .408
212          LG    .350    .360   5.100    .260   7.000
213          UC   1.579   1.417
214          UA       0       3       5       8      12      20      43      75      90      96
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

215          UA     100
             * DDM   ***** Preserved *****

216          KK    R150
217          KM   ROUTING OF FLOW FROM SUB-BASIN 150 TO R152
218          RS       3    FLOW      -1
219          RC    .045     .04    .045    3100    .032
220          RX       0       1       2      23      33      54      55      56
221          RY       7       7       7       0       0       7       7       7
             * DDM   ***** Preserved *****

222          KK    R152
223          KM   ROUTING OF FLOW FROM R152 TO SUB-BASIN 160
224          RS       6    FLOW      -1
225          RC    .045     .03    .045    5900    .019
226          RX       0       1       2       8      33      39      40      41
227          RY       2       2       2       0       0       2       2       2
             * DDM   ***** Updated *****

228          KK     160
229          KM   SUB-BASIN 160
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230          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
231          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
232          KM     L = 2.10  Kb = .047  Adj. Slope =  129.0
233          BA    .369
234          LG    .340    .330   4.150    .440   1.000
235          UC    .587    .655
236          UA      0       3       5       8      12      20      43      75      90      96
237          UA    100
             * DDM   ***** Updated *****

238          KK     180
239          KM   SUB-BASIN 180
240          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
241          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
242          KM     L = 2.42  Kb = .041  Adj. Slope =  140.0
243          BA   1.000
244          LG    .350    .350   4.150    .430    .000
245          UC    .571    .403
246          UA      0       3       5       8      12      20      43      75      90      96
247          UA    100
             * DDM   ***** Preserved *****

248          KK    180C
249          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
250          HC      5
             * DDM   ***** Updated *****

251          KK     210
252          KM   SUB-BASIN 210
253          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
254          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
255          KM     L = 1.84  Kb = .045  Adj. Slope =  315.0
256          BA    .583
257          LG    .350    .350   7.000    .120   5.000
1                                        HEC-1 INPUT                                          PAGE  7

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

258          UC    .321    .232
259          UA      0       3       5       8      12      20      43      75      90      96
260          UA    100
             * DDM   ***** Preserved *****

261          KK    R210
262          KM   ROUTING OF FLOW FROM SUB-BASIN 210 TO SUB-BASIN 220
263          RS      2    FLOW      -1
264          RC    .045     .03    .045    5100    .022
265          RX      0       1       2      14      34      46      47      48
266          RY      4       4       4       0       0       4       4       4
             * DDM   ***** Updated *****

267          KK     240
268          KM   SUB-BASIN 240
269          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
270          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .992
271          KM     L = 3.50  Kb = .039  Adj. Slope =  298.6
272          BA   1.398
273          LG    .350    .370   5.200    .240   2.000
274          UC    .471    .361
275          UA      0       3       5       8      12      20      43      75      90      96
276          UA    100
             * DDM   ***** Preserved *****

277          KK    240C
278          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
279          HC      2
             * DDM   ***** Preserved *****

280          KK   SR240
281          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
282          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
283          RS      1    STOR       0
284          SA   1.38    14.2    36.5
285          SE    1.7       5      11
286          SS      5      42       3     1.5
             * DDM   ***** Updated *****

287          KK     220
288          KM   SUB-BASIN 220
289          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
290          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
291          KM     L = 1.92  Kb = .043  Adj. Slope =  315.0
292          BA    .725
293          LG    .350    .350   7.000    .120   4.000
294          UC    .317    .209
295          UA      0       3       5       8      12      20      43      75      90      96
296          UA    100
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE  8

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

297          KK    220C
298          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
299          HC      2
             * DDM   ***** Preserved *****

300          KK   SR220
301          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
302          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
303          RS      1    STOR       0
304          SA    .78     4.1    13.7
305          SE      1       3      10
306          SS      3      65       3     1.5
             * DDM   ***** Updated *****

307          KK     190
308          KM   SUB-BASIN 190
309          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
310          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
311          KM     L = 1.91  Kb = .042  Adj. Slope =  315.0
312          BA    .918
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313          LG    .350    .390   5.800    .190   8.000
314          UC    .321    .185
315          UA       0       3       5       8      12      20      43      75      90      96
316          UA     100
             * DDM   ***** Preserved *****

317          KK    R190
318          KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
319          RS       2    FLOW      -1
320          RC    .045     .03    .045    4740     .03
321          RX       0       1       2      17      37      52      53      54
322          RY       5       5       5       0       0       5       5       5
             * DDM   ***** Preserved *****

323          KK    R192
324          KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
325          RS       2    FLOW      -1
326          RC    .045    .035    .045    2200    .018
327          RX       0       1      50      59      79      88     137     138
328          RY     3.5       3       3       0       0       3       3     3.5
             * DDM   ***** Updated *****

329          KK     200
330          KM   SUB-BASIN 200
331          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
332          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
333          KM     L = 1.58  Kb = .045  Adj. Slope =  305.6
334          BA    .535
335          LG    .350    .390   5.700    .200  10.000
336          UC    .300    .200
337          UA       0       3       5       8      12      20      43      75      90      96
338          UA     100
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE  9

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

339          KK    200C
340          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 220 & 200
341          HC       3
             * DDM   ***** Preserved *****

342          KK   SR200
343          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
344          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
345          RS       1    STOR       0
346          SA    2.56     3.1     9.4
347          SE       0       3      10
348          SS       3     112       3     1.5
             * DDM   ***** Preserved *****

349          KK    R200
350          KM   ROUTE FLOW FROM SUB-BASIN 200 TO SIGNAL BUTTE FRS
351          RS       1    FLOW      -1
352          RC    .035    .025    .035    1300    .005
353          RX       0       1       2      17     117     132     133     134
354          RY       5       5       5       0       0       5       5       5
             * DDM   ***** Preserved *****

355          KK    C180
356          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
             *      1       2
357          HC       2
             * DDM   ***** Preserved *****

358          KK   SR180
359          KM   SIGNAL BUTTE FRS DATED 1/28/85
360          KM   OUTLET PIPE=36"RCP; L= 147';  INLET INV.=1690; OUTLET INV.=1687
361          KM   EMERGENCY SPILLWAY ELEV.=1712.4; PRINCIPLE SPILLWAY ELEV.=1701
362          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 250 ACRE-FEET
363          RS       1    STOR       0
364          SV       0       1     250     500     750    1060
365          SQ       0   106.5   125.5   137.5     146     160
366          SE      90     101   104.5     107     109   112.4
             * DDM   ***** Preserved *****

367          KK    R180
368          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
369          KM   ROUTE FLOW FROM SIGNAL BUTTE FRS TO SUB-BASIN 260
370          RS       3    FLOW      -1
371          RC    .035    .025    .035    1500    .003
372          RX       0       1       2    22.6    38.6    59.2      60      61
373          RY     9.3     9.3     9.3       0       0     9.3     9.3     9.3
             * DDM   ***** Updated *****

374          KK     260
375          KM   SUB-BASIN 260
376          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
377          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
378          KM     L =  .81  Kb = .049  Adj. Slope =   68.0
379          BA    .267
1                                    HEC-1 INPUT                                          PAGE 10

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

380          LG    .300    .170   6.800    .160  15.000
381          UC    .363    .215
382          UA       0       5      16      30      65      77      84      90      94      97
383          UA     100
             * DDM   ***** Preserved *****

384          KK    260C
385          KM   HYDROGRAPH COMBINATION FOR OUTFLOW OF SIGNAL BUTTE FRS & SUB-BASIN 260
386          HC       2    .267
             * DDM   ***** Preserved *****

387          KK    R260
388          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
389          KM   ROUTE FLOW FROM SUB-BASIN 260 TO SUB-BASIN 280
390          RS       3    FLOW      -1
391          RC    .035    .025    .035    2300    .003
392          RX       0       1       2    23.4    43.4    64.8      65      66
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393          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Updated *****

394          KK     280
395          KM   SUB-BASIN 280
396          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
397          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
398          KM     L =  .77  Kb = .049  Adj. Slope =   84.0
399          BA    .304
400          LG    .300    .250   5.300    .290  15.000
401          UC    .333    .175
402          UA       0       5      16      30      65      77      84      90      94      97
403          UA     100
             * DDM   ***** Preserved *****

404          KK    280C
405          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 260 & SUB-BASIN 280
406          HC       2
             * DDM   ***** Preserved *****

407          KK    R280
408          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
409          KM   ROUTE FLOW FROM SUB-BASIN 280 TO SUB-BASIN 300
410          RS       2    FLOW      -1
411          RC    .035    .025    .035    2500    .003
412          RX       0       1       2    23.4    43.4    64.8      65      66
413          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Updated *****

414          KK     300
415          KM   SUB-BASIN 300
416          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
417          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
418          KM     L = 2.28  Kb = .041  Adj. Slope =  127.0
419          BA    .988
420          LG    .340    .320   4.500    .370   7.000
421          UC    .538    .362
422          UA       0       5      16      30      65      77      84      90      94      97
1                                        HEC-1 INPUT                                          PAGE 11

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

423          UA     100
             * DDM   ***** Preserved *****

424          KK    300C
425          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 280 & 300
426          HC       2
             * DDM   ***** Preserved *****

427          KK    R300
428          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
429          KM   ROUTE FLOW FROM SUB-BASIN 300 TO START OF FLOODWAY CONCRETE CHANNEL
430          RS       2    FLOW      -1
431          RC    .035    .025    .035    2200    .003
432          RX       0       1       2    23.4    55.4    76.8      77      78
433          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Preserved *****

434          KK   RR300
435          KM   CHANNEL GEOMETRY FOR SPOOK HILL FRS OBTAINED FROM AS-BUILTS PLANS.
436          KM   CONTINUE TO ROUTE FLOW WITHIN CONCRETE CHANNEL TO SPOOK HILL FRS
437          RS       2    FLOW      -1
438          RC    .016    .016    .016    6050   .0146
439          RX       0       1       2     2.1    16.1    16.2      17      18
440          RY     7.5     7.5     7.5       0       0     7.5     7.5     7.5
             *      1       2
             * DDM   ***** Updated *****

441          KK     350
442          KM   SUB-BASIN 350
443          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
444          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
445          KM     L = 2.22  Kb = .042  Adj. Slope =  315.0
446          BA    .970
447          LG    .350    .350   4.550    .340   4.000
448          UC    .367    .234
449          UA       0       3       5       8      12      20      43      75      90      96
450          UA     100
             * DDM   ***** Preserved *****

451          KK    D350
452          KM   DIVERT FLOW FROM SUB-BASIN 350. FOR MODELING PURPOSES THE SPLIT FLOW WILL
453          KM   BE ROUTED BETWEEN SUB-BASINS 355 & 310. THE MAIN FLOW WILL ROUTED TO 310
454          DT   SF350
455          DI       0   10000
456          DQ       0    6000
             * DDM   ***** Preserved *****

457          KK    350R
458          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING
459          KM   ROUTING OF MAIN FLOW FROM DIVERSION OF SUB-BASIN 350 TO SUB-BASIN 310
460          RS       7    FLOW      -1
461          RC    .045    .035    .045    5150    .025
462          RX       0       1      40      46      56      62     102     103
463          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****
1                                        HEC-1 INPUT                                          PAGE 12

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

464          KK     310
465          KM   SUB-BASIN 310
466          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
467          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
468          KM     L = 2.70  Kb = .045  Adj. Slope =  283.5
469          BA    .555
470          LG    .350    .350   3.910    .480    .000
471          UC    .483    .511
472          UA       0       3       5       8      12      20      43      75      90      96
473          UA     100
             * DDM   ***** Preserved *****
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474          KK    C310
475          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 350 & 310
476          HC       2    .943
             * DDM   ***** Preserved *****

477          KK    R310
478          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
479          KM   ROUTING OF FLOW FROM SUB-BASIN 310 TO 320
480          RS      11    FLOW      -1
481          RC    .045    .035    .045   10050    .022
482          RX       0       1      40      46      56      62     102     103
483          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

484          KK     320
485          KM   SUB-BASIN 320
486          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
487          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
488          KM     L = 2.20  Kb = .042  Adj. Slope =  132.0
489          BA    .972
490          LG    .310    .300   4.550    .360  14.000
491          UC    .508    .333
492          UA       0       5      16      30      65      77      84      90      94      97
493          UA     100
             * DDM   ***** Preserved *****

494          KK    D320
495          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
496          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
497          KM   SIERRA HEIGHTS       FALCON RIDGE    & MARBLE CREEK
498          KM        MAXIMUM VOLUME DIVERSION = 12.27acre-feet
             *      1
499          DT   BS320   12.27
500          DI       0   10000
501          DQ       0   10000
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

502          KK   RT320
503          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
504          DR   BS320
             * DDM   ***** Preserved *****

505          KK   SR320
506          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
507          KM   12.27 ACRE-FEETx43560/36x3600=4.1cfs
             *      1
508          RS       1    STOR       0
509          SV       0     .01    12.3
510          SQ       0     4.2     4.2
             * DDM   ***** Preserved *****

