Spook Hill ADMP Update

Flood Control District of Maricopa County

Appendix B
Volume 5

Level I - Hydrology
(07/18/2000 - 07/27/2000)

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RICHARD L.
HINER
Date Signed 9-2000
ARIZONA U.S.A.

Spook Hill Area Drainage Master Plan Update

Flood Control District of Maricopa County

List of Appendices

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Appendix A

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Volume 3	TR-20 Hydrology Analysis
Volume 4	Design Alternative Analysis – Level I
Volume 5	Design Alternative Analysis – Level II
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Appendix B

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Volume 7A	HEC-1 Modeling Output Files (Level II)
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Volume 7C	HEC-1 Modeling Output Files (Level II)

Registered Professional Engineer (Civil)
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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.

0.	07/18/00	S24CE41.DAT	HEC-1 Existing Conditions 100-year 24-hour event. Model based on combination and update of three previous options: Pass Mountain, Mcdowell Road, and Mckellips Road. The Pass Mtn. Option has levee extended north-west creating new sub-basin boundaries: 295, 300 & 305 from 300; 353 & 355 from 355; 365 & 370 from 370; 383 & 385 from 385; 393 & 395 from 395. Detention basins are added to sub-basins 300 & 305. The Mcdowell option has detention basins located at meeting of 370 & 395; and meeting of 385 & 411. The detention basin located at 385 & 411 will be routed via channels along Mcdowell & Hawes to combine with sub-basin 390 and the flow from the detention basin located at 370 & 395 which was routed west along Mcdowell Road. All of the flow will then be routed below grade in RGRCP that will outlet into a natural channel in sub-basin 455. The Mckellips option reflects 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.
51.	07/18/00	S24CE42.DAT	HEC-1 Existing Conditions 100-year 24-hour event. Model based on combination and update of three previous options: Pass Mountain, Mcdowell Road, and Mckellips Road. The Pass Mtn. Option has levee extended north-west creating new sub-basin boundaries: 295, 300 & 305 from 300; 353 & 355 from 355; 365 & 370 from 370; 383 & 385 from 385; 393 & 395 from 395. Detention basins are added to sub-basins 300 & 305. The Mcdowell option has detention basins located at meeting of 370 & 395; and meeting of 385 & 411. The detention basin located at 385 & 411 will be routed via RGRCP to channel at Sossaman Road. The detention basin located at 370 & 395 will be routed by channel to combine with sub-basin 390 and then be routed by RGRCP to outlet into natural channel located in sub-basin 455. The Mckellips option reflects 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
52.	07/18/00	S24CE43.DAT	HEC-1 Existing Conditions 100-year 24-hour event. Model based on combination and update of two previous options: Pass Mountain, and Mcdowell Road. The Pass Mtn. Option has levee extended north-west creating new sub-basin boundaries: 295, 300 & 305 from 300; 353 & 355 from 355; 365 & 370 from 370; 383 & 385 from 385; 393 & 395 from 395. Detention basins are added to sub-basins 300 & 305. The Mcdowell option has detention basins located at 455, the meeting of 370 & 395; and meeting of 385 & 411. Improved natural channels will be utilized along Mcdowell between Power & Ellsworth, along Oak St. between Hawes & Thunder Mtn. , along Hawes north of Oak St. to Mcdowell road.

53.	07/19/00	S24CE44.DAT	HEC-1 Existing Conditions 100-year 24-hour event. Model based on combination of three previous options: Mckellips, Pass Mountain, and Mcdowell. The Mckellips option utilizes an 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. The Pass Mtn. Option has levee extended north-west creating new sub-basin boundaries: 295, 300 & 305 from 300; 353 & 355 from 355; 365 & 370 from 370; 383 & 385 from 385; 393 & 395 from 395. Detention basins are added to sub-basins 300 & 305. The Mcdowell option has detention basins located at 455, the meeting of 370 & 395; and meeting of 385 & 411. Improved natural channels will be utilized along Mcdowell between Power & Ellsworth, along Oak St. between Sossaman & Thunder Mtn. , along Hawes north of Oak St. and along Sossaman between Mcdowell & Oak St. This will generate new sub-basins 410, 411, and 413 from sub-basins 415 & 420.
54.	07/19/00	S24CE45.DAT	HEC-1 Existing Conditions 100-year 24-hour event. Model based on the combination of two previous options: Pass Mountain and Mcdowell Road. The Pass Mtn. Option has levee extended north-west creating new sub-basin boundaries: 295, 300 & 305 from 300; 353 & 355 from 355; 365 & 370 from 370; 383 & 385 from 385; 393 & 395 from 395. Detention basins are added to sub-basins 300 & 305. The Mcdowell option has detention basins located at 455, the meeting of 370 & 395; and meeting of 385 & 411. Improved natural channels will be utilized along Mcdowell between Power & Ellsworth, along Oak St. between Hawes & Thunder Mtn. , along Hawes north of Oak St. to Mcdowell road.
55.	07/20/00	S24CE46.DAT	HEC-1 Existing Conditions 100-year 24-hour event. Model based on combination of three previous options: Mckellips, Pass Mountain, and Mcdowell. The Mckellips option utilizes an interceptor channel extending From just west of Hawes road to the Spook Hill FRS. Original sub-basins 340, 380, and 400 are subdivided into 340, 342, 380, 381, 400, and 401. Conceptual detention basins are also included at the intersections of Mckellips/Hawes and Mckellips/Ellsworth. The Pass Mtn. Option has levee extended north-west creating new sub-basin boundaries: 295, 300 & 305 from 300; 353 & 355 from 355; 365 & 370 from 370; 383 & 385 from 385; 393 & 395 from 395. Detention basins are added to sub-basins 300 & 305. The Mcdowell option has detention basins located at 455; and meeting of 385 & 411. Improved natural channels will be utilized along Mcdowell between Power & Ellsworth, along Oak St. between Hawes & Thunder Mtn. , along Hawes north of Oak St. to Mcdowell road.