511          KK    C320
512          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
513          HC       4
             *
             *
             * BEGINNING OF ALTERNATIVE 15 REVISIONS WHICH INCLUDE AN INTERCEPTOR CHANNEL
             * ALONG McKELLIPS RD.
             *
             *
             * DDM   ***** Updated *****

514          KK     340
515          KM   SUB-BASIN 340
516          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
517          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
518          KM     L = 1.78  Kb = .047  Adj. Slope =   99.0
519          BA   1.024
520          LG    .250    .250   4.200    .540  26.000
521          UC    .546    .296
522          UA       0       5      16      30      65      77      84      90      94      97
523          UA     100
             * DDM   ***** Preserved *****

524          KK    D340
525          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
526          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
527          KM   GRANDVIEW ESTATES    BOULDER MOUNTAIN & 33% OF MESA HIGHLANDS
528          KM        MAXIMUM VOLUME DIVERSION =39.2 acre feet
             *      1
529          DT   BS340    39.2
530          DI       0   10000
531          DQ       0   10000
             * DDM   ***** Preserved *****

532          KK   RT340
533          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
534          DR   BS340
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

535          KK   SR340
536          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
537          KM    39.2 ACRE-FEETx43560\36x3600=13.2cfs
             *      1
538          RS       1    STOR       0
539          SV       0     .01    39.2
540          SQ       0    13.2    13.2
             * DDM   ***** Preserved *****

541          KK    C340
542          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
543          HC       3
             * DDM   ***** Updated *****
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544          KK     360
545          KM   SUB-BASIN 360
546          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
547          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
548          KM     L = 1.21  Kb = .062  Adj. Slope =  104.0
549          BA    .315
550          LG    .220    .250   4.100    .640  29.000
551          UC    .504    .389
552          UA       0       5      16      30      65      77      84      90      94      97
553          UA     100
             * DDM   ***** Preserved *****

554          KK    D360
555          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
556          KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
557          KM        MAXIMUM VOLUME DIVERSION = 15.7 acre-feet
             *      1
558          DT   BS360    15.7
559          DI       0   10000
560          DQ       0   10000
             * DDM   ***** Preserved *****

561          KK   RT360
562          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
563          DR   BS360
             * DDM   ***** Preserved *****

564          KK   SR360
565          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
566          KM    15.7 ACRE-FEETx43560/36x3600=5.3 cfs
567          RS       1    STOR       0
568          SV       0     .01    15.7
569          SQ       0     5.3     5.3
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 15

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

570          KK    360C
571          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
572          HC       3
             * DDM   ***** Updated *****

573          KK     380
574          KM   SUB-BASIN 380
575          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
576          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
577          KM     L =  .67  Kb = .078  Adj. Slope =  119.0
578          BA    .268
579          LG    .180    .250   4.100    .710  19.000
580          UC    .392    .201
581          UA       0       5      16      30      65      77      84      90      94      97
582          UA     100
             * DDM   ***** Preserved *****

583          KK    D380
584          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
585          KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
586          KM        MAXIMUM VOLUME DIVERSION  = 7.1 acre-feet
             *      1
587          DT   BS380     7.1
588          DI       0   10000
589          DQ       0   10000
             * DDM   ***** Preserved *****

590          KK   RT380
591          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
592          DR   BS380
             * DDM   ***** Preserved *****

593          KK   SR380
594          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
595          KM    7.1  ACRE-FEETx43560\36x3600=2.4 cfs
596          RS       1    STOR       0
597          SV       0     .01     7.1
598          SQ       0     2.4     2.4
             * DDM   ***** Preserved *****

599          KK    380C
600          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
601          HC       3
             * DDM   ***** Updated *****

602          KK     400
603          KM   SUB-BASIN 400
604          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
605          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
606          KM     L =  .30  Kb = .112  Adj. Slope =  107.0
607          BA    .053
608          LG    .200    .250   4.000    .740    .000
609          UC    .321    .213
610          UA       0       5      16      30      65      77      84      90      94      97
1                                    HEC-1 INPUT                                          PAGE 16

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

611          UA     100
             * DDM   ***** Preserved *****

612          KK    D400
613          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
614          KM   DETENTION/RETENTION BASIN LOCATED WITHIN SAGUARO VISTA SUBDIVISION
615          KM        MAXIMUM VOLUME DIVERSION = 1.6 ACRE-FEET
             *      1
616          DT   BS400     1.6
617          DI       0   10000
618          DQ       0   10000
             * DDM   ***** Preserved *****

619          KK   RT400
620          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
621          DR   BS400
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            * DDM   ***** Preserved *****

 622        KK   SR400
 623        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
 624        KM     1.6 ACRE-FEETx43560/36x3600 = 0.5 cfs
 625        RS       1    STOR       0
 626        SV       0     .01     1.6
 627        SQ       0     0.5     0.5
            * DDM   ***** Preserved *****

 628        KK    C400
 629        KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
 630        HC       2
            * DDM   ***** Updated *****

 631        KK    400C
 632        KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
 633        HC       2
            * DDM   ***** Preserved *****

 634        KK   RT350
 635        KM   RETRIEVE SPLIT FLOW FROM DIVERSION OF SUB-BASIN 350
 636        DR   SF350
            * DDM   ***** Preserved *****

 637        KK   RR350
 638        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
 639        KM   ROUTING OF FLOW FROM SPLIT OF SUB-BASIN 350 TO 355
 640        RS       7    FLOW      -1
 641        RC    .045    .035    .045    6050    .025
 642        RX       0       1      40      46      56      62     102     103
 643        RY       3       2       2       0       0       2       2       3
            * DDM   ***** Updated *****
1                                   HEC-1 INPUT                                          PAGE 17

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 644        KK     355
 645        KM   SUB-BASIN 355
 646        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 647        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
 648        KM     L = 3.00  Kb = .044  Adj. Slope =  284.0
 649        BA    .659
 650        LG    .340    .340   4.450    .370   4.000
 651        UC    .488    .509
 652        UA       0       3       5       8      12      20      43      75      90      96
 653        UA     100
            * DDM   ***** Preserved *****

 654        KK    C355
 655        KM   HYDROGRAPH COMBINATION OF SUB-BASIN 355 AND THE SPLIT FLOW FROM SUB-BASIN 350
 656        HC       2    1.24
            * DDM   ***** Preserved *****

 657        KK    R355
 658        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
 659        KM   ROUTING OF FLOW FROM SUB-BASIN 355 TO SUB-BASIN 361
 660        RS       6    FLOW      -1
 661        RC    .045    .035    .045    5868   0.021
 662        RX       0       1      40      46      56      62     102     103
 663        RY       3       2       2       0       0       2       2       3
            * DDM   ***** Updated *****

 664        KK     361
 665        KM   SUB-BASIN 361
 666        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 667        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
 668        KM     L = 1.03  Kb = .047  Adj. Slope =  142.0
 669        BA    .359
 670        LG    .270    .250   4.100    .540  24.000
 671        UC    .329    .198
 672        UA       0       5      16      30      65      77      84      90      94      97
 673        UA     100
            * DDM   ***** Preserved *****

 674        KK    D361
 675        KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
 676        KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
 677        KM        MAXIMUM VOLUME DIVERSION = 12.9 acre-feet
            *      1
 678        DT   BS361    12.9
 679        DI       0   10000
 680        DQ       0   10000
            * DDM   ***** Preserved *****

 681        KK   RT361
 682        KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
 683        DR   BS361
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 18

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 684        KK   SR361
 685        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
 686        KM    12.9 ACRE-FEETx43560/36x3600=4.3 cfs
 687        RS       1    STOR       0
 688        SV       0     .01    12.9
 689        SQ       0     4.3     4.3
            * DDM   ***** Preserved *****

 690        KK    361C
 691        KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
 692        HC       3
            * DDM   ***** Updated *****

 693        KK     342
 694        KM   SUB-BASIN 342
 695        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 696        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
 697        KM     L = 1.01  Kb = .048  Adj. Slope =  213.1
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698          BA    .298
699          LG    .310    .260   3.950    .530  16.000
700          UC    .279    .180
701          UA      0       5      16      30      65      77      84      90      94      97
702          UA    100
             *

703          KK   D3421
704          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
705          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
706          KM   GRANDVIEW ESTATES    BOULDER MOUNTAIN & 33% OF MESA HIGHLANDS
707          KM        MAXIMUM VOLUME DIVERSION  =8.4 Acre feet
             *      1
708          DT  BS3421     8.4
709          DI       0   10000
710          DQ       0   10000
             * DDM   ***** Preserved *****

711          KK  RT3421
712          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
713          DR  BS3421
             * DDM   ***** Preserved *****

714          KK  SR3421
715          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
716          KM     8.4 ACRE-FEETx43560\36x3600=2.8 cfs
             *      1
717          RS       1    STOR       0
718          SV       0     .01     8.4
719          SQ       0     2.8     2.8
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

720          KK    C342
721          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
722          HC       2
             *

723          KK   D3422
724          KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN AT NE CORNER OF ELLSWORTH
725          KM   AND  McKELLIPS ROAD
726          KM   MAXIMUM VOLUME OF DIVERSION IS 15 ACRE FEET
727          DT  BS3422      15
728          DI       0      20   10000
729          DQ       0       0    9980
             *

730          KK  RT3422
731          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
732          DR  BS3422
             *

733          KK  SR3422
734          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS
735          KM      15 ACRE-FEETx43560/36x3600 =5.0 cfs
736          RS       1    STOR       0
737          SV       0     .01      15
738          SQ       0     5.0     5.0
             *

739          KK   CC342
740          KM   HYDROGRAPH COMBINATION AT McKELLIPS RD CHANNEL
741          HC       2
             *

742          KK    R342
743          KM   ROUTING OF FLOW FROM SUB-BASIN 342 TO 341
744          RS       7    FLOW      -1
745          RC    0.05    0.03    0.05    2198  0.0118
746          RX       0     0.1     0.2       4       9      13     213   213.1
747          RY     3.0     1.5     1.0       0       0     1.0     2.0     3.0
             *