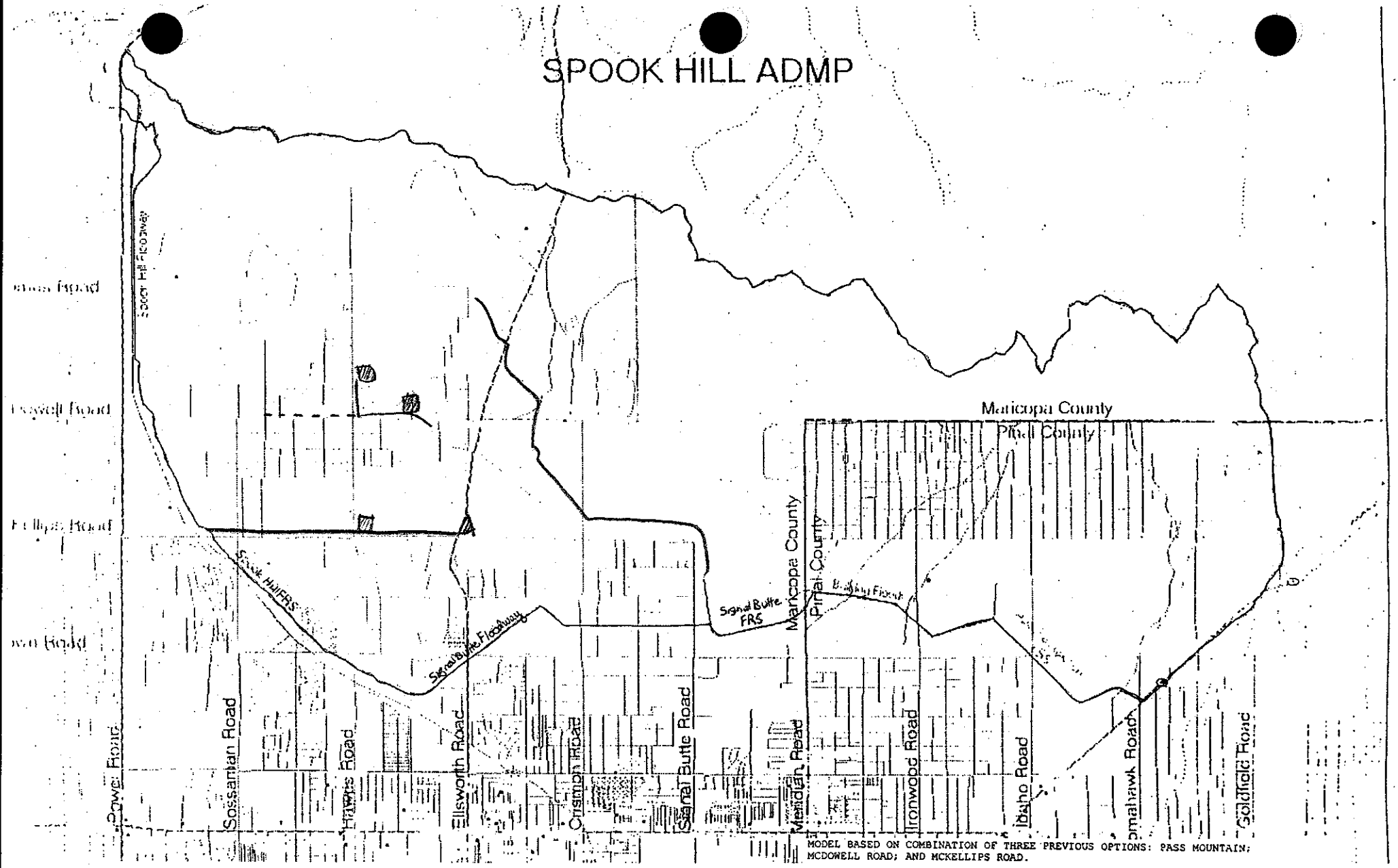
6.	07/20/00	S24CE47.DAT	HEC-1 Existing Conditions 100-year 24-hour event. Model based on the combination of two previous options: Pass Mountain and Mcdowell Road. The Pass Mtn. Option has levee extended north-west creating new sub-basin boundaries: 295, 300 & 305 from 300; 353 & 355 from 355; 365 & 370 from 370; 383 & 385 from 385; 393 & 395 from 395. Detention basins are added to sub-basins 300 & 305. The Mcdowell option has detention basins located at 455, the meeting of 370 & 395; and meeting of 385 & 411. Improved natural channels will be utilized along Mcdowell between Power & Ellsworth, along Oak St. between Hawes & Thunder Mtn. , along Hawes north of Oak St. to Mcdowell road. This will generate new sub-basins 410, and 411 from sub-basins 415 and 420.
57.	07/27/00	S24CE30Z.DAT	HEC-1 Existing Conditions 100-year 24-hour storm event. Changes to model include: 1) Number of hydrograph ordinates increased to 2000; 2) SE, SV, and SQ cards for the Three FRS's updated; 3) Sediment volumes subtracted from storage volumes; 4) Old elevation datum adjusted to NAVD 1988.
58.	07/27/00	S24CE30A.DAT	HEC-1 Existing Conditions 100-year 24-hour storm event. Update to this model based on changing all d-theta values to "dry" for all sub-basins.
59.	07/27/00	S24CE30B.DAT	HEC-1 Existing Conditions 100-year 24-hour storm event. Update to this model based on changing all d-theta values to "normal" for all sub-basins.
0.	07/27/00	S24CE30C.DAT	HEC-1 Existing Conditions 100-year 24-hour storm event. Update to this model based on changing all d-theta values to "wet" for all sub-basins.

HEC-1 alternatives within this book utilize updated 100-Year, 24-Hour Storm. The base model was further updated to reflect re-delineation of Sub-Basins 385 (reduced) and 415 (enlarged).

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



MODEL BASED ON COMBINATION OF THREE PREVIOUS OPTIONS: PASS MOUNTAIN; MCDOWELL ROAD; AND MCKELLIPS ROAD.

THE PASS MTN. OPTION HAS LEVEE EXTENDED NORTH-WEST CREATING NEW SUB-BASIN BOUNDARIES: 295, 300 & 305 FROM 300; 353 & 355 FROM 355; 365 & 370 FROM 370; 383 & 385 FROM 385; 393 & 395 FROM 395. DETENTION BASINS ARE ADDED TO SUB-BASINS 300 AND 305.

THE MCDOWELL OPTION HAS DETENTION BASINS LOCATED AT MEETING OF 370 & 395; AND MEETING OF 385 & 411. THE DETENTION BASIN LOCATED AT 385 & 411 WILL BE ROUTED VIA CHANNELS ALONG MCDOWELL & HAWES TO COMBINE WITH SUB-BASIN 390 AND THE FLOW FROM THE DETENTION BASIN LOCATED AT 370 & 395 WHICH WAS ROUTED WEST ALONG MCDOWELL RD. ALL OF THE FLOW WILL THEN BE ROUTED BELOW GRADE IN RGRCP THAT WILL OUTLET INTO A NATURAL CHANNEL IN SUB-BASIN 455

THE MCKELLIPS OPTION REFLECTS 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 MSKELLIPS/ELLSWORTH.