748          KK     341
749          KM   SUB-BASIN 341
750          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
751          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
752          KM     L = 1.01  Kb = .048  Adj. Slope =  123.0
753          BA    .229
754          LG    .250    .250   3.910    .600  34.000
755          UC    .346    .266
756          UA      0       5      16      30      65      77      84      90      94      97
757          UA    100
             *
             * DDM   ***** Preserved *****
```



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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

758          KK    D341
759          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
760          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
761          KM   GRANDVIEW ESTATES    BOULDER MOUNTAIN & 33% OF MESA HIGHLANDS
762          KM        MAXIMUM VOLUME DIVERSION  =8.4 Acre feet
             *
763          DT   BS341     8.4
764          DI       0   10000
765          DQ       0   10000
             * DDM   ***** Preserved *****

766          KK   RT341
767          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
768          DR   BS341
             * DDM   ***** Preserved *****

769          KK   SR341
770          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
771          KM     8.4 ACRE-FEETx43560\36x3600=2.8 cfs
             *
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772          RS       1    STOR       0
773          SV       0     .01     8.4
774          SQ       0     2.8     2.8
             * DDM   ***** Preserved *****

775          KK    C341
776          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
777          HC       3
             * DDM   ***** Preserved *****

778          KK   RR341
779          KM   ROUTING OF FLOW FROM SUB-BASIN 341 TO 361
780          KM   ARTIFICIALLY HIGH VALUE FOR NSTPS IS USED TO PRESERVE PEAK INFLOW
781          RS      50    FLOW      -1
782          RC   0.050   0.030   0.050    4143  0.0126
783          RX       0     0.1     0.2       4       9      13     213   213.1
784          RY     3.0     1.5     1.0       0       0     1.0     2.0     3.0
             * DDM   ***** Preserved *****

785          KK   361CC
786          KM   HYDROGRAPH COMBINATION AT McKELLIPS ROAD INTERCEPTOR CHANNEL
787          HC       2
             *
             * DDM   ***** Preserved *****

788          KK   RR361
789          KM   ROUTING OF FLOW FROM SUB-BASIN 361 TO 381
790          KM   A VALUE OF 5 WAS USED FOR NSTPS TO KEEP OUTFLOW AT OR BELOW INFLOW
791          RS       5    FLOW      -1
792          RC   0.050   0.030   0.050    3854  0.0156
793          RX       0     0.1     0.2       8      28      36     236   236.1
794          RY     3.5     2.5       2       0       0       2       3     3.5
             * DDM   ***** Updated *****
1                                    HEC-1 INPUT                                          PAGE 21

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

795          KK     370
796          KM   SUB-BASIN 370
797          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
798          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
799          KM     L = 2.90  Kb = .044  Adj. Slope =  294.6
800          BA    .667
801          LG    .340    .320   4.650    .330   9.000
802          UC    .454    .455
803          UA       0       3       5       8      12      20      43      75      90      96
804          UA     100
             * DDM   ***** Updated *****

805          KK     395
806          KM   SUB-BASIN 395
807          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
808          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
809          KM     L = 1.60  Kb = .051  Adj. Slope =  215.8
810          BA    .198
811          LG    .330    .320   4.900    .300  10.000
812          UC    .383    .468
813          UA       0       3       5       8      12      20      43      75      90      96
814          UA     100
             * DDM   ***** Preserved *****

815          KK    370C
816          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
817          HC       2
             * DDM   ***** Preserved *****

818          KK    R370
819          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
820          KM   ROUTING OF FLOW FROM SUB-BASINS 370 AND 395 TO SUB-BASIN 381.
821          RS      10    FLOW      -1
822          RC    .045    .035    .045    8633   0.022
823          RX       0       1      40      46      56      62     102     103
824          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

825          KK     381
826          KM   SUB-BASIN 381
827          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
828          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
829          KM     L = 1.65  Kb = .043  Adj. Slope =  119.0
830          BA    .726
831          LG    .310    .280   4.200    .490  13.000
832          UC    .463    .282
833          UA       0       5      16      30      65      77      84      90      94      97
834          UA     100
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 22

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

835          KK    D381
836          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
837          KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
838          KM        MAXIMUM VOLUME DIVERSION  =21.5 acre-feet
             *      1
839          DT   BS381    21.5
840          DI       0   10000
841          DQ       0   10000
             * DDM   ***** Preserved *****

842          KK   RT381
843          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
844          DR   BS381
             * DDM   ***** Preserved *****

845          KK   SR381
846          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
847          KM   21.5  ACRE-FEETx43560/36x3600=7.2 cfs
848          RS       1    STOR       0
849          SV       0     .01    21.5
850          SQ       0     7.2     7.2
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            * DDM   ***** Preserved *****

851         KK    381C
852         KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
853         HC       4
            *
            * DDM   ***** Preserved *****

854         KK   RR381
855         KM   ROUTING OF FLOW FROM SUB-BASIN 381 TO 401
856         RS       5    FLOW      -1
857         RC    0.05    0.03    0.05    2992  0.0134
858         RX       0     0.1     0.2       8      33      41     241   241.1
859         RY     3.5     2.5       2       0       0       2       3     3.5
            * DDM   ***** Updated *****

860         KK     390
861         KM   SUB-BASIN 390
862         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
863         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
864         KM     L =  .70  Kb = .050  Adj. Slope =  299.4
865         BA    .244
866         LG    .300    .250   4.700    .380  18.000
867         UC    .204    .107
868         UA       0       5      16      30      65      77      84      90      94      97
869         UA     100
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 23

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

870         KK    D390
871         KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
872         KM   DETENTION/RETENTION BASINS LOCATED WITHIN THUNDER MOUNTAIN ESTATES
873         KM        MAXIMUM VOLUME DIVERSION  = 3.5 acre-feet
            *      1
874         DT   BS390     3.5
875         DI       0   10000
876         DQ       0   10000
            * DDM   ***** Preserved *****

877         KK   RT390
878         KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
879         DR   BS390
            * DDM   ***** Preserved *****

880         KK   SR390
881         KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
882         KM     3.5 ACRE-FEETx43560/36x3600=1.2cfs
883         RS       1    STOR       0
884         SV       0     .01     3.5
885         SQ       0     1.2     1.2
            * DDM   ***** Preserved *****

886         KK    390C
887         KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
888         HC       2
            * DDM   ***** Preserved *****

889         KK   RR390
890         KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
891         KM   FROM SUB-BASIN 390 TO SUB-BASIN 401
892         RS      14    FLOW      -1
893         RC    .045    .045    .045    8800    .020
894         RX       0       1      40      46      56      62     102     103
895         RY       3       2       2       0       0       2       2       3
            * DDM   ***** Updated *****

896         KK     401
897         KM   SUB-BASIN 401
898         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
899         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
900         KM     L = 1.71  Kb = .051  Adj. Slope =   97.0
901         BA    .605
902         LG    .280    .250   4.150    .570  12.000
903         UC    .604    .433
904         UA       0       5      16      30      65      77      84      90      94      97
905         UA     100
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 24

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

906         KK    D401
907         KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
908         KM   DETENTION/RETENTION BASIN LOCATED WITHIN SAGUARO VISTA SUBDIVISION
909         KM        MAXIMUM VOLUME DIVERSION = 4.0 ACRE-FEET
            *      1
910         DT   BS401     4.0
911         DI       0   10000
912         DQ       0   10000
            * DDM   ***** Preserved *****

913         KK   RT401
914         KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
915         DR   BS401
            * DDM   ***** Preserved *****

916         KK   SR401
917         KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
918         KM     4.0 ACRE-FEETx43560/36x3600= 1.3 cfs
919         RS       1    STOR       0
920         SV       0     .01     4.0
921         SQ       0     1.3     1.3
            * DDM   ***** Preserved *****

922         KK    C401
923         KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
924         HC       5
            *
            *
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            * END OF ALTERNATIVE 15 REVISIONS
            *
            * DDM   ***** Updated *****

 925        KK     385
 926        KM   SUB-BASIN 385
 927        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 928        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
 929        KM     L = 2.30  Kb = .044  Adj. Slope =  303.0
 930        BA    .647
 931        LG    .350    .370   5.600    .210  13.000
 932        UC    .375    .311
 933        UA      0       3       5       8      12      20      43      75      90      96
 934        UA     100
            * DDM   ***** Preserved *****

 935        KK    D385
 936        KM   DIVERT FLOW INTO SUB-BASINS 415 & 420
 937        DT   SF385
 938        DI       0   10000
 939        DQ       0    2500
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                                    PAGE 25

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


 940        KK    385R
 941        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
 942        KM   ROUTING OF FLOW DIVERSION FROM SUB-BASIN 385 INTO SUB-BASIN 420
 943        RS      14    FLOW      -1
 944        RC    .045     .04    .045   10250    .022
 945        RX       0       1      40      46      56      62     102     103
 946        RY       3       2       2       0       0       2       2       3
            * DDM   ***** Updated *****

 947        KK     420
 948        KM   SUB-BASIN 420
 949        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 950        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .995
 951        KM     L = 1.91  Kb = .042  Adj. Slope =  120.0
 952        BA    .849
 953        LG    .310    .270   3.880    .580  12.000
 954        UC    .512    .325
 955        UA      0       5      16      30      65      77      84      90      94      97
 956        UA     100
            * DDM   ***** Preserved *****

 957        KK    D420
 958        KM       DIVERT FLOW INTO ONLINE  DETENTION BASIN
 959        KM   DETENTION/RETENTION BASINS LOCATED WITHIN GRAY FOX SUBDIVISION
 960        KM       MAXIMUM VOLUME DIVERSION = 8.65 acre-feet
            *
 961        DT   BS420    8.65
 962        DI       0   10000
 963        DQ       0   10000
            * DDM   ***** Preserved *****

 964        KK   RT420
 965        KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
 966        DR   BS420
            * DDM   ***** Preserved *****

 967        KK   SR420
 968        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
 969        KM   38.55 ACRE-FEETx43560/36x3600=13cfs
 970        RS       1    STOR       0
 971        SV       0     .01   38.55
 972        SQ       0     .13      13
            * DDM   ***** Preserved *****

 973        KK    420C
 974        KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
 975        HC       4   10.87
            * DDM   ***** Updated *****
1                                   HEC-1 INPUT                                                    PAGE 26

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


 976        KK     440
 977        KM   SUB-BASIN 440
 978        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 979        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
 980        KM     L =  .40  Kb = .039  Adj. Slope =  315.0
 981        BA    .080
 982        LG    .190    .380   6.400    .140  13.000
 983        UC    .129    .077
 984        UA      0       3       5       8      12      20      43      75      90      96
 985        UA     100
            * DDM   ***** Preserved *****

 986        KK     R70
 987        KM   ROUTE FLOW FROM SUB-BASIN 440 TO C108
 988        RS       1    FLOW      -1
 989        RC     .05    .035     .05    2250     .08
 990        RX    1000    1025    1050    1070    1075    1095    1120    1145
 991        RY      30    22.9    15.7      10      10    15.7    22.9      30
            * DDM   ***** Updated *****

 992        KK     441
 993        KM   SUB-BASIN 441
 994        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 995        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
 996        KM     L =  .28  Kb = .069  Adj. Slope =  315.0
 997        BA    .010
 998        LG    .300    .250   5.600    .220   5.000
 999        UC    .150    .225
1000        UA      0       5      16      30      65      77      84      90      94      97
1001        UA     100
            * DDM   ***** Preserved *****

1002        KK    C108
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1003        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 440 & 441
1004        HC       2
            * DDM   ***** Preserved *****

1005        KK    DIV4
1006        KM        SPLIT FLOW WITH TWO 42 INCH PIPES TO WEST AND SOUTH
            *      1
1007        DT   SPLIT
1008        DI       0      14      40      82     120     154     180
1009        DQ       0       7      20      41      60      77      90
            * DDM   ***** Preserved *****

1010        KK    R108
1011        KM        ROUTE FLOW FROM SUB-BASIN C108 TO C67
1012        RS       2    FLOW      -1
1013        RC     .05    .035     .05    3200      .1
1014        RX    1000    1025    1050    1070    1075    1095    1120    1145
1015        RY      30    22.9    15.7      10      10    15.7    22.9      30
            * DDM   ***** Updated *****
1                                       HEC-1 INPUT                                                    PAGE 27

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1016        KK     442
1017        KM   SUB-BASIN 442
1018        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1019        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1020        KM     L =  .83  Kb = .055  Adj. Slope =  274.2
1021        BA    .100
1022        LG    .300    .270   3.290    .770   5.000
1023        UC    .258    .264
1024        UA       0       5      16      30      65      77      84      90      94      97
1025        UA     100
            * DDM   ***** Preserved *****

1026        KK     C67
1027        KM   COMBINE FLOW FROM SUB-BASIN 442 & DIV4
1028        HC       2
            * DDM   ***** Preserved *****

1029        KK    DIV6
1030        KM        OFFLINE BASIN WITH 25 FOOT WEIR SET AT 2.5 FEET ABOVE BOTTOM OF CHANNEL
1031        KM        FLOW CONTINUES BEYOND BASIN THROUGH 2-30" PIPES
            *      1
1032        DT  BASIN4