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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      *
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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 BASED ON COMBINATION OF THREE PREVIOUS OPTIONS: PASS MOUNTAIN;
 13           ID   MCDOWELL ROAD; AND MCKELLIPS ROAD.
 14           ID
 15           ID   THE PASS MTN. OPTION HAS LEVEE EXTENDED NORTH-WEST CREATING NEW
 16           ID   SUB-BASIN BOUNDARIES:  295, 300 & 305 FROM 300; 353 & 355 FROM 355;
 17           ID   365 & 370 FROM 370; 383 & 385 FROM 385; 393 & 395 FROM 395.  DETENTION BASINS
 18           ID   ARE ADDED TO SUB-BASINS 300 AND 305.
 19           ID
 20           ID   THE MCDOWELL OPTION HAS DETENTION BASINS LOCATED AT MEETING OF 370 & 395;
 21           ID   AND MEETING OF 385 & 411.  THE DETENTION BASIN LOCATED AT 385 & 411 WILL
 22           ID   BE ROUTED VIA CHANNELS ALONG MCDOWELL & HAWES TO COMBINE WITH SUB-BASIN 390
 23           ID   AND THE FLOW FROM THE DETENTION BASIN LOCATED AT 370 & 395 WHICH WAS ROUTED
 24           ID   WEST ALONG MCDOWELL RD. ALL OF THE FLOW WILL THEN BE ROUTED BELOW GRADE
 25           ID   IN RGRCP THAT WILL OUTLET INTO A NATURAL CHANNEL IN SUB-BASIN 455
 26           ID
 27           ID   THE MCKELLIPS OPTION REFLECTS INTERCEPTOR CHANNEL EXTENDING FROM JUST EAST
 28           ID   OF ELLSWORTH ROAD TO THE SPOOK HILL FRS.  ORIGINAL SUB-BASINS 340, 360,
 29           ID   380, AND 400 ARE SUBDIVIDED INTO 340, 341, 342, 360, 361, 380, 381, 400 AND
 30           ID   401.  CONCEPTUAL DETENTION BASINS ARE ALSO INCLUDED AT THE INTERSECTIONS OF
 31           ID   MCKELLIPS/HAWES AND MSKELLIPS/ELLSWORTH.
 32           ID
 33           ID
 34           ID
 35           ID
 36           ID   ANALYSIS PERFORMED BY WOOD/PATEL; MW;        07/18/00  FILE: S24CE41.DAT
 37           ID
 38           ID   DDM MCUHP1 SPOOK HILL AMDP
              *DIAGRAM
 39           IT       2                    1500
 40           IO       3
 41           IN      15
 42           JD    3.81    0.01
 43           PC    .000    .002    .005    .008    .011    .014    .017    .020    .023    .026
 44           PC    .029    .032    .035    .038    .041    .044    .048    .052    .056    .060
 45           PC    .064    .068    .072    .076    .080    .085    .090    .095    .100    .105
 46           PC    .110    .115    .120    .126    .133    .140    .147    .155    .163    .172
 47           PC    .181    .191    .203    .218    .236    .257    .283    .387    .663    .707
 48           PC    .735    .758    .776    .791    .804    .815    .825    .834    .842    .849
 49           PC    .856    .863    .869    .875    .881    .887    .893    .898    .903    .908
 50           PC    .913    .918    .922    .926    .930    .934    .938    .942    .946    .950
 51           PC    .953    .956    .959    .962    .965    .968    .971    .974    .977    .980
 52           PC    .983    .986    .989    .992    .995    .998   1.000
 53           JD    3.58   10.00
 54           JD    3.43   30.00
1                                          HEC-1 INPUT                                                    PAGE  2

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

 55           JD    3.28   60.00
 56           JD    3.22   90.00
 57           JD    3.18  120.00
 58           JD    3.14  150.00
 59           JD    3.05  300.00
 60           JD    2.97  500.00
              * DDM   ***** Updated *****

 61           KK      10
 62           KM   SUB-BASIN 10
 63           KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 64           KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
 65           KM     L = 2.00  Kb = .044  Adj. Slope =  165.0
 66           BA    .702
 67           LG    .350    .320   7.600    .090  15.000
 68           UC    .421    .302
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 69          UA       0       3       5       8      12      20      43      75      90      96
 70          UA     100
             * DDM   ***** Preserved *****

 71          KK     R10
 72          KM   ROUTING OF FLOW FROM SUB-BASIN 10 TO R12
 73          RS       4    FLOW      -1
 74          RC    .045     .03    .045    8700    .021
 75          RX       0       1       2      17      27      42      43      44
 76          RY       5       5       5       0       0       5       5       5
             * DDM   ***** Preserved *****

 77          KK     R12
 78          KM   ROUTING OF FLOW FROM R12 TO SUB-BASIN 20
 79          RS       6    FLOW      -1
 80          RC    .045     .03    .045    4500     .01
 81          RX       0       1      30    37.5    57.5      65      94      95
 82          RY       3     2.5     2.5       0       0     2.5     2.5       3
             * DDM   ***** Updated *****

 83          KK      20
 84          KM   SUB-BASIN 20
 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  .993
 87          KM     L = 2.50  Kb = .041  Adj. Slope =   88.0
 88          BA   1.120
 89          LG    .350    .390   5.800    .190   1.000
 90          UC    .658    .454
 91          UA       0       3       5       8      12      20      43      75      90      96
 92          UA     100
             * DDM   ***** Preserved *****

 93          KK     C20
 94          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 10 AND 20
 95          HC       2
             * DDM   ***** Updated *****
1                                    HEC-1 INPUT                                          PAGE  3

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

 96          KK      40
 97          KM   SUB-BASIN 40
 98          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 99          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
100          KM     L = 3.08  Kb = .036  Adj. Slope =  189.0
101          BA   2.233
102          LG    .340    .340   4.900    .280   5.000
103          UC    .496    .264
104          UA       0       3       5       8      12      20      43      75      90      96
105          UA     100
             * DDM   ***** Updated *****

106          KK      60
107          KM   SUB-BASIN 60
108          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
109          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .990
110          KM     L = 4.19  Kb = .038  Adj. Slope =  209.6
111          BA   1.746
112          LG    .330    .350   5.800    .190   9.000
113          UC    .596    .477
114          UA       0       3       5       8      12      20      43      75      90      96
115          UA     100
             * DDM   ***** Preserved *****

116          KK     60C
117          KM   HYDROGRAPH COMBINATION FOR APACHE JUNCTION FRS
             *      1       2
118          HC       3
             * DDM   ***** Preserved *****

119          KK    SR60
120          KM   APACHE JUNCTION FRS AS-BUILT PLANS 12/19/88
121          KM   OUTLET PIPE=30"RCP; L=136.6'; INLET INV.=1783.5; OUTLET INV.=1783
122          KM   EMERGENCY SPILLWAY ELEV.=1799.77'; PRINCIPLE SPILLWAY ELEV.=1793.5'
123          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 100 ACRE-FEET
124          RS       1    STOR       0
125          SV       0       1     100     200     300     400
126          SQ       0      71      81      87    91.5      94
127          SE    83.5    93.5      96    97.7      99   99.77
             * DDM   ***** Preserved *****

128          KK     R60
129          KM        ROUTE FLOW THROUGH BULLDOG FLOODWAY FROM APACHE JUNCTION FRS
130          RS       1    FLOW      -1
131          RC    .016    .016    .016    2850    .012
132          RX       0       1       2     2.1     5.6     5.7       6       7
133          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

134          KK    RR60
135          KM   ROUTE FLOW FROM BULLDOG FLOODWAY TO SUB-BASIN 80
136          RS       4    FLOW      -1
137          RC    .016    .016    .016    3500    .005
138          RX       0       1       2     2.1     7.1     7.2       8       9
139          RY     3.5     3.5     3.5       0       0     3.5     3.5     3.5
             * DDM   ***** Updated *****

140          KK      80
141          KM   SUB-BASIN 80
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  .991
144          KM     L = 2.69  Kb = .039  Adj. Slope =  229.8
145          BA   1.475
146          LG    .330    .330   5.600    .210   4.000
147          UC    .433    .259
148          UA       0       3       5       8      12      20      43      75      90      96
149          UA     100
             * DDM   ***** Preserved *****
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150          KK     80C
151          KM   HYDROGRAPH COMBINATION FOR FLOW FROM APACHE JUNCTION FRS & SUB-BASIN 80
152          HC       2   1.475
             * DDM   ***** Preserved *****

153          KK     R80
154          KM   ROUTE FLOW FROM SUB-BASIN 80 TO SUB-BASIN 100
155          RS       1    FLOW      -1
156          RC    .025    .016    .025    1200    .003
157          RX       0       2       6     6.1    41.1    41.2    56.2    58.2
158          RY     5.5     4.5     4.5       0       0     4.5     4.5     5.5
             * DDM   ***** Updated *****

159          KK     100
160          KM   SUB-BASIN 100
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  .997
163          KM     L = 1.94  Kb = .046  Adj. Slope =  108.0
164          BA    .484
165          LG    .320    .290   5.100    .260   3.000
166          UC    .533    .473
167          UA       0       5      16      30      65      77      84      90      94      97
168          UA     100
             * DDM   ***** Preserved *****