1033        DI       0      10      32      44    79.9   132.5     198   272.9   356.8
1034        DQ       0       0       0       0    23.9    67.5     124   190.9   266.8
            * DDM   ***** Preserved *****

1035        KK  RTDIV6
1036        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1037        DR  BASIN4
            * DDM   ***** Preserved *****

1038        KK  RFDIV6
1039        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1040        KM     3.3 ACRE-FEETx43560/36x3600=1.1cfs
            *      1
1041        RS       1    STOR       0
1042        SV       0     .01     3.3
1043        SQ       0     1.1     1.1
            * DDM   ***** Preserved *****

1044        KK   CDIV6
1045        KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1046        HC       2
            * DDM   ***** Updated *****

1047        KK     443
1048        KM   SUB-BASIN 443
1049        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1050        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1051        KM     L =  .71  Kb = .050  Adj. Slope =  315.0
1052        BA    .080
1053        LG    .250    .190   8.000    .080  10.000
1054        UC    .196    .194
1055        UA       0       5      16      30      65      77      84      90      94      97
1                                       HEC-1 INPUT                                                    PAGE 28

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1056        UA     100
            * DDM   ***** Preserved *****

1057        KK   DIV66
1058        KM        DIVERT FLOW INTO 3 NATURAL WASHES WITH ONE 24" PIPE IN EACH WASH.
1059        KM        EACH PIPE CAPACITY BASED ON 4 FEET OF HEAD
1060        DT   WSH66
1061        DI       0      78     100     200
1062        DQ       0      78      78      78
            * DDM   ***** Preserved *****

1063        KK    R113
1064        KM        ROUTE FLOW FROM C113 TO C114
1065        RS       1    FLOW      -1
1066        RC    .019    .019    .019    1300    .029
1067        RX    1000    1004    1008    1012    1018    1022    1026    1030
1068        RY      17   15.33   12.67      10      10   12.67   15.33      17
            * DDM   ***** Preserved *****

1069        KK    C114
1070        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 67 AND C113
1071        HC       2
            * DDM   ***** Updated *****

1072        KK     444
1073        KM   SUB-BASIN 444
1074        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1075        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1076        KM     L =  .33  Kb = .034  Adj. Slope =  315.0
1077        BA    .040
1078        LG    .130    .350   4.450    .320   1.000
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1079        UC    .112    .084
1080        UA       0       3       5       8      12      20      43      75      90      96
1081        UA     100
            * DDM   ***** Preserved *****

1082        KK     R58
1083        KM   ROUTE FLOW FROM SUB-BASIN 444 TO C107
1084        RS       1    FLOW      -1
1085        RC     .05    .035     .05    2370   .0516
1086        RX    1000    1010    1020    1050    1055    1085    1095    1105
1087        RY      19      18      17      10      10      17      18      19
            * DDM   ***** Updated *****

1088        KK     445
1089        KM   SUB-BASIN 445
1090        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1091        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1092        KM     L =  .82  Kb = .036  Adj. Slope =  315.0
1093        BA    .190
1094        LG    .170    .320   3.470    .590   3.000
1095        UC    .192    .130
1096        UA       0       5      16      30      65      77      84      90      94      97
1097        UA     100
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 29

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1098        KK    C107
1099        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 444 & 445
1100        HC       2
            * DDM   ***** Preserved *****

1101        KK    R107
1102        KM        ROUTE FLOW FROM C107 TO C109
1103        RS       1    FLOW      -1
1104        RC     .05    .035     .05     700   .0516
1105        RX    1000    1010    1020    1050    1055    1085    1095    1105
1106        RY      19      18      17      10      10      17      18      19
            * DDM   ***** Preserved *****

1107        KK    RTB2
1108        KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
            *      1
1109        DR   SPLIT
            * DDM   ***** Preserved *****

1110        KK  RSPLIT
1111        KM        ROUTE FLOW FROM SPLIT TO C109
1112        RS       1    FLOW      -1
1113        RC     .05    .035     .05     800     .05
1114        RX    1000    1025    1050    1070    1075    1095    1120    1145
1115        RY      30    22.9    15.7      10      10    15.7    22.9      30
            * DDM   ***** Updated *****

1116        KK     446
1117        KM   SUB-BASIN 446
1118        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1119        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1120        KM     L =  .46  Kb = .061  Adj. Slope =  303.9
1121        BA    .040
1122        LG    .270    .250   4.500    .400  19.000
1123        UC    .183    .189
1124        UA       0       5      16      30      65      77      84      90      94      97
1125        UA     100
            * DDM   ***** Preserved *****

1126        KK    C109
1127        KM        COMBINE HYDROGRAPHS FROM COMBINES C107 AND C108
1128        HC       3
            * DDM   ***** Preserved *****

1129        KK    DIV5
1130        KM        DIVERT FLOW INTO WASHES TOWARDS WEST
1131        KM        DIVERSION THROUGH 36" PIPE WITH 3 FEET OF HEAD
            *      1
1132        DT  WSH404
1133        DI       0    40.7    71.2   121.6     190     276   379.4   500.6
1134        DQ       0      35      35      35      35      35      35      35
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 30

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1135        KK    R109
1136        KM        ROUTE FLOW FROM C109 TO C110
1137        RS       1    FLOW      -1
1138        RC    .019    .019    .019    3080     .05
1139        RX    1000    1005    1010    1015    1025    1030    1035    1040
1140        RY   13.75    12.5   11.25      10      10   11.25    12.5   13.75
            * DDM   ***** Updated *****

1141        KK     447
1142        KM   SUB-BASIN 447
1143        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1144        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1145        KM     L =  .49  Kb = .056  Adj. Slope =  221.0
1146        BA    .090
1147        LG    .250    .270   3.350    .870  30.000
1148        UC    .208    .145
1149        UA       0       5      16      30      65      77      84      90      94      97
1150        UA     100
            * DDM   ***** Preserved *****

1151        KK   RT404
1152        KM        RETRIEVE DIVERTED FLOW FOR WASH 109
1153        DR  WSH404
            * DDM   ***** Preserved *****

1154        KK    R404
1155        KM        ROUTE FLOW FROM C110 TO C110
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1156        RS       5    FLOW      -1
1157        RC    .019    .019    .019    3540     .03
1158        RX    1000    1012    1016    1020    1025    1029    1033    1045
1159        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Preserved *****

1160        KK    C110
1161        KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 447 AND R404
1162        HC       3
            * DDM   ***** Preserved *****

1163        KK    R110
1164        KM        ROUTE FLOW FROM C110 TO C115
1165        RS       1    FLOW      -1
1166        RC    .019    .019    .019     580   .0291
1167        RX    1000    1012    1016    1020    1035    1039    1043    1055
1168        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Preserved *****

1169        KK    C115
1170        KM        COMBINE HYDROGRAPHS FROM C114 AND C110
1171        HC       2
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                    PAGE 31

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1172        KK    R115
1173        KM        ROUTE FLOW FROM C115 TO C119
1174        RS       1    FLOW      -1
1175        RC    .019    .019    .019    2125    .029
1176        RC    .019    .019    .019     580   .0291
1177        RX    1000    1012    1016    1020    1035    1039    1043    1055
1178        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Updated *****

1179        KK     448
1180        KM   SUB-BASIN 448
1181        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1182        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1183        KM     L =  .36  Kb = .042  Adj. Slope =  315.0
1184        BA    .045
1185        LG    .170    .310   4.200    .390  11.000
1186        UC    .133    .102
1187        UA       0       5      16      30      65      77      84      90      94      97
1188        UA     100
            * DDM   ***** Updated *****

1189        KK     449
1190        KM   SUB-BASIN 449
1191        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1192        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1193        KM     L =  .40  Kb = .054  Adj. Slope =  315.0
1194        BA    .050
1195        LG    .260    .280   3.500    .640   6.000
1196        UC    .167    .134
1197        UA       0       5      16      30      65      77      84      90      94      97
1198        UA     100
            * DDM   ***** Preserved *****

1199        KK   C6364
1200        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 448 & 449
1201        HC       2
            * DDM   ***** Preserved *****

1202        KK   R6364
1203        KM   ROUTE FLOW FROM C116 AND SUB-BASINS 448 AND 449
1204        RS       4    FLOW      -1
1205        RC     .05    .035     .05    4375   .0333
1206        RX    1000    1027    1053    1080    1090    1117    1143    1170
1207        RY      15   13.33   11.67      10      10   11.67   13.33      15
            * DDM   ***** Updated *****

1208        KK     450
1209        KM   SUB-BASIN 450
1210        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1211        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1212        KM     L =  .85  Kb = .057  Adj. Slope =  210.5
1213        BA    .070
1214        LG    .340    .350   3.630    .570   4.000
1215        UC    .296    .383
1                                   HEC-1 INPUT                                    PAGE 32

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1216        UA       0       3       5       8      12      20      43      75      90      96
1217        UA     100
            * DDM   ***** Updated *****

1218        KK     451
1219        KM   SUB-BASIN 451
1220        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1221        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1222        KM     L =  .57  Kb = .063  Adj. Slope =  175.0
1223        BA    .025
1224        LG    .340    .340   3.290    .750   3.000
1225        UC    .271    .453
1226        UA       0       3       5       8      12      20      43      75      90      96
1227        UA     100
            * DDM   ***** Preserved *****

1228        KK    RT66
1229        KM        RETRIEVE DIVERTED FLOW FROM SUB-BASIN 66
1230        DR   WSH66
            * DDM   ***** Updated *****

1231        KK     452
1232        KM   SUB-BASIN 452
1233        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1234        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1235        KM     L =  .43  Kb = .055  Adj. Slope =  315.0
1236        BA    .040
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1237          LG    .260    .280   3.700    .550   9.000
1238          UC    .171    .166
1239          UA      0       5      16      30      65      77      84      90      94      97
1240          UA    100
              * DDM   ***** Preserved *****

1241          KK   C6465
1242          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 443 AND 452
1243          HC       2
              * DDM   ***** Preserved *****

1244          KK   R6566
1245          KM        ROUTE FLOW FROM DIVERSIONS 65 AND 66 TO C116
1246          RS       2    FLOW      -1
1247          RC     .05    .035     .05    2435   .0282
1248          RX    1000    1045    1090    1150    1160    1220    1265    1310
1249          RY      25      23      20      10      10      20      23      25
              * DDM   ***** Preserved *****

1250          KK    C116
1251          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 450 & 451 AND R6364 & R6465
1252          HC       4
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 33

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1253          KK  BASIN5
1254          KM        RESERVOIR WITHIN PARCEL 31      2-48 INCH PIPES AT OUTFALL
1255          KM        BASIN 5 FEET DEEP
1256          RS       1    ELEV       0
1257          SV       0     4.5     9.9
1258          SQ       0      69     190
1259          SE       0     2.5       5
              * DDM   ***** Preserved *****

1260          KK    R116
1261          KM   ROUTE FLOW FROM C116 TO C117
1262          RS       2    FLOW      -1
1263          RC     .05    .035     .05    1300   .0333
1264          RX    1000    1100    1200    1300    1320    1420    1520    1620
1265          RY      13      12      11      10      10      11      12      13
              * DDM   ***** Updated *****

1266          KK     453
1267          KM   SUB-BASIN 453
1268          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1269          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1270          KM     L =  .58  Kb = .058  Adj. Slope =  138.0
1271          BA    .060
1272          LG    .290    .300   3.290    .820  18.000
1273          UC    .275    .284
1274          UA      0       5      16      30      65      77      84      90      94      97
1275          UA    100
              * DDM   ***** Preserved *****

1276          KK    C117
1277          KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 453 AND R116
1278          HC       2
              * DDM   ***** Preserved *****

1279          KK    C118
1280          KM   COMBINE HYDROGRAPHS FROM R115 AND C117
1281          HC       2
              * DDM   ***** Preserved *****

1282          KK    R118
1283          KM        ROUTE FLOW FROM C118 TO  DIV7
1284          RS       1    FLOW      -1
1285          RC    .019    .019    .019    1500    .024
1286          RX    1000    1012    1016    1020    1035    1039    1043    1055
1287          RY      15      12      11      10      10      11      12      15
              * DDM   ***** Preserved *****

1288          KK    DIV7
1289          KM        OFFLINE BASIN AT NORTH MOUNTAIN RIDGE   FLOWS ENTER BASIN OVER
1290          KM        30' WEIR SET AT 5.3' ABOVE THE CHANNEL BOTTOM
              *      1
1291          DT  BASIN6
1292          DI       0     363     487     563     645     844
1293          DQ       0       3      47      83     125     244
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 34

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1294          KK  RTDIV7
1295          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1296          DR  BASIN6
              * DDM   ***** Preserved *****

1297          KK  RFDIV7
1298          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1299          KM     3.6 ACRE-FEETx43560/36x3600=1.2cfs
1300          RS       1    STOR       0
1301          SV       0     .01     3.6
1302          SQ       0     1.2     1.2
              * DDM   ***** Preserved *****

1303          KK   CDIV7
1304          KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1305          HC       2
              * DDM   ***** Updated *****

1306          KK     454
1307          KM   SUB-BASIN 454
1308          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1309          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1310          KM     L = 1.23  Kb = .051  Adj. Slope =  163.0
1311          BA    .180
1312          LG    .300    .310   3.780    .560  14.000
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1313        UC    .379    .395
1314        UA       0       5      16      30      65      77      84      90      94      97
1315        UA     100
            * DDM   ***** Preserved *****

1316        KK    C119
1317        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 454 AND C119
            *      1       2
1318        HC       2
            * DDM   ***** Preserved *****

1319        KK    R454
1320        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1321        KM   ROUTE FLOW FROM C119 TO 415C
1322        RS       2    FLOW      -1
1323        RC    .045    .035    .045    2200    .009
1324        RX       0      .5       1      33      42      67    67.5      68
1325        RY       5       4       4       0       0       6       6       6
            * DDM   ***** Updated *****

1326        KK     415
1327        KM   SUB-BASIN 415
1328        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1329        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
1330        KM     L = 2.10  Kb = .046  Adj. Slope =  266.0
1331        BA    .448
1332        LG    .310    .270   4.250    .480  15.000
1333        UC    .404    .387
1334        UA       0       5      16      30      65      77      84      90      94      97
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1335        UA     100
            * DDM   ***** Preserved *****

1336        KK   RT385
1337        KM   RETRIEVE FLOW FROM DIVERSION OF SUB-BASIN 385 INTO SUB-BASIN 415
1338        DR   SF385
            * DDM   ***** Preserved *****

1339        KK   RR385
1340        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1341        KM   ROUTING OF SPLIT FLOW FROM SUB-BASIN 385 TO SUB-BASIN 415
1342        RS       5    FLOW      -1
1343        RC    .045     .04    .045    5878    .024
1344        RX       0       1      40      46      56      62     102     103
1345        RY       3       2       2       0       0       2       2       3
            * DDM   ***** Preserved *****

1346        KK    415C
1347        KM   HYDROGRAPH COMBINATION OF SUB-BASINS 415, R454 & SPLIT FLOW FROM 385
1348        HC       3    1.71
            * DDM   ***** Preserved *****

1349        KK    R415
1350        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1351        KM   ROUTING OF FLOW FROM 415C TO 455C
1352        RS       2    FLOW      -1
1353        RC    .045     .03    .045    4100    .024
1354        RX       0      .5       1       8      16      23    23.5      24
1355        RY       8       8       8       0       0       8       8       8
            * DDM   ***** Updated *****

1356        KK     455
1357        KM   SUB-BASIN 455
1358        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1359        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
1360        KM     L = 1.70  Kb = .041  Adj. Slope =  146.0
1361        BA   1.111
1362        LG    .270    .280   3.700    .640  24.000
1363        UC    .421    .204
1364        UA       0       5      16      30      65      77      84      90      94      97
1365        UA     100
            * DDM   ***** Preserved *****

1366        KK    D455
1367        KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1368        KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1369        KM   FOR BASIN #: 30      34      43      47&58
1370        KM        MAXIMUM VOLUME DIVERSION = 74.1 acre-feet
            *      1
1371        DT   BS455    74.1
1372        DI       0   10000
1373        DQ       0   10000
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1374        KK   RT455
1375        KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1376        DR   BS455
            * DDM   ***** Preserved *****

1377        KK   SR455
1378        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1379        KM    74.1 ACRE-FEETx43560/36x3600=25cfs
1380        RS       1    STOR       0
1381        SV       0     .01    74.1
1382        SQ       0      25      25
            * DDM   ***** Preserved *****

1383        KK    C455
1384        KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 455 AND DIVERTED BASIN STORAGE OF 455
1385        HC       2
            * DDM   ***** Preserved *****

1386        KK    455C
1387        KM  HYDROGRAPH COMBINATION OF 420C, R415 AND C455
            *      1       2
1388        HC       3
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            * DDM   ***** Preserved *****

1389        KK   SR440
1390        KM   SPOOK HILL FRS PLANS DATED 6/15/77
1391        KM   OUTLET PIPE=7'x7.5'RCBC; L=70 INLET INV.=1566; OUTLET INV.=1566
1392        KM   EMERGENCY SPILLWAY ELEV.=1582; PRINCIPLE SPILLWAY ELEV.=1577.5
1393        KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 200 ACRE-FEET
1394        RS       1    STOR       0
1395        SV       0      10     100     300     500     680
1396        SQ       0     640     720     780     825     860
1397        SE      66    77.5      79    80.2    81.2      82
            * DDM   ***** Preserved *****

1398        KK   RR455
1399        KM   ROUTE FLOW FROM SPOOK HILL FRS TO SUB-BASIN 462
1400        RS       9    FLOW      -1
1401        RC    .035    .025    .035    9200    .002
1402        RX       0       1       2      28      58      84      85      86
1403        RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
            * DDM   ***** Updated *****

1404        KK     456
1405        KM   SUB-BASIN 456
1406        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1407        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1408        KM     L =  .94  Kb = .045  Adj. Slope =  315.0
1409        BA    .260
1410        LG    .300    .380   5.600    .200  12.000
1411        UC    .217    .139
1412        UA       0       5      16      30      65      77      84      90      94      97
1413        UA     100
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1414        KK    DIV1
1415        KM        DIVERT FLOW INTO OFFLINE DETENTION BASIN
1416        KM        WEIR FOR BASIN SET AT 4 FEET ABOVE CHANNEL BOTTOM
            *      1
1417        DT  BASIN1
1418        DI       0    11.1   127.9   234.4   577.7   789.9  1025.5  1280.9  1555.7
1419        DQ       0       0       0    47.7     248   381.8   533.6   701.5     884
            * DDM   ***** Preserved *****

1420        KK    DIV2
1421        KM        SPLIT OUT FLOW FOR WASHES THAT FLOW TO THE SOUTH FROM
1422        KM        WASHES THAT DRAIN TO THE WES, SOUTHERN WASHES FED BY 30" & 24" PIPE
1423        DT    WA30
1424        DI       0    11.1   127.9   189.6   329.7     408   491.9   579.4   671.7
1425        DQ       0    11.1    38.4    48.2      63    69.5      76      81      86
            * DDM   ***** Preserved *****

1426        KK    R456
1427        KM        ROUTE FLOW FROM SUB-BASIN 51 TO C101
1428        RS       2    FLOW      -1
1429        RC     .05    .035     .05    3800    .044
1430        RX    1000    1010    1020    1036    1041    1057    1067    1077
1431        RY   14.88   14.44      14      10      10      14   14.44   14.88
            * DDM   ***** Updated *****

1432        KK     457
1433        KM   SUB-BASIN 457
1434        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1435        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1436        KM     L = 1.01  Kb = .045  Adj. Slope =  308.8
1437        BA    .190
1438        LG    .270    .330   3.950    .460   6.000
1439        UC    .237    .195
1440        UA       0       5      16      30      65      77      84      90      94      97
1441        UA     100
            * DDM   ***** Preserved *****

1442        KK    C101
1443        KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 50 AND 51
1444        HC       2
            * DDM   ***** Preserved *****

1445        KK    DIV3
1446        KM        RESERVOIR AT THE EDGE OF THE PROPERTY   FLOW FROM CHANNEL
1447        KM        DIVERTED  INTO OFFLINE BASIN A 25' WEIR SET AT ELEVATION 1808 FT
            *      1
1448        DT  BASIN2
1449        DI       0      36      70     110     180   313.5     402   500.9
1450        DQ       0       0       0       0       0    67.5     124   190.9
            * DDM   ***** Preserved *****
```



```
LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1451        KK  RTDIV3
1452        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1453        DR  BASIN2
            * DDM   ***** Preserved *****

1454        KK  RFDIV3
1455        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1456        KM     5.0 ACRE-FEETx43560/36x3600=1.7cfs
1457        RS       1    STOR       0
1458        SV       0     .01       5
1459        SQ       0     1.7     1.7
            * DDM   ***** Preserved *****

1460        KK   CDIV3
1461        KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1462        HC       2
            * DDM   ***** Preserved *****

1463        KK    R101
1464        KM        ROUTE FLOW FROM SUBBASIN C101 TO C103
1465        RS       1    FLOW      -1
```

```
1466        RC     .05    .035     .05    1450     .05
1467        RX    1000    1010    1020    1036    1041    1057    1067    1077
1468        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Updated *****

1469        KK     458
1470        KM   SUB-BASIN 458
1471        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1472        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1473        KM     L =  .76  Kb = .048  Adj. Slope =  299.0
1474        BA    .190
1475        LG    .290    .330   5.800    .190   6.000
1476        UC    .204    .131
1477        UA       0       5      16      30      65      77      84      90      94      97
1478        UA     100
            * DDM   ***** Preserved *****

1479        KK    C103
1480        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 55 AND C101
1481        HC       2
            * DDM   ***** Preserved *****

1482        KK    R103
1483        KM        ROUTE FLOW FROM SUBBASIN C103 TO C106
1484        RS       1    FLOW      -1
1485        RC     .05    .035     .05     900     .03
1486        RX    1000    1010    1020    1030    1050    1060    1070    1080
1487        RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
            * DDM   ***** Preserved *****
```



```
LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1488        KK    RT30
1489        KM        RETRIEVE DIVERTED FLOW FOR WASH BELOW 30 INCH PIPE
1490        DR    WA30
            * DDM   ***** Preserved *****

1491        KK     R30
1492        KM        ROUTE FLOW FROM WASH DIVERSION TO COMBINE C52
1493        RS       1    FLOW      -1
1494        RC     .05    .035     .05    1630     .05
1495        RX    1000    1010    1020    1036    1041    1057    1067    1077
1496        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Preserved *****

1497        KK    RTB1
1498        KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
            *      1       2
1499        DR  BASIN1
            * DDM   ***** Preserved *****

1500        KK      B1
1501        KM        ROUTE FLOW THROUGH OFFLINE DETENTION BASIN
1502        KM        FLOW OUTLETS THROUGH A 30 INCH OUTLET PIPE
            *      1       2
1503        RS       1    ELEV       0
1504        SV              .7     1.4     2.3     2.7     3.2
1505        SQ       0       5      16      28    32.5      37
1506        SE       0       1       2       3     3.5       4
            * DDM   ***** Preserved *****

1507        KK     RB1
1508        KM        ROUTE FLOW FROM BASIN DIVERSION TO COMBINE C52
1509        RS       2    FLOW      -1
1510        RC     .05    .035     .05    1720     .05
1511        RX    1000    1010    1020    1036    1041    1057    1067    1077
1512        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Preserved *****

1513        KK    CDIV
1514        KM        COMBINE FLOWS FROM WA30 AND BASIN 1
1515        HC       2     .12
            * DDM   ***** Updated *****

1516        KK     459
1517        KM   SUB-BASIN 459
1518        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1519        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1520        KM     L =  .35  Kb = .052  Adj. Slope =  251.6
1521        BA    .030
1522        LG    .220    .300   3.330    .710   8.000
1523        UC    .162    .157
1524        UA       0       5      16      30      65      77      84      90      94      97
1525        UA     100
            * DDM   ***** Preserved *****
```



```
LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1526        KK     C52
1527        KM        COMBINE FLOWS FROM SUB-BASIN 52 WA30 AND BASIN 1
1528        HC       2
            * DDM   ***** Preserved *****

1529        KK     R52
1530        KM        ROUTE FLOW FROM SUBBASIN 52 TO C102
1531        RS       2    FLOW      -1
1532        RC     .05    .035     .05    2000     .05
1533        RX    1000    1010    1020    1036    1041    1057    1067    1077
1534        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Updated *****

1535        KK     460
1536        KM   SUB-BASIN 460
1537        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1538        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1539        KM     L =  .62  Kb = .058  Adj. Slope =  194.0
1540        BA    .140
1541        LG    .250    .260   3.740    .690  27.000
1542        UC    .242    .160
```

```
1543        UA       0       5      16      30      65      77      84      90      94      97
1544        UA     100
            * DDM   ***** Preserved *****

1545        KK    C102
1546        KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 52 AND 53
1547        HC       2
            * DDM   ***** Preserved *****

1548        KK  BASIN3
1549        KM        RESERVOIR AT CLUBHOUSE LOCATION 1-30 INCH PIPE AT OUTFALL
1550        KM        BOTTOM OF BASIN AT 6 FEET ABOVE 1795 ELEVATION
1551        RS       1    ELEV       0
1552        SA       0       0       0       0     .34    1.59    1.81    1.96    2.13     2.3
            *      0       0       0       0    1.14    3.25    5.52    9.23
1553        SQ       0      22      45    47.4      48      51      57      62      67      73
1554        SE    1795  1797.5    1800  1800.4  1800.5    1801    1802    1803    1804  1805.5
            * DDM   ***** Preserved *****

1555        KK      R3
1556        KM        ROUTE FLOW FROM C102 to C106
1557        RS       4    FLOW      -1
1558        RC     .05     .03     .05    2750   .0375
1559        RX    1000    1010    1020    1052    1086    1118    1128    1138
1560        RY    19.2    18.4      18      10      10      18    18.4    19.2
            * DDM   ***** Updated *****

1561        KK     461
1562        KM   SUB-BASIN 461
1563        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1564        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1565        KM     L =  .83  Kb = .052  Adj. Slope =  181.0
1566        BA    .120
```



```
1                                   HEC-1 INPUT

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1567        LG    .270    .250   4.250    .450  21.000
1568        UC    .271    .250
1569        UA       0       5      16      30      65      77      84      90      94      97
1570        UA     100
            * DDM   ***** Preserved *****

1571        KK    C104
1572        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 54 AND R102
1573        HC       2
            * DDM   ***** Preserved *****

1574        KK    C106
1575        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN C103 AND C104
1576        HC       2
            * DDM   ***** Preserved *****

1577        KK    R106
1578        KM        ROUTE FLOW FROM C106 TO C49
1579        RS       2    FLOW      -1
1580        RC     .05    .035     .05    3950    .033
1581        RX    1000    1010    1020    1030    1050    1060    1070    1080
1582        RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
            * DDM   ***** Updated *****

1583        KK     462
1584        KM   SUB-BASIN 462
1585        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1586        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1587        KM     L =  .97  Kb = .045  Adj. Slope =  297.7
1588        BA    .301
1589        LG    .300    .330   5.300    .240  12.000
1590        UC    .225    .137
1591        UA       0       5      16      30      65      77      84      90      94      97
1592        UA     100
            * DDM   ***** Preserved *****

1593        KK     C56
1594        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 56 AND C106
            *      1       2
1595        HC       2
            * DDM   ***** Updated *****

1596        KK     480
1597        KM   SUB-BASIN 480
1598        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1599        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
1600        KM     L = 1.21  Kb = .042  Adj. Slope =  165.0
1601        BA    .731
1602        LG    .270    .270   3.580    .730  27.000
1603        UC    .325    .148
1604        UA       0       5      16      30      65      77      84      90      94      97
1605        UA     100
            * DDM   ***** Preserved *****
```