169          KK    100C
170          KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 80 & 100
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    R100
173          KM   ROUTE FLOW FROM SUB-BASIN 100 TO SUB-BASIN 120
174          RS       1    FLOW      -1
175          RC    .016    .016    .016     940    .005
176          RX       0       1       2     2.1    52.1    52.2      53      54
177          RY     4.5     4.5     4.5       0       0     4.5     4.5     4.5
             * DDM   ***** Updated *****

178          KK     120
179          KM   SUB-BASIN 120
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  .987
182          KM     L = 3.07  Kb = .037  Adj. Slope =  239.0
183          BA   2.202
184          LG    .330    .280   6.800    .130  11.000
185          UC    .429    .226
186          UA       0       3       5       8      12      20      43      75      90      96
187          UA     100
             * DDM   ***** Preserved *****

188          KK    120C
189          KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 100 & 120
190          HC       2
             * DDM   ***** Preserved *****

191          KK    R120
192          KM   ROUTE FLOW FROM SUB-BASIN 120 TO SIGNAL BUTTE FRS
193          RS       1    FLOW      -1
194          RC    .025    .016    .025    2100    .005
195          RX       0       6      10    10.1    60.1    60.2    74.2    80.2
196          RY       8       5       5       0       0       5       5       8
             * DDM   ***** Updated *****

197          KK     140
198          KM   SUB-BASIN 140
199          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
200          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
201          KM     L = 1.61  Kb = .044  Adj. Slope =  149.0
202          BA    .598
203          LG    .310    .280   4.200    .440   5.000
204          UC    .421    .278
205          UA       0       5      16      30      65      77      84      90      94      97
206          UA     100
             * DDM   ***** Updated *****

207          KK     150
208          KM   SUB-BASIN 150
209          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
210          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
211          KM     L = 1.50  Kb = .047  Adj. Slope =  314.6
212          BA    .408
213          LG    .350    .360   5.100    .260   7.000
214          UC    .296    .221
215          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

216          UA     100
             * DDM   ***** Preserved *****

217          KK    R150
218          KM   ROUTING OF FLOW FROM SUB-BASIN 150 TO R152
219          RS       2    FLOW      -1
220          RC    .045     .04    .045    3100    .032
221          RX       0       1       2      23      33      54      55      56
222          RY       7       7       7       0       0       7       7       7
             * DDM   ***** Preserved *****

223          KK    R152
224          KM   ROUTING OF FLOW FROM R152 TO SUB-BASIN 160
225          RS       4    FLOW      -1
226          RC    .045     .03    .045    5900    .019
227          RX       0       1       2       8      33      39      40      41
228          RY       2       2       2       0       0       2       2       2
             * DDM   ***** Updated *****

229          KK     160
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230          KM   SUB-BASIN 160
231          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
232          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
233          KM     L = 2.10  Kb = .047  Adj. Slope =  129.0
234          BA    .369
235          LG    .340    .330   4.150    .440   1.000
236          UC    .587    .655
237          UA       0       3       5       8      12      20      43      75      90      96
238          UA     100
             * DDM   ***** Updated *****

239          KK     180
240          KM   SUB-BASIN 180
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 = 2.42  Kb = .041  Adj. Slope =  140.0
244          BA   1.000
245          LG    .350    .350   4.150    .430    .000
246          UC    .571    .403
247          UA       0       3       5       8      12      20      43      75      90      96
248          UA     100
             * DDM   ***** Preserved *****

249          KK    180C
250          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
251          HC       5
             * DDM   ***** Updated *****

252          KK     383
253          KM   SUB-BASIN 383
254          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
255          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
256          KM     L = 1.49  Kb = .047  Adj. Slope =  315.0
257          BA    .420
258          LG    .350    .400   6.000    .170  16.000
1                                        HEC-1 INPUT                                                    PAGE  7

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

259          UC    .287    .209
260          UA       0       3       5       8      12      20      43      75      90      96
261          UA     100
             * DDM   ***** Preserved *****

262          KK    R383
263          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
264          KM   ROUTING OF FLOW FROM SUB-BASIN 383 TO SUB-BASIN 393
265          KM   OVERBANK MANNINGS INCREASED TO ACCOUNT FOR SKEWED FLOW TO NATURAL
266          KM   WATERCOURSE FLOW PATH
267          RS       2    FLOW      -1
268          RC     .07     .03     .07    1115    .045
269          RX       0       1       3       9      39      45      46      47
270          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

271          KK     393
272          KM   SUB-BASIN 393
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 1.000
275          KM     L =  .61  Kb = .061  Adj. Slope =  246.2
276          BA    .040
277          LG    .350    .350   4.200    .420    .000
278          UC    .233    .310
279          UA       0       3       5       8      12      20      43      75      90      96
280          UA     100
             * DDM   ***** Preserved *****

281          KK    393C
282          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 383 & 393
283          HC       2
             * DDM   ***** Preserved *****

284          KK    R393
285          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
286          KM   ROUTING OF FLOW FROM SUB-BASIN 393 TO SUB-BASIN 365
287          RS       1    FLOW      -1
288          RC    .055     .03    .055    1115    .045
289          RX       0       1       3       9      39      45      46      47
290          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

291          KK     365
292          KM   SUB-BASIN 365
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  .998
295          KM     L = 2.20  Kb = .047  Adj. Slope =  299.5
296          BA    .415
297          LG    .350    .350   4.600    .330   4.000
298          UC    .400    .415
299          UA       0       3       5       8      12      20      43      75      90      96
300          UA     100
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                                    PAGE  8

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

301          KK    365C
302          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 393 & 365
303          HC       2
             * DDM   ***** Preserved *****

304          KK    R365
305          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
306          KM   ROUTING OF FLOW FROM SUB-BASIN 365 TO ROUTING 365R
307          RS       2    FLOW      -1
308          RC    .045     .03    .045    1000    .025
309          RX       0       1      50      56      76      82     131     132
310          RY     2.5       2       2       0       0       2       2     2.5
             * DDM   ***** Preserved *****

311          KK    365R
312          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
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313          KM   ROUTING OF FLOW FROM 365R TO SUB-BASIN 353
314          KM   OVERBANK MANNINGS INCREASED TO ACCOUNT FOR SKEWED FLOW TO NATURAL
315          KM   WATERCOURSE FLOW PATH
316          RS       3    FLOW      -1
317          RC     .07     .03     .07    1300    .008
318          RX       0       3       5      11      41      47     147     247
319          RY       3     2.5       2       0       0       2     2.5       3
             * DDM   ***** Updated *****

320          KK     353
321          KM   SUB-BASIN 353
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 = 2.50  Kb = .046  Adj. Slope =  297.9
325          BA    .502
326          LG    .350    .350   4.350    .380   1.000
327          UC    .442    .460
328          UA       0       3       5       8      12      20      43      75      90      96
329          UA     100
             * DDM   ***** Preserved *****

330          KK    353C
331          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 365 & 353
332          HC       2
             * DDM   ***** Preserved *****

333          KK    R353
334          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
335          KM   ROUTING OF FLOW FROM SUB-BASIN 353 TO ROUTING 353R
336          KM   OVERBANK MANNINGS INCREASED TO ACCOUNT FOR SKEWED FLOW TO NATURAL
337          KM   WATERCOURSE FLOW PATH
338          RS       2    FLOW      -1
339          RC     .07     .03     .07    1100    .009
340          RX       0       3       5      11      41      47     172     302
341          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