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1                                   HEC-1 INPUT

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1606        KK    D480
1607        KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1608        KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1609        KM   FOR BASIN #: 18 & 26
1610        KM        MAXIMUM VOLUME DIVERSION = 16.5 acre-feet
            *      1
1611        DT   BS480    16.5
1612        DI       0   10000
1613        DQ       0   10000
            * DDM   ***** Preserved *****

1614        KK   RT480
1615        KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1616        DR   BS480
            * DDM   ***** Preserved *****

1617        KK   SR480
1618        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
```

```
1619          KM    16.5 ACRE-FEETx43560/36x3600=5.5cfs
1620          RS       1    STOR       0
1621          SV       0     .01    16.5
1622          SQ       0     5.6     5.6
              * DDM   ***** Preserved *****

1623          KK    C480
1624          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1625          HC       2
              * DDM   ***** Preserved *****

1626          KK    480C
1627          KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1628          HC       3    2.09
              * DDM   ***** Preserved *****

1629          KK   RR480
1630          KM   ROUTE FLOW FROM SUB-BASIN 480 TO SUB-BASIN 500
1631          RS       1    FLOW      -1
1632          RC    .025    .025    .025    6500     .05
1633          RX       0       1       2      28      58      84      85      86
1634          RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
              * DDM   ***** Updated *****

1635          KK     500
1636          KM   SUB-BASIN 500
1637          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1638          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
1639          KM     L = 2.77  Kb = .042  Adj. Slope =  286.8
1640          BA    .930
1641          LG    .350    .400   6.000    .170   9.000
1642          UC    .421    .333
1643          UA       0       3       5       8      12      20      43      75      90      96
1644          UA     100
              * DDM   ***** Preserved *****
```



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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1645          KK    500C
1646          KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1647          HC       2    3.02
1648          ZZ
```

SCHEMATIC DIAGRAM OF STREAM NETWORK

```
INPUT
 LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW
  NO.      (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

  60         10
              V
              V
  70        R10
              V
              V
  76        R12
              .
              .
  82          .          20
              .           .
              .           .
  92        C20............
              .
              .
  95          .          40
              .           .
              .           .
 105          .           .          60
              .           .           .
              .           .           .
 115        60C........................
              V
              V
 118       SR60
              V
              V
 127        R60
              V
              V
 133       RR60
              .
              .
 139          .          80
              .           .
              .           .
 149        80C............
              V
              V
 152        R80
              .
              .
 158          .         100
              .           .
              .           .
 168       100C............
              V
              V
 171       R100
              .
              .
 177          .         120
              .           .
              .           .
 187       120C............
              V
              V
 190       R120
              .
              .
 196          .         140
              .           .
              .           .
 206          .           .         150
              .           .           V
              .           .           V
 216          .           .        R150
              .           .           V
              .           .           V
 222          .           .        R152
              .           .           .
              .           .           .
 228          .           .           .         160
              .           .           .           .
              .           .           .           .
 238          .           .           .           .         180
              .           .           .           .           .
              .           .           .           .           .
 248       180C..............................................
              .
              .
 251          .         210
              .           V
              .           V
 261          .        R210
              .           .
              .           .
 267          .           .         240
              .           .           .
              .           .           .
 277          .        240C............
              .           V
              .           V
 280          .       SR240
              .           .
              .           .
 287          .           .         220
              .           .           .
              .           .           .
 297          .        220C............
              .           V
              .           V
 300          .       SR220
              .           .
              .           .
 307          .           .         190
```

```
                .          .          V
                .          .          V
317             .          .       R190
                .          .          V
                .          .          V
323             .          .       R192
                .          .          .
                .          .          .
329             .          .          .        200
                .          .          .          .
                .          .          .          .
339             .       200C.......................
                .          V
                .          V
342             .      SR200
                .          V
                .          V
349             .       R200
                .          .
                .          .
355          C180............
                V
                V
358         SR180
                V
                V
367          R180
                .
                .
374             .        260
                .          .
                .          .
384          260C...........
                V
                V
387          R260
                .
                .
394             .        280
                .          .
                .          .
404          280C...........
                V
                V
407          R280
                .
                .
414             .        300
                .          .
                .          .
424          300C...........
                V
                V
427          R300
                V
                V
434         RR300
                .
                .
441             .        350
                .          .
                .          .
454             .          .-------->   SF350
451             .       D350
                .          V
                .          V
457             .       350R
                .          .
                .          .
464             .          .        310
                .          .          .
                .          .          .
474             .       C310...........
                .          V
                .          V
477             .       R310
                .          .
                .          .
484             .          .        320
                .          .          .
                .          .          .
499             .          .          .-------->   BS320
494             .          .       D320
                .          .          .
                .          .          .
504             .          .          .          .<-------   BS320
502             .          .          .       RT320
                .          .          .          V
                .          .          .          V
505             .          .          .       SR320
                .          .          .          .
                .          .          .          .
511          C320.................................
                .
                .
514             .        340
                .          .
                .          .
529             .          .-------->   BS340
524             .       D340
                .          .
                .          .
534             .          .          .<-------   BS340
532             .          .      RT340
                .          .          V
                .          .          V
535             .          .      SR340
                .          .          .
                .          .          .
541          C340........................
                .
                .
544             .        360
```

```
558          .          .-------> BS360
554          .       D360
             .          .
             .          .
563          .          .          .<-------  BS360
561          .          .      RT360
             .          .          V
             .          .          V
564          .          .      SR360
             .          .          .
             .          .          .
570       360C.......................
             .
             .
573          .        380
             .          .
             .          .
587          .          .-------> BS380
583          .       D380
             .          .
             .          .
592          .          .          .<-------  BS380
590          .          .      RT380
             .          .          V
             .          .          V
593          .          .      SR380
             .          .          .
             .          .          .
599       380C.......................
             .
             .
602          .        400
             .          .
             .          .
616          .          .-------> BS400
612          .       D400
             .          .
             .          .
621          .          .          .<-------  BS400
619          .          .      RT400
             .          .          V
             .          .          V
622          .          .      SR400
             .          .          .
             .          .          .
628          .       C400............
             .          .
             .          .
631       400C............
             .
             .
636          .          .<-------  SF350
634          .      RT350
             .          V
             .          V
637          .      RR350
             .          .
             .          .
644          .          .        355
             .          .          .
             .          .          .
654          .       C355............
             .          V
             .          V
657          .       R355
             .          .
             .          .
664          .          .        361
             .          .          .
             .          .          .
678          .          .          .-------> BS361
674          .          .      D361
             .          .          .
             .          .          .
683          .          .          .          .<-------  BS361
681          .          .          .      RT361
             .          .          .          V
             .          .          .          V
684          .          .          .      SR361
             .          .          .          .
             .          .          .          .
690          .       361C........................
             .          .
             .          .
693          .          .        342
             .          .          .
             .          .          .
708          .          .          .-------> BS3421
703          .          .      D3421
             .          .          .
             .          .          .
713          .          .          .          .<-------  BS3421
711          .          .          .     RT3421
             .          .          .          V
             .          .          .          V
714          .          .          .     SR3421
             .          .          .          .
             .          .          .          .
720          .          .       C342............
             .          .          .
             .          .          .
727          .          .          .-------> BS3422
723          .          .      D3422
             .          .          .
             .          .          .
732          .          .          .          .<-------  BS3422
730          .          .          .     RT3422
             .          .          .          V
             .          .          .          V
733          .          .          .     SR3422
             .          .          .          .
```

```
739          CC342............
                V
                V
742          R342
                .
                .
748                 341
                    .
                    .
763                 .-------> BS341
758              D341
                    .
                    .
768                 .<------- BS341
766                 .     RT341
                    .        V
                    .        V
769                 .     SR341
                    .        .
                    .        .
775          C341........................
                V
                V
778          RR341
                .
                .
785      361CC............
            V
            V
788      RR361
            .
            .
795             370
                .
                .
805                 395
                    .
                    .
815          370C............
                V
                V
818          R370
                .
                .
825                 381
                    .
                    .
839                 .-------> BS381
835              D381
                    .
                    .
844                 .<------- BS381
842                 .     RT381
                    .        V
                    .        V
845                 .     SR381
                    .        .
                    .        .
851       381C...................................
            V
            V
854      RR381
            .
            .
860             390
                .
                .
874             .-------> BS390
870          D390
                .
                .
879                 .<------- BS390
877                 .    RT390
                    .       V
                    .       V
880                 .    SR390
                    .       .
                    .       .
886          390C............
                V
                V
889          RR390
                .
                .
896                 401
                    .
                    .
910                 .-------> BS401
906              D401
                    .
                    .
915                 .<------- BS401
913                 .     RT401
                    .        V
                    .        V
916                 .     SR401
                    .        .
                    .        .
922  C401.............................................
                .
925         385
                .
                .
937             .-------> SF385
935         D385
                V
                V
940         385R
                .
                .
947             420
```

```
961                  .-------> BS420
957              D420
966                          .<-------  BS420
964                      RT420
                             V
                             V
967                      SR420
                             .
                             .
973   420C.....................................
976          440
               V
               V
986          R70
               .
               .
992                  441
                       .
                       .
1002         C108............
               .
               .
1007           .-------> SPLIT
1005         DIV4
               V
               V
1010         R108
               .
               .
1016                 442
                       .
                       .
1026          C67............
               .
               .
1032           .-------> BASIN4
1029         DIV6
               .
               .
1037                   .<-------  BASIN4
1035             RTDIV6
                     V
                     V
1038             RFDIV6
                       .
                       .
1044       CDIV6............
               .
               .
1047                 443
                       .
                       .
1060                   .-------> WSH66
1057            DIV66
                     V
                     V
1063            R113
                       .
                       .
1069         C114............
               .
               .
1072                 444
                       V
                       V
1082                 R58
                       .
                       .
1088                           445
                               .
                               .
1098            C107............
                     V
                     V
1101            R107
                       .
                       .
1109                           .<-------  SPLIT
1107                       RTB2
                               V
                               V
1110                   RSPLIT
                               .
                               .
1116                           .          446
                               .            .
                               .            .
1126            C109........................
                       .
                       .
1132                   .-------> WSH404
1129            DIV5
                     V
                     V
1135            R109
                       .
                       .
1141                           447
                               .
                               .
1153                           .            .<-------  WSH404
1151                           .        RT404
                               .            V
                               .            V
1154                           .         R404
                               .            .
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1160          .          .        C110.......................
              .          .           V
              .          .           V
1163          .          .        R110
              .          .           .
              .          .           .
1169          .       C115............
              .          V
              .          V
1172          .       R115
              .          .
              .          .
1179          .          .         448
              .          .           .
              .          .           .
1189          .          .           .         449
              .          .           .           .
              .          .           .           .
1199          .          .        C6364...........
              .          .           V
              .          .           V
1202          .          .        R6364
              .          .           .
              .          .           .
1208          .          .           .         450
              .          .           .           .
              .          .           .           .
1218          .          .           .           .         451
              .          .           .           .           .
              .          .           .           .           .
1230          .          .           .           .           .          .<-------   WSH66
1228          .          .           .           .           .      RT66
              .          .           .           .           .           .
              .          .           .           .           .           .
1231          .          .           .           .           .           .         452
              .          .           .           .           .           .           .
              .          .           .           .           .           .           .
1241          .          .           .           .           .      C6465...........
              .          .           .           .           .           V
              .          .           .           .           .           V
1244          .          .           .           .           .      R6566
              .          .           .           .           .           .
              .          .           .           .           .           .
1250          .          .        C116.................................
              .          .           V
              .          .           V
1253          .          .      BASIN5
              .          .           V
              .          .           V
1260          .          .        R116
              .          .           .
              .          .           .
1266          .          .           .         453
              .          .           .           .
              .          .           .           .
1276          .          .        C117...........
              .          .           .
              .          .           .
1279          .       C118............
              .          V
              .          V
1282          .       R118
              .          .
              .          .
1291          .          .-------> BASIN6
1288          .       DIV7
              .          .
              .          .
1296          .          .           .<-------  BASIN6
1294          .          .      RTDIV7
              .          .           V
              .          .           V
1297          .          .      RFDIV7
              .          .           .
              .          .           .