342          KK    353R
343          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
344          KM   ROUTING OF FLOW FROM 353R TO SUB-BASIN 310
345          RS       1    FLOW      -1
346          RC    .045     .03    .045    1692     .03
347          RX       0       1      25      31      51      57      81      82
348          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

349          KK     350
350          KM   SUB-BASIN 350
351          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
352          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
353          KM     L = 2.22  Kb = .042  Adj. Slope =  311.0
354          BA    .935
355          LG    .350    .350   4.600    .330   5.000
356          UC    .367    .239
357          UA       0       3       5       8      12      20      43      75      90      96
358          UA     100
             * DDM   ***** Preserved *****

359          KK    350R
360          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
361          KM   ROUTING OF MAIN FLOW FROM DIVERSION OF SUB-BASIN 350 TO SUB-BASIN 310
362          RS       8    FLOW      -1
363          RC    .045    .035    .045    7650    .025
364          RX       0       1      50      56      86      92     141     142
365          RY       3       2       2       0       0       2       2       3
             *      1       2
             * DDM   ***** Updated *****

366          KK     310
367          KM   SUB-BASIN 310
368          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
369          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
370          KM     L = 2.70  Kb = .045  Adj. Slope =  283.5
371          BA    .555
372          LG    .350    .350   3.910    .480    .000
373          UC    .483    .511
374          UA       0       3       5       8      12      20      43      75      90      96
375          UA     100
             * DDM   ***** Preserved *****

376          KK    C310
377          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 310, 350, AND 353
378          HC       3
             * DDM   ***** Preserved *****

379          KK    R310
380          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
381          KM   ROUTING OF FLOW FROM SUB-BASIN 310 TO 320
382          RS       6    FLOW      -1
383          RC    .045    .035    .045   10050    .022
384          RX       0       1      40      46      61      67     106     107
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

385          RY       4       2       2       0       0       2       2       4
             * DDM   ***** Preserved *****

386          KK    R312
387          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
388          KM   ROUTING OF FLOW FROM R312 TO SUB-BASIN 295
389          KM   OVERBANK MANNINGS INCREASED TO ACCOUNT FOR SKEWED FLOW TO NATURAL
390          KM   WATERCOURSE FLOW PATH
391          RS       3    FLOW      -1
392          RC     .07     .03     .07    2100   .0124
393          RX       0       3       5      11      61      67     200     395
394          RY       4     2.5       2       0       0       2     2.5       4
             * DDM   ***** Updated *****
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395          KK     295
396          KM   SUB-BASIN 295
397          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
398          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
399          KM     L = 1.60  Kb = .047  Adj. Slope =  131.0
400          BA    .380
401          LG    .350    .350   4.900    .280    .000
402          UC    .450    .386
403          UA       0       3       8      12      20      43      75      90      96
404          UA     100
             * DDM   ***** Preserved *****

405          KK    295C
406          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 310 & 295
407          HC       2
             * DDM   ***** Preserved *****

408          KK    295R
409          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
410          KM   ROUTING OF FLOW FROM SUB-BASIN 295 TO BEGINNING OF PASS MTN. DIVERSION.
411          KM   OVERBANK MANNINGS INCREASED TO ACCOUNT FOR SKEWED FLOW TO NATURAL
412          KM   WATERCOURSE FLOW PATH
413          RS       2    FLOW      -1
414          RC     .07     .03     .07    1100    .013
415          RX       0       3       5      11      51      57     200     400
416          RY       4     2.5       2       0       0       2     2.5       4
             * DDM   ***** Updated *****

417          KK     210
418          KM   SUB-BASIN 210
419          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
420          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
421          KM     L = 1.84  Kb = .045  Adj. Slope =  315.0
422          BA    .583
423          LG    .350    .350   7.000    .120   5.000
424          UC    .321    .232
425          UA       0       3       5       8      12      20      43      75      90      96
426          UA     100
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

427          KK    R210
428          KM   ROUTING OF FLOW FROM SUB-BASIN 210 TO SUB-BASIN 220
429          RS       2    FLOW      -1
430          RC    .045     .03    .045    5100    .022
431          RX       0       1       2      14      34      46      47      48
432          RY       4       4       4       0       0       4       4       4
             * DDM   ***** Updated *****

433          KK     240
434          KM   SUB-BASIN 240
435          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
436          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .992
437          KM     L = 3.50  Kb = .039  Adj. Slope =  298.6
438          BA   1.398
439          LG    .350    .370   5.200    .240   2.000
440          UC    .471    .361
441          UA       0       3       5       8      12      20      43      75      90      96
442          UA     100
             * DDM   ***** Preserved *****

443          KK    240C
444          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
445          HC       3
             * DDM   ***** Preserved *****

446          KK   SR240
447          KM   DIGITAL MAPPING SHOWS SEDIMENTATION.  FOR SIMPLICITY NO ADDITIONAL
448          KM   SEDIMENTATION WILL BE CONSIDERED FOR STORAGE ROUTING ANALYSIS. 5/11/00
449          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
450          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
451          RS       1    STOR       0
452          SA    1.38    14.2    36.5
453          SE       0       5      11
454          SS       5      42       3     1.5
             * DDM   ***** Updated *****

455          KK     220
456          KM   SUB-BASIN 220
457          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
458          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
459          KM     L = 1.92  Kb = .043  Adj. Slope =  315.0
460          BA    .725
461          LG    .350    .350   7.000    .120   4.000
462          UC    .317    .209
463          UA       0       3       5       8      12      20      43      75      90      96
464          UA     100
             * DDM   ***** Preserved *****

465          KK    220C
466          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
467          HC       2
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

468          KK   SR220
469          KM   DIGITAL MAPPING SHOWS SEDIMENTATION.  FOR SIMPLICITY NO ADDITIONAL
470          KM   SEDIMENTATION WILL BE CONSIDERED FOR STORAGE ROUTING ANALYSIS. 5/11/00
471          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
472          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
473          RS       1    STOR       0
474          SA     .78     4.1    13.7
475          SE       0       3      10
476          SS       3      65       3     1.5
             * DDM   ***** Updated *****

477          KK     190
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478          KM   SUB-BASIN 190
479          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
480          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
481          KM     L = 1.91  Kb = .042  Adj. Slope =  315.0
482          BA    .918
483          LG    .350    .390   5.800    .190   8.000
484          UC    .321    .185
485          UA       0       3       5       8      12      20      43      75      90      96
486          UA     100
             * DDM   ***** Preserved *****

487          KK    R190
488          KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
489          RS       2    FLOW      -1
490          RC    .045     .03    .045    4740     .03
491          RX       0       1       2      17      37      52      53      54
492          RY       5       5       5       0       0       5       5       5
             * DDM   ***** Preserved *****

493          KK    R192
494          KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
495          RS       2    FLOW      -1
496          RC    .045    .035    .045    2200    .018
497          RX       0       1      50      59      79      88     137     138
498          RY     3.5       3       3       0       0       3       3     3.5
             * DDM   ***** Updated *****

499          KK     200
500          KM   SUB-BASIN 200
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  .997
503          KM     L = 1.58  Kb = .045  Adj. Slope =  305.6
504          BA    .535
505          LG    .350    .390   5.700    .200  10.000
506          UC    .300    .200
507          UA       0       3       5       8      12      20      43      75      90      96
508          UA     100
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