1303          .      CDIV7............
              .          .
              .          .
1306          .          .         454
              .          .           .
              .          .           .
1316          .       C119............
              .          V
              .          V
1319          .       R454
              .          .
              .          .
1326          .          .         415
              .          .           .
              .          .           .
1338          .          .           .           .<-------   SF385
1336          .          .           .       RT385
              .          .           .           V
              .          .           .           V
1339          .          .           .       RR385
              .          .           .           .
              .          .           .           .
1346          .       415C........................
              .          V
              .          V
1349          .       R415
              .          .
              .          .
1356          .          .         455
              .          .           .
              .          .           .
1371          .          .           .------->   BS455
1366          .          .        D455
              .          .           .
              .          .           .
1376          .          .           .           .<-------   BS455
1374          .          .           .       RT455
              .          .           .           V
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                                                V
1377                                         SR455
                                                .
1383                                        C455............
                                                .
1386        455C........................
              V
              V
1389        SR440
              V
              V
1398        RR455
                .
1404            .        456
                .
                .
1417            .        .-------> BASIN1
1414            .       DIV1
                .
                .
1423            .        .------->   WA30
1420            .       DIV2
                .         V
                .         V
1426            .       R456
                .
                .
1432            .                457
                .                  .
                .                  .
1442            .       C101............
                .
                .
1448            .        .-------> BASIN2
1445            .       DIV3
                .
                .
1453            .                  .<-------  BASIN2
1451            .            RTDIV3
                .                  V
                .                  V
1454            .            RFDIV3
                .                  .
                .                  .
1460            .      CDIV3............
                .         V
                .         V
1463            .       R101
                .
                .
1469            .                458
                .                  .
                .                  .
1479            .       C103............
                .         V
                .         V
1482            .       R103
                .
                .
1490            .                  .<-------    WA30
1488            .           RT30
                .                  V
                .                  V
1491            .                R30
                .                  .
                .                  .
1499            .                  .          .<-------  BASIN1
1497            .                  .        RTB1
                .                  .          V
                .                  .          V
1500            .                  .         B1
                .                  .          V
                .                  .          V
1507            .                  .        RB1
                .                  .          .
                .                  .          .
1513            .           CDIV............
                .                  .
                .                  .
1516            .                  .        459
                .                  .          .
                .                  .          .
1526            .                C52............
                .                  V
                .                  V
1529            .                R52
                .                  .
                .                  .
1535            .                  .        460
                .                  .          .
                .                  .          .
1545            .           C102............
                .                  V
                .                  V
1548            .            BASIN3
                .                  V
                .                  V
1555            .                 R3
                .                  .
                .                  .
1561            .                  .        461
                .                  .          .
                .                  .          .
1571            .           C104............
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                .                  .
1574            .       C106............
                .         V
                .         V
1577            .       R106
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1583            .          .        462
                .          .          .
                .          .          .
1593            .        C56..........
                .          .
                .          .
1596            .          .        480
                .          .          .
                .          .          .
1611            .          .          .-------->   BS480
1606            .          .       D480
                .          .          .
                .          .          .
1616            .          .          .          .<--------   BS480
1614            .          .          .      RT480
                .          .          .          V
                .          .          .          V
1617            .          .          .      SR480
                .          .          .          .
                .          .          .          .
1623            .          .       C480..........
                .          .          .
                .          .          .
1626         480C.......................
                V
                V
1629        RR480
                .
                .
1635            .        500
                .          .
                .          .
1645         500C...........
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(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT	10	951.	12.27	114.	31.	15.	.70		
+	ROUTED TO	R10	882.	12.40	114.	31.	15.	.70		
+	ROUTED TO	R12	833.	12.60	114.	31.	15.	.70		
+	HYDROGRAPH AT	20	959.	12.43	128.	32.	16.	1.12		
+	2 COMBINED AT	C20	1663.	12.53	240.	63.	30.	1.82		
+	HYDROGRAPH AT	40	2582.	12.30	252.	66.	32.	2.23		
+	HYDROGRAPH AT	60	1553.	12.40	228.	61.	29.	1.75		
+	3 COMBINED AT	60C	5274.	12.37	708.	188.	90.	5.80		
+	ROUTED TO	SR60	92.	14.40	92.	89.	70.	5.80		
+	ROUTED TO	R60	92.	14.40	92.	89.	70.	5.80		
+	ROUTED TO	RR60	92.	14.53	92.	89.	70.	5.80		
+	HYDROGRAPH AT	80	1868.	12.27	179.	46.	22.	1.48		
+	2 COMBINED AT	80C	1942.	12.27	266.	134.	92.	1.48		
+	ROUTED TO	R80	1919.	12.27	266.	134.	92.	1.48		
+	HYDROGRAPH AT	100	404.	12.20	58.	15.	7.	.48		
+	2 COMBINED AT	100C	2300.	12.27	321.	148.	99.	1.96		
+	ROUTED TO	R100	2292.	12.30	321.	148.	99.	1.96		
+	HYDROGRAPH AT	120	3232.	12.27	326.	88.	42.	2.20		
+	2 COMBINED AT	120C	5469.	12.27	636.	229.	141.	4.16		
+	ROUTED TO	R120	5397.	12.30	636.	229.	140.	4.16		
+	HYDROGRAPH AT	140	632.	12.13	64.	17.	8.	.60		
+	HYDROGRAPH AT	150	135.	13.20	47.	13.	6.	.41		
+	ROUTED TO	R150	134.	13.30	47.	13.	6.	.41		
+	ROUTED TO	R152	133.	13.50	47.	13.	6.	.41		
+	HYDROGRAPH AT	160	217.	12.40	35.	9.	4.	.37		
+	HYDROGRAPH AT	180	785.	12.37	90.	23.	11.	1.00		
+	5 COMBINED AT	180C	6707.	12.30	857.	286.	168.	6.54		
+	HYDROGRAPH AT	210	870.	12.20	80.	21.	10.	.58		
+	ROUTED TO	R210	815.	12.27	80.	21.	10.	.58		
+	HYDROGRAPH AT	240	1405.	12.30	155.	39.	19.	1.40		
+	2 COMBINED AT	240C	2185.	12.30	233.	60.	29.	1.98		
	ROUTED TO	SR240	634.	12.77	186.	49.	23.	1.98		
+	HYDROGRAPH AT	220	1126.	12.17	98.	25.	12.	.73		
+	2 COMBINED AT	220C	1138.	12.20	279.	73.	35.	2.71		
+	ROUTED TO	SR220	914.	12.43	272.	71.	34.	2.71		

+	HYDROGRAPH AT	190	1403.	12.17	116.	31.	15.	.92
+	ROUTED TO	R190	1348.	12.23	116.	31.	15.	.92
	ROUTED TO	R192	1267.	12.30	116.	31.	15.	.92
+	HYDROGRAPH AT	200	806.	12.17	69.	19.	9.	.54
+	3 COMBINED AT	200C	2624.	12.27	447.	119.	57.	4.16
+	ROUTED TO	SR200	2493.	12.37	442.	115.	55.	4.16
+	ROUTED TO	R200	2473.	12.40	441.	115.	55.	4.16
+	2 COMBINED AT	C180	8912.	12.30	1279.	396.	221.	10.69
+	ROUTED TO	SR180	140.	18.27	140.	139.	112.	10.69
+	ROUTED TO	R180	140.	18.33	140.	139.	112.	10.69
+	HYDROGRAPH AT	260	418.	12.10	43.	12.	6.	.27
+	2 COMBINED AT	260C	527.	12.10	177.	150.	119.	.27
+	ROUTED TO	R260	515.	12.20	177.	150.	119.	.27
+	HYDROGRAPH AT	280	478.	12.10	42.	12.	6.	.30
+	2 COMBINED AT	280C	945.	12.13	216.	160.	124.	.57
+	ROUTED TO	R280	909.	12.20	216.	160.	123.	.57
+	HYDROGRAPH AT	300	875.	12.20	109.	29.	14.	.99
+	2 COMBINED AT	300C	1769.	12.20	321.	187.	137.	1.56
	ROUTED TO	R300	1733.	12.27	321.	187.	136.	1.56
+	ROUTED TO	RR300	1699.	12.33	321.	187.	136.	1.56
+	HYDROGRAPH AT	350	1192.	12.20	103.	27.	13.	.97
+	DIVERSION TO	SF350	715.	12.20	62.	16.	8.	.97
+	HYDROGRAPH AT	D350	477.	12.20	41.	11.	5.	.97
+	ROUTED TO	350R	414.	12.43	41.	11.	5.	.97
+	HYDROGRAPH AT	310	376.	12.33	49.	12.	6.	.56
+	2 COMBINED AT	C310	749.	12.40	89.	23.	11.	.94
+	ROUTED TO	R310	679.	12.77	89.	23.	11.	.94
+	HYDROGRAPH AT	320	965.	12.20	123.	34.	17.	.97
+	DIVERSION TO	BS320	377.	11.97	21.	6.	3.	.97
+	HYDROGRAPH AT	D320	965.	12.20	109.	28.	14.	.97
+	HYDROGRAPH AT	RT320	377.	11.97	21.	6.	3.	.97
+	ROUTED TO	SR320	4.	4.13	4.	4.	3.	.97
+	4 COMBINED AT	C320	2601.	12.33	516.	240.	162.	3.47
+	HYDROGRAPH AT	340	1056.	12.20	143.	43.	21.	1.02
	DIVERSION TO	BS340	1056.	12.20	71.	20.	9.	1.02
+	HYDROGRAPH AT	D340	945.	12.30	85.	23.	11.	1.02
+	HYDROGRAPH AT	RT340	1056.	12.20	71.	20.	9.	1.02
+	ROUTED TO	SR340	13.	8.37	13.	13.	9.	1.02

+	3 COMBINED AT	C340	3515.	12.30	609.	275.	183.	4.50
+	HYDROGRAPH AT	360	283.	12.20	45.	14.	7.	.31
	DIVERSION TO	BS360	283.	12.20	29.	8.	4.	.31
+	HYDROGRAPH AT	D360	173.	12.53	20.	6.	3.	.31
+	HYDROGRAPH AT	RT360	283.	12.20	29.	8.	4.	.31
+	ROUTED TO	SR360	5.	8.80	5.	5.	4.	.31
+	3 COMBINED AT	360C	3517.	12.30	632.	286.	189.	4.81
+	HYDROGRAPH AT	380	321.	12.13	32.	9.	5.	.27
+	DIVERSION TO	BS380	276.	12.07	13.	4.	2.	.27
+	HYDROGRAPH AT	D380	321.	12.13	21.	6.	3.	.27
+	HYDROGRAPH AT	RT380	276.	12.07	13.	4.	2.	.27
+	ROUTED TO	SR380	2.	8.20	2.	2.	2.	.27
+	3 COMBINED AT	380C	3718.	12.30	654.	293.	193.	5.08
+	HYDROGRAPH AT	400	58.	12.10	4.	1.	1.	.05
+	DIVERSION TO	BS400	58.	12.10	3.	1.	0.	.05
+	HYDROGRAPH AT	D400	21.	12.33	1.	0.	0.	.05
+	HYDROGRAPH AT	RT400	58.	12.10	3.	1.	0.	.05
+	ROUTED TO	SR400	1.	11.87	1.	1.	0.	.05
	2 COMBINED AT	C400	22.	12.33	2.	1.	1.	.05
+	2 COMBINED AT	400C	3719.	12.30	655.	294.	194.	5.13
+	HYDROGRAPH AT	RT350	715.	12.20	62.	16.	8.	.97
+	ROUTED TO	RR350	630.	12.43	62.	16.	8.	.97
+	HYDROGRAPH AT	355	500.	12.33	69.	18.	9.	.66
+	2 COMBINED AT	C355	1080.	12.40	130.	34.	16.	1.24
+	ROUTED TO	R355	1013.	12.60	130.	34.	16.	1.24
+	HYDROGRAPH AT	361	499.	12.10	49.	15.	7.	.36
+	DIVERSION TO	BS361	475.	12.07	23.	7.	3.	.36
+	HYDROGRAPH AT	D361	486.	12.13	30.	8.	4.	.36
+	HYDROGRAPH AT	RT361	475.	12.07	23.	7.	3.	.36
+	ROUTED TO	SR361	4.	8.30	4.	4.	3.	.36
+	3 COMBINED AT	361C	1101.	12.57	162.	46.	23.	1.60
+	HYDROGRAPH AT	342	420.	12.07	36.	10.	5.	.30
+	DIVERSION TO	BS3421	358.	12.00	15.	4.	2.	.30
+	HYDROGRAPH AT	D3421	418.	12.10	23.	6.	3.	.30
	HYDROGRAPH AT	RT3421	358.	12.00	15.	4.	2.	.30
+	ROUTED TO	SR3421	3.	8.57	3.	3.	2.	.30
+	2 COMBINED AT	C342	420.	12.10	26.	9.	5.	.30
+	DIVERSION TO	BS3422	400.	12.10	17.	4.	2.	.30

+	HYDROGRAPH AT	D3422	20.	12.07	9.	5.	3.	.30
+	HYDROGRAPH AT	RT3422	400.	12.10	17.	4.	2.	.30
	ROUTED TO	SR3422	5.	12.07	5.	4.	2.	.30
+	2 COMBINED AT	CC342	25.	12.07	14.	9.	5.	.30
+	ROUTED TO	R342	25.	12.33	14.	9.	5.	.30
+	HYDROGRAPH AT	341	284.	12.13	35.	11.	5.	.23
+	DIVERSION TO	BS341	246.	12.03	15.	4.	2.	.23
+	HYDROGRAPH AT	D341	284.	12.13	25.	7.	3.	.23
+	HYDROGRAPH AT	RT341	246.	12.03	15.	4.	2.	.23
+	ROUTED TO	SR341	3.	4.57	3.	3.	2.	.23
+	3 COMBINED AT	C341	290.	12.13	41.	18.	10.	.53
+	ROUTED TO	RR341	267.	12.60	41.	18.	10.	.53
+	2 COMBINED AT	361CC	1351.	12.60	201.	63.	33.	2.13
+	ROUTED TO	RR361	1233.	12.80	201.	63.	33.	2.13
+	HYDROGRAPH AT	370	588.	12.30	79.	21.	10.	.67
+	HYDROGRAPH AT	395	182.	12.23	25.	7.	3.	.20
+	2 COMBINED AT	370C	758.	12.30	103.	28.	13.	.87
+	ROUTED TO	R370	673.	12.60	103.	28.	13.	.87
	HYDROGRAPH AT	381	749.	12.17	84.	24.	11.	.73
+	DIVERSION TO	BS381	749.	12.17	41.	11.	5.	.73
+	HYDROGRAPH AT	D381	658.	12.27	48.	13.	6.	.73
+	HYDROGRAPH AT	RT381	749.	12.17	41.	11.	5.	.73
+	ROUTED TO	SR381	7.	9.87	7.	7.	5.	.73
+	4 COMBINED AT	381C	1960.	12.73	352.	109.	57.	3.72
+	ROUTED TO	RR381	1931.	12.83	352.	109.	57.	3.72
+	HYDROGRAPH AT	390	463.	12.03	33.	10.	5.	.24
+	DIVERSION TO	BS390	95.	11.73	6.	2.	1.	.24
+	HYDROGRAPH AT	D390	463.	12.03	30.	8.	4.	.24
+	HYDROGRAPH AT	RT390	95.	11.73	6.	2.	1.	.24
+	ROUTED TO	SR390	1.	.90	1.	1.	1.	.24
+	2 COMBINED AT	390C	464.	12.03	31.	9.	5.	.24
+	ROUTED TO	RR390	324.	12.50	31.	9.	5.	.24
+	HYDROGRAPH AT	401	448.	12.23	67.	19.	9.	.61
+	DIVERSION TO	BS401	44.	11.80	6.	2.	1.	.61
	HYDROGRAPH AT	D401	448.	12.23	65.	17.	8.	.61
+	HYDROGRAPH AT	RT401	44.	11.80	6.	2.	1.	.61
+	ROUTED TO	SR401	1.	.93	1.	1.	1.	.61
+	5 COMBINED AT	C401	5079.	12.40	1087.	425.	262.	9.70

+	HYDROGRAPH AT	385	782.	12.23	87.	24.	12.	.65
+	DIVERSION TO	SF385	195.	12.23	22.	6.	3.	.65
	HYDROGRAPH AT	D385	586.	12.23	65.	18.	9.	.65
+	ROUTED TO	385R	475.	12.70	65.	18.	9.	.65
+	HYDROGRAPH AT	420	752.	12.20	92.	26.	12.	.85
+	DIVERSION TO	BS420	269.	11.97	15.	4.	2.	.85
+	HYDROGRAPH AT	D420	752.	12.20	83.	22.	10.	.85
+	HYDROGRAPH AT	RT420	269.	11.97	15.	4.	2.	.85
+	ROUTED TO	SR420	13.	11.03	12.	4.	2.	.85
+	4 COMBINED AT	420C	5813.	12.37	1228.	462.	281.	10.87
+	HYDROGRAPH AT	440	180.	12.03	12.	3.	2.	.08
+	ROUTED TO	R70	176.	12.07	12.	3.	2.	.08
+	HYDROGRAPH AT	441	16.	12.03	1.	0.	0.	.01
+	2 COMBINED AT	C108	191.	12.07	14.	4.	2.	.09
+	DIVERSION TO	SPLIT	96.	12.07	7.	2.	1.	.09
+	HYDROGRAPH AT	DIV4	96.	12.07	7.	2.	1.	.09
+	ROUTED TO	R108	88.	12.13	7.	2.	1.	.09
+	HYDROGRAPH AT	442	102.	12.10	9.	2.	1.	.10
	2 COMBINED AT	C67	187.	12.10	15.	4.	2.	.19
+	DIVERSION TO	BASIN4	115.	12.10	6.	1.	1.	.19
+	HYDROGRAPH AT	DIV6	72.	12.10	10.	3.	1.	.19
+	HYDROGRAPH AT	RTDIV6	115.	12.10	6.	1.	1.	.19
+	ROUTED TO	RFDIV6	1.	11.90	1.	1.	1.	.19
+	2 COMBINED AT	CDIV6	74.	12.10	10.	4.	2.	.19
+	HYDROGRAPH AT	443	148.	12.07	14.	4.	2.	.08
+	DIVERSION TO	WSH66	78.	11.90	12.	3.	2.	.08
+	HYDROGRAPH AT	DIV66	70.	12.07	3.	1.	0.	.08
+	ROUTED TO	R113	69.	12.07	3.	1.	0.	.08
+	2 COMBINED AT	C114	140.	12.07	13.	4.	2.	.27
+	HYDROGRAPH AT	444	82.	12.03	5.	1.	1.	.04
+	ROUTED TO	R58	75.	12.07	5.	1.	1.	.04
+	HYDROGRAPH AT	445	296.	12.03	18.	5.	2.	.19
+	2 COMBINED AT	C107	365.	12.03	22.	6.	3.	.23
+	ROUTED TO	R107	365.	12.07	22.	6.	3.	.23
	HYDROGRAPH AT	RTB2	96.	12.07	7.	2.	1.	.09
+	ROUTED TO	RSPLIT	95.	12.07	7.	2.	1.	.09
+	HYDROGRAPH AT	446	65.	12.03	6.	2.	1.	.04
+	3 COMBINED AT	C109	520.	12.07	35.	9.	4.	.27

+	DIVERSION TO	WSH404	35.	11.73	8.	2.	1.	.27
+	HYDROGRAPH AT	DIV5	485.	12.07	27.	7.	3.	.27
	ROUTED TO	R109	469.	12.10	27.	7.	3.	.27
	HYDROGRAPH AT	447	138.	12.07	12.	4.	2.	.09
+	HYDROGRAPH AT	RT404	35.	11.73	8.	2.	1.	.27
+	ROUTED TO	R404	35.	11.90	8.	2.	1.	.27
+	3 COMBINED AT	C110	635.	12.07	46.	13.	6.	.36
+	ROUTED TO	R110	632.	12.10	46.	13.	6.	.36
+	2 COMBINED AT	C115	764.	12.10	59.	17.	8.	.63
+	ROUTED TO	R115	767.	12.10	59.	17.	8.	.63
+	HYDROGRAPH AT	448	88.	12.03	6.	2.	1.	.05
+	HYDROGRAPH AT	449	80.	12.03	5.	1.	1.	.05
+	2 COMBINED AT	C6364	166.	12.03	11.	3.	1.	.09
+	ROUTED TO	R6364	137.	12.17	11.	3.	1.	.09
+	HYDROGRAPH AT	450	61.	12.20	6.	2.	1.	.07
+	HYDROGRAPH AT	451	18.	12.17	2.	1.	0.	.03
+	HYDROGRAPH AT	RT66	78.	11.90	12.	3.	2.	.08
+	HYDROGRAPH AT	452	62.	12.03	4.	1.	1.	.04
+	2 COMBINED AT	C6465	140.	12.03	16.	4.	2.	.04
+	ROUTED TO	R6566	135.	12.10	16.	4.	2.	.04
+	4 COMBINED AT	C116	341.	12.17	35.	9.	4.	.23
+	ROUTED TO	BASIN5	152.	12.47	35.	9.	4.	.23
+	ROUTED TO	R116	150.	12.53	35.	9.	4.	.23
+	HYDROGRAPH AT	453	62.	12.10	7.	2.	1.	.06
+	2 COMBINED AT	C117	169.	12.50	41.	11.	5.	.29
+	2 COMBINED AT	C118	852.	12.10	99.	28.	14.	.92
+	ROUTED TO	R118	842.	12.10	99.	28.	14.	.92
+	DIVERSION TO	BASIN6	243.	12.10	10.	2.	1.	.92
+	HYDROGRAPH AT	DIV7	599.	12.10	89.	25.	13.	.92
+	HYDROGRAPH AT	RTDIV7	243.	12.10	10.	2.	1.	.92
+	ROUTED TO	RFDIV7	1.	11.97	1.	1.	1.	.92
+	2 COMBINED AT	CDIV7	600.	12.10	90.	26.	13.	.92
+	HYDROGRAPH AT	454	157.	12.17	21.	6.	3.	.18
+	2 COMBINED AT	C119	748.	12.13	110.	32.	16.	1.10
+	ROUTED TO	R454	722.	12.20	110.	32.	16.	1.10
+	HYDROGRAPH AT	415	412.	12.17	55.	16.	7.	.45
+	HYDROGRAPH AT	RT385	195.	12.23	22.	6.	3.	.65
+	ROUTED TO	RR385	177.	12.40	22.	6.	3.	.65

+ 3 COMBINED AT	415C	1193.	12.20	184.	53.	26.	1.71
+ ROUTED TO	R415	1179.	12.27	184.	53.	26.	1.71
HYDROGRAPH AT	455	1346.	12.13	142.	43.	21.	1.11
DIVERSION TO	BS455	1346.	12.13	137.	37.	18.	1.11
+ HYDROGRAPH AT	D455	55.	12.77	16.	6.	3.	1.11
+ HYDROGRAPH AT	RT455	1346.	12.13	137.	37.	18.	1.11
+ ROUTED TO	SR455	25.	10.47	25.	25.	18.	1.11
+ 2 COMBINED AT	C455	80.	12.77	41.	31.	21.	1.11
+ 3 COMBINED AT	455C	6810.	12.37	1415.	533.	324.	13.69
+ ROUTED TO	SR440	815.	13.80	799.	533.	323.	13.69
+ ROUTED TO	RR455	815.	14.13	799.	533.	321.	13.69
+ HYDROGRAPH AT	456	468.	12.07	35.	10.	5.	.26
+ DIVERSION TO	BASIN1	184.	12.07	8.	2.	1.	.26
+ HYDROGRAPH AT	DIV1	284.	12.07	27.	8.	4.	.26
+ DIVERSION TO	WA30	58.	12.07	10.	3.	2.	.26
+ HYDROGRAPH AT	DIV2	226.	12.07	18.	4.	2.	.26
+ ROUTED TO	R456	213.	12.13	18.	4.	2.	.26
+ HYDROGRAPH AT	457	264.	12.07	20.	5.	3.	.19
+ 2 COMBINED AT	C101	462.	12.10	38.	10.	5.	.45
+ DIVERSION TO	BASIN2	165.	12.10	7.	2.	1.	.45
+ HYDROGRAPH AT	DIV3	297.	12.10	30.	8.	4.	.45
+ HYDROGRAPH AT	RTDIV3	165.	12.10	7.	2.	1.	.45
+ ROUTED TO	RFDIV3	2.	11.90	2.	2.	1.	.45
+ 2 COMBINED AT	CDIV3	299.	12.10	32.	9.	5.	.45
+ ROUTED TO	R101	297.	12.10	32.	9.	5.	.45
+ HYDROGRAPH AT	458	356.	12.03	25.	7.	3.	.19
+ 2 COMBINED AT	C103	635.	12.07	56.	16.	8.	.64
+ ROUTED TO	R103	630.	12.07	56.	16.	8.	.64
+ HYDROGRAPH AT	RT30	58.	12.07	10.	3.	2.	.26
+ ROUTED TO	R30	57.	12.10	10.	3.	2.	.26
+ HYDROGRAPH AT	RTB1	184.	12.07	8.	2.	1.	.26
+ ROUTED TO	B1	37.	12.23	8.	2.	1.	.26
+ ROUTED TO	RB1	37.	12.30	8.	2.	1.	.26
+ 2 COMBINED AT	CDIV	86.	12.20	17.	5.	3.	.12
+ HYDROGRAPH AT	459	44.	12.03	3.	1.	0.	.03
+ 2 COMBINED AT	C52	113.	12.10	20.	6.	3.	.15
+ ROUTED TO	R52	112.	12.17	20.	6.	3.	.15
+ HYDROGRAPH AT	460	214.	12.07	19.	6.	3.	.14

+	2 COMBINED AT	C102	313.	12.07	39.	12.	6.	.29
+	ROUTED TO	BASIN3	71.	12.63	39.	12.	6.	.29
	ROUTED TO	R3	71.	12.77	39.	12.	6.	.29
+	HYDROGRAPH AT	461	161.	12.10	17.	5.	2.	.12
+	2 COMBINED AT	C104	213.	12.10	55.	17.	8.	.41
+	2 COMBINED AT	C106	835.	12.07	110.	32.	16.	1.05
+	ROUTED TO	R106	797.	12.13	110.	32.	16.	1.05
+	HYDROGRAPH AT	462	538.	12.07	40.	11.	5.	.30
+	2 COMBINED AT	C56	1254.	12.10	149.	42.	21.	1.35
+	HYDROGRAPH AT	480	1050.	12.10	96.	29.	14.	.73
+	DIVERSION TO	BS480	455.	11.90	27.	8.	4.	.73
+	HYDROGRAPH AT	D480	1050.	12.10	78.	21.	10.	.73
+	HYDROGRAPH AT	RT480	455.	11.90	27.	8.	4.	.73
+	ROUTED TO	SR480	6.	3.90	6.	6.	4.	.73
+	2 COMBINED AT	C480	1056.	12.10	84.	27.	14.	.73
+	3 COMBINED AT	480C	2511.	12.10	975.	617.	365.	2.09
+	ROUTED TO	RR480	2348.	12.13	972.	617.	365.	2.09
+	HYDROGRAPH AT	500	1073.	12.27	122.	33.	16.	.93
+	2 COMBINED AT	500C	3238.	12.20	1083.	645.	379.	3.02

*** NORMAL END OF HEC-1 ***