509          KK    200C
510          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 220 & 200
511          HC       3
             * DDM   ***** Preserved *****

512          KK   SR200
513          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
514          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
515          RS       1    STOR       0
516          SA    2.56     3.1     9.4
517          SE       0       3      10
518          SS       3     112       3     1.5
             * DDM   ***** Preserved *****

519          KK   200SR
520          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
521          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
             *      1       2
522          RS       1    STOR       0
523          SA       8     9.2     9.2
524          SE       0       7      10
525          SS       7     251       3     1.5
526          KM   ****************************************************************
527          KM   ************* END OF PASS MOUNTAIN ALTERNATIVE UPDATE. **************
528          KM
             * DDM   ***** Preserved *****

529          KK    C180
530          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
             *      1       2
531          HC       2
             * DDM   ***** Preserved *****

532          KK   SR180
533          KM   SIGNAL BUTTE FRS DATED 1/28/85
534          KM   OUTLET PIPE=36"RCP; L= 147';  INLET INV.=1690; OUTLET INV.=1687
535          KM   EMERGENCY SPILLWAY ELEV.=1712.4; PRINCIPLE SPILLWAY ELEV.=1701
536          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 250 ACRE-FEET
537          RS       1    STOR       0
538          SV       0       1     250     500     750    1060
539          SQ       0   106.5   125.5   137.5     146     160
540          SE      90     101   104.5     107     109   112.4
             * DDM   ***** Preserved *****

541          KK    R180
542          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
543          KM   ROUTE FLOW FROM SIGNAL BUTTE FRS TO SUB-BASIN 260
544          RS       3    FLOW      -1
545          RC    .035    .025    .035    1500    .003
546          RX       0       1       2    22.6    38.6    59.2      60      61
547          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

548          KK     260
549          KM   SUB-BASIN 260
550          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
551          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
552          KM     L =  .81  Kb = .049  Adj. Slope =   68.0
553          BA    .267
554          LG    .300    .170   6.800    .160  15.000
555          UC    .363    .215
556          UA       0       5      16      30      65      77      84      90      94      97
557          UA     100
             * DDM   ***** Preserved *****

558          KK    260C
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559          KM   HYDROGRAPH COMBINATION FOR OUTFLOW OF SIGNAL BUTTE FRS & SUB-BASIN 260
560          HC       2    .267
             * DDM   ***** Preserved *****

561          KK    R260
562          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
563          KM   ROUTE FLOW FROM SUB-BASIN 260 TO SUB-BASIN 280
564          RS       3    FLOW      -1
565          RC    .035    .025    .035    2300    .003
566          RX       0       1       2    23.4    43.4    64.8      65      66
567          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Updated *****

568          KK     280
569          KM   SUB-BASIN 280
570          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
571          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
572          KM     L =  .77  Kb = .049  Adj. Slope =   84.0
573          BA    .304
574          LG    .300    .250   5.300    .290  15.000
575          UC    .333    .175
576          UA       0       5      16      30      65      77      84      90      94      97
577          UA     100
             * DDM   ***** Preserved *****

578          KK    280C
579          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 260 & SUB-BASIN 280
580          HC       2
             * DDM   ***** Preserved *****

581          KK    R280
582          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
583          KM   ROUTE FLOW FROM SUB-BASIN 280 TO SUB-BASIN 300
584          RS       2    FLOW      -1
585          RC    .035    .025    .035    2500    .003
586          RX       0       1       2    23.4    43.4    64.8      65      66
587          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


588          KK     300
589          KM   SUB-BASIN 300
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  .998
592          KM     L =  .80  Kb = .049  Adj. Slope =  100.0
593          BA    .297
594          LG    .320    .280   4.200    .480  11.000
595          UC    .333    .183
596          UA       0       5      16      30      65      77      84      90      94      97
597          UA     100
             * DDM   ***** Preserved *****

598          KK    C300
599          KM   HYDROGRAPH COMBINATION OF DIVERTED FLOW
600          HC       2
             * DDM   ***** Preserved *****

601          KK    D300
602          KM   DIVERT FLOW INTO OFFLINE BASIN AT SIGNAL BUTTE FLOODWAY TO BE COMBINED
603          KM   LATER WITH BASIN 305 AT END OF SIGNAL BUTTE FLOODWAY
604          DT   DIV300
605          DI       0     300    5000
606          DQ       0       0    4700
             * DDM   ***** Preserved *****

607          KK   RTDIV300
608          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
609          DR   DIV300
             * DDM   ***** Preserved *****

610          KK   SRDIV300
611          KM   RETRIEVE FLOW INTO BASIN AND BLEED OFF WITHIN 36 HOURS
612          KM
613          RS       1    STOR       0
614          SV       0      60
615          SE       0      12
616          SQ       0     300
             * DDM   ***** Preserved *****

617          KK    300C
618          KM   HYDROGRAPH COMBINATION OF DIVERTED FLOW
619          HC       2
             * DDM   ***** Updated *****

620          KK     305
621          KM   SUB-BASIN 305
622          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
623          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
624          KM     L = 1.20  Kb = .047  Adj. Slope =   92.0
625          BA    .377
626          LG    .340    .330   4.450    .380   8.000
627          UC    .438    .298
628          UA       0       3       5       8      12      20      43      75      90      96
629          UA     100
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 16

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


630          KK    D305
631          KM   DIVERT FLOW INTO OFFLINE BASIN TO BE COMBINED LATER WITH PASS MOUNTAIN
632          KM   DIVERSION FLOW AT END OF SIGNAL BUTTE FLOODWAY
633          DT    305D
634          DI       0    1000
635          DQ       0    1000
             * DDM   ***** Preserved *****

636          KK   RT305D
637          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
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638          DR    305D
             * DDM   ***** Preserved *****

639          KK   SR305D
640          KM   RETRIEVE FLOW INTO BASIN AND BLEED OFF WITHIN 36 HOURS
641          KM
642          RS       1    STOR       0
643          SV       0      25
644          SE       0       6
645          SQ       0     100
             * DDM   ***** Preserved *****

646          KK    305C
647          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 280 & 300
648          HC       3
             * DDM   ***** Preserved *****

649          KK    R305
650          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
651          KM   ROUTE FLOW FROM SUB-BASIN 300 TO START OF FLOODWAY CONCRETE CHANNEL
652          RS       2    FLOW      -1
653          RC    .035    .025    .035    2200    .003
654          RX       0       1       2    23.4    55.4    76.8      77      78
655          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Preserved *****

656          KK   RR305
657          KM   CHANNEL GEOMETRY FOR SPOOK HILL FRS OBTAINED FROM AS-BUILTS PLANS.
658          KM   CONTINUE TO ROUTE FLOW WITHIN CONCRETE CHANNEL TO SPOOK HILL FRS
659          RS       1    FLOW      -1
660          RC    .016    .016    .016    6050   .0146
661          RX       0       1       2     2.1    16.1    16.2      17      18
662          RY     7.5     7.5     7.5       0       0     7.5     7.5     7.5
             * DDM   ***** Updated *****

663          KK     320
664          KM   SUB-BASIN 320
665          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
666          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .995
667          KM     L = 1.60  Kb = .042  Adj. Slope =  106.0
668          BA    .870
669          LG    .310    .290   4.500    .380  15.000
670          UC    .450    .240
671          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

672          UA     100
             * DDM   ***** Preserved *****

673          KK    D320
674          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
675          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
676          KM   SIERRA HEIGHTS       FALCON RIDGE    & MARBLE CREEK
677          KM        MAXIMUM VOLUME DIVERSION = 12.27acre-feet
             *      1
678          DT   BS320   12.27
679          DI       0   10000
680          DQ       0   10000
             * DDM   ***** Preserved *****

681          KK   RT320
682          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
683          DR   BS320
             * DDM   ***** Preserved *****

684          KK   SR320
685          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
686          KM   12.27 ACRE-FEETx43560/36x3600=4.1cfs
             *      1
687          RS       1    STOR       0
688          SV       0     .01    12.3
689          SQ       0     4.2     4.2
             * DDM   ***** Preserved *****

690          KK    C320
691          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
692          HC       3
             *
             * BEGINNING OF MCKELLIPS TWO BASIN OPTION WITH DETENTION BASINS LOCATED
             *  AT INTERSECTION OF MCKELLIPS & HAWES;  AND MCKELLIPS & ELLSWORTH
             *
             *
             * DDM   ***** Updated *****

693          KK     340
694          KM   SUB-BASIN 340
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  .994
697          KM     L = 1.78  Kb = .047  Adj. Slope =   99.0
698          BA   1.024
699          LG    .250    .250   4.250    .520  25.000
700          UC    .546    .296
701          UA       0       5      16      30      65      77      84      90      94      97
702          UA     100
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

703          KK    D340
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 =39.2 acre feet
             *      1
708          DT   BS340    39.2
709          DI       0   10000
710          DQ       0   10000
             * DDM   ***** Preserved *****
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711          KK   RT340
712          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
713          DR   BS340
             * DDM   ***** Preserved *****

714          KK   SR340
715          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
716          KM    39.2 ACRE-FEETx43560\36x3600=13.2cfs
             *      1
717          RS       1    STOR       0
718          SV       0     .01    39.2
719          SQ       0    13.2    13.2
             * DDM   ***** Preserved *****

720          KK    C340
721          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
722          HC       3
             * DDM   ***** Updated *****

723          KK     360
724          KM   SUB-BASIN 360
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  .998
727          KM     L = 1.21  Kb = .062  Adj. Slope =  104.0
728          BA    .315
729          LG    .220    .250   4.100    .640  29.000
730          UC    .504    .389
731          UA       0       5      16      30      65      77      84      90      94      97
732          UA     100
             * DDM   ***** Preserved *****

733          KK    D360
734          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
735          KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
736          KM        MAXIMUM VOLUME DIVERSION = 15.7 acre-feet
             *      1
737          DT   BS360    15.7
738          DI       0   10000
739          DQ       0   10000
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

740          KK   RT360
741          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
742          DR   BS360
             * DDM   ***** Preserved *****

743          KK   SR360
744          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
745          KM    15.7 ACRE-FEETx43560/36x3600=5.3 cfs
746          RS       1    STOR       0
747          SV       0     .01    15.7
748          SQ       0     5.3     5.3
             * DDM   ***** Preserved *****

749          KK    360C
750          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
751          HC       3
             * DDM   ***** Updated *****

752          KK     380
753          KM   SUB-BASIN 380
754          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
755          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
756          KM     L =  .67  Kb = .077  Adj. Slope =  119.0
757          BA    .268
758          LG    .180    .250   4.100    .710  19.000
759          UC    .387    .199
760          UA       0       5      16      30      65      77      84      90      94      97
761          UA     100
             * DDM   ***** Preserved *****

762          KK    D380
763          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
764          KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
765          KM        MAXIMUM VOLUME DIVERSION  = 7.1 acre-feet
             *      1
766          DT   BS380     7.1
767          DI       0   10000
768          DQ       0   10000
             * DDM   ***** Preserved *****

769          KK   RT380
770          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
771          DR   BS380
             * DDM   ***** Preserved *****

772          KK   SR380
773          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
774          KM    7.1  ACRE-FEETx43560\36x3600=2.4 cfs
775          RS       1    STOR       0
776          SV       0     .01     7.1
777          SQ       0     2.4     2.4
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

778          KK    380C
779          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
780          HC       3
             * DDM   ***** Updated *****

781          KK     400
782          KM   SUB-BASIN 400
783          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
784          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
785          KM     L =  .30  Kb = .112  Adj. Slope =  107.0
786          BA    .051
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787          LG    .200    .250   4.000    .740    .000
788          UC    .321    .218
789          UA       0       5      16      30      65      77      84      90      94      97
790          UA     100
             * DDM   ***** Preserved *****

791          KK    D400
792          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
793          KM   DETENTION/RETENTION BASIN LOCATED WITHIN SAGUARO VISTA SUBDIVISION
794          KM        MAXIMUM VOLUME DIVERSION = 1.6 ACRE-FEET
             *      1
795          DT   BS400     1.6
796          DI       0   10000
797          DQ       0   10000
             * DDM   ***** Preserved *****

798          KK   RT400
799          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
800          DR   BS400
             * DDM   ***** Preserved *****

801          KK   SR400
802          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
803          KM     1.6 ACRE-FEETx43560/36x3600 = 0.5 cfs
804          RS       1    STOR       0
805          SV       0     .01     1.6
806          SQ       0     0.5     0.5
             * DDM   ***** Preserved *****

807          KK    C400
808          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
809          HC       2
             * DDM   ***** Preserved *****

810          KK    400C
811          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
812          HC       2
             * DDM   ***** Updated *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

813          KK     355
814          KM   SUB-BASIN 355
815          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
816          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
817          KM     L =  .80  Kb = .052  Adj. Slope =  125.0
818          BA    .174
819          LG    .320    .300   4.550    .360  12.000
820          UC    .308    .227
821          UA       0       5      16      30      65      77      84      90      94      97
822          UA     100
             * DDM   ***** Preserved *****

823          KK    R355
824          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
825          KM   ROUTING OF FLOW FROM SUB-BASIN 355 TO SUB-BASIN 361
826          RS       5    FLOW      -1
827          RC    .045    .035    .045    5868   0.021
828          RX       0       1      40      46      56      62     102     103
829          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

830          KK     361
831          KM   SUB-BASIN 361
832          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
833          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
834          KM     L = 1.03  Kb = .046  Adj. Slope =  142.0
835          BA    .369
836          LG    .270    .260   4.150    .530  24.000
837          UC    .321    .189
838          UA       0       5      16      30      65      77      84      90      94      97
839          UA     100
             * DDM   ***** Preserved *****

840          KK    D361
841          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
842          KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
843          KM        MAXIMUM VOLUME DIVERSION = 12.9 acre-feet
             *      1
844          DT   BS361    12.9
845          DI       0   10000
846          DQ       0   10000
             * DDM   ***** Preserved *****

847          KK   RT361
848          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
849          DR   BS361
             * DDM   ***** Preserved *****

850          KK   SR361
851          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
852          KM    12.9 ACRE-FEETx43560/36x3600=4.3 cfs
853          RS       1    STOR       0
854          SV       0     .01    12.9
855          SQ       0     4.3     4.3
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 22

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

856          KK    361C
857          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
858          HC       3
             * DDM   ***** Updated *****

859          KK     342
860          KM   SUB-BASIN 342
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  .998
863          KM     L = 1.01  Kb = .048  Adj. Slope =  213.1
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 864          BA    .298
 865          LG    .310    .280   3.950    .530  16.000
 866          UC    .279    .180
 867          UA       0       5      16      30      65      77      84      90      94      97
 868          UA     100
              *
              * DDM   ***** Preserved *****

 869          KK   D3421
 870          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
 871          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
 872          KM   GRANDVIEW ESTATES    BOULDER MOUNTAIN & 33% OF MESA HIGHLANDS
 873          KM        MAXIMUM VOLUME DIVERSION  =8.4 Acre feet
              *      1
 874          DT  BS3421     8.4
 875          DI       0   10000
 876          DQ       0   10000
              * DDM   ***** Preserved *****

 877          KK  RT3421
 878          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
 879          DR  BS3421
              * DDM   ***** Preserved *****

 880          KK  SR3421
 881          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
 882          KM     8.4 ACRE-FEETx43560\36x3600=2.8 cfs
              *      1
 883          RS       1    STOR       0
 884          SV       0     .01     8.4
 885          SQ       0     2.8     2.8
              * DDM   ***** Preserved *****

 886          KK    C342
 887          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
 888          HC       2
              *
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 23

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

 889          KK   D3422
 890          KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN AT NE CORNER OF ELLSWORTH
 891          KM   AND  McKELLIPS ROAD
 892          KM   MAXIMUM VOLUME OF DIVERSION IS 15 ACRE FEET
 893          DT  BS3422      15
 894          DI       0   10000
 895          DQ       0   10000
              *
              * DDM   ***** Preserved *****

 896          KK  RT3422
 897          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
 898          DR  BS3422
              *
              * DDM   ***** Preserved *****

 899          KK  SR3422
 900          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS
 901          KM      15 ACRE-FEETx43560/36x3600 =5.0 cfs
 902          RS       1    STOR       0
 903          SV       0     .01      15
 904          SQ       0     5.0     5.0
              *
              * DDM   ***** Preserved *****

 905          KK   CC342
 906          KM   HYDROGRAPH COMBINATION AT McKELLIPS RD CHANNEL
 907          HC       2
              *
              * DDM   ***** Preserved *****

 908          KK    R342
 909          KM   ROUTING OF FLOW FROM SUB-BASIN 342 TO 341
 910          RS       9    FLOW      -1
 911          RC    0.05    0.03    0.05    2198  0.0118
 912          RX       0     0.1     0.2       4       9      13     213   213.1
 913          RY     3.0     1.5     1.0       0       0     1.0     2.0     3.0
              *
              * DDM   ***** Updated *****

 914          KK     341
 915          KM   SUB-BASIN 341
 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  .999
 918          KM     L = 1.01  Kb = .048  Adj. Slope =  123.0
 919          BA    .229
 920          LG    .250    .250   3.910    .600  34.000
 921          UC    .346    .266
 922          UA       0       5      16      30      65      77      84      90      94      97
 923          UA     100
              *
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 24

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

 924          KK    D341
 925          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
 926          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
 927          KM   GRANDVIEW ESTATES    BOULDER MOUNTAIN & 33% OF MESA HIGHLANDS
 928          KM        MAXIMUM VOLUME DIVERSION  =8.4 Acre feet
              *
 929          DT   BS341     8.4
 930          DI       0   10000
 931          DQ       0   10000
              * DDM   ***** Preserved *****

 932          KK   RT341
 933          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
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934          DR   BS341
             * DDM   ***** Preserved *****

935          KK   SR341
936          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
937          KM     8.4 ACRE-FEETx43560\36x3600=2.8 cfs
             *
938          RS       1    STOR       0
939          SV       0     .01     8.4
940          SQ       0     2.8     2.8
             * DDM   ***** Preserved *****

941          KK    C341
942          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
943          HC       3
             * DDM   ***** Preserved *****

944          KK   RR341
945          KM   ROUTING OF FLOW FROM SUB-BASIN 341 TO 361
946          KM   ARTIFICIALLY HIGH VALUE FOR NSTPS IS USED TO PRESERVE PEAK INFLOW
947          RS      15    FLOW      -1
948          RC   0.050   0.030   0.050    4143  0.0126
949          RX       0     0.1     0.2       4       9      13     213   213.1
950          RY     3.0     1.5     1.0       0       0     1.0     2.0     3.0
             * DDM   ***** Preserved *****

951          KK   361CC
952          KM   HYDROGRAPH COMBINATION AT McKELLIPS ROAD INTERCEPTOR CHANNEL
953          HC       2
             *
             * DDM   ***** Preserved *****

954          KK   D3612
955          KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN AT NE CORNER OF ELLSWORTH
956          KM   AND  McKELLIPS ROAD
957          KM   MAXIMUM VOLUME OF DIVERSION IS 50 ACRE FEET
958          DT  BS3612      50
959          DI       0   10000
960          DQ       0   10000
             *
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 25

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

961          KK  RT3612
962          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
963          DR  BS3612
             *
             * DDM   ***** Preserved *****

964          KK  SR3612
965          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS
966          KM    50.0 ACRE-FEETx43560/36x3600=16.8 cfs
967          RS       1    STOR       0
968          SV       0     .01      50
969          SQ       0    16.8    16.8
             *
             * DDM   ***** Preserved *****

970          KK   C3612
971          KM   HYDROGRAPH COMBINATION AT McKELLIPS RD CHANNEL
972          HC       2
             * DDM   ***** Preserved *****

973          KK   RR361
974          KM   ROUTING OF FLOW FROM SUB-BASIN 361 TO 381
975          RS      11    FLOW      -1
976          RC   0.050   0.030   0.050    3854  0.0156
977          RX       0     0.1     0.2       8      28      36     236   236.1
978          RY     3.5     2.5       2       0       0       2       3     3.5
             * DDM   ***** Updated *****

979          KK     381
980          KM   SUB-BASIN 381
981          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
982          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
983          KM     L = 1.65  Kb = .043  Adj. Slope =  119.0
984          BA    .726
985          LG    .310    .280   4.200    .490  13.000
986          UC    .463    .282
987          UA       0       5      16      30      65      77      84      90      94      97
988          UA     100
             * DDM   ***** Preserved *****

989          KK    D381
990          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
991          KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
992          KM        MAXIMUM VOLUME DIVERSION  =21.5 acre-feet
             *      1
993          DT   BS381    21.5
994          DI       0   10000
995          DQ       0   10000
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 26

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

996          KK   RT381
997          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
998          DR   BS381
             * DDM   ***** Preserved *****

999          KK   SR381
1000         KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1001         KM   21.5  ACRE-FEETx43560/36x3600=7.2 cfs
1002         RS       1    STOR       0
1003         SV       0     .01    21.5
1004         SQ       0     7.2     7.2
             * DDM   ***** Preserved *****
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1005          KK    381C
1006          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1007          HC       3
              *
              * DDM   ***** Preserved *****

1008          KK   RR381
1009          KM   ROUTING OF FLOW FROM SUB-BASIN 381 TO 401
1010          RS       4    FLOW      -1
1011          RC    0.05    0.03    0.05    2992  0.0134
1012          RX       0     0.1     0.2       8      33      41     241   241.1
1013          RY     3.5     2.5       2       0       0       2       3     3.5
              * DDM   ***** Updated *****

1014          KK     401
1015          KM   SUB-BASIN 401
1016          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1017          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
1018          KM    L = 1.71  Kb = .051  Adj. Slope =   97.0
1019          BA    .605
1020          LG    .280    .250   4.150    .570  12.000
1021          UC    .604    .433
1022          UA       0       5      16      30      65      77      84      90      94      97
1023          UA     100
              * DDM   ***** Preserved *****

1024          KK    D401
1025          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1026          KM   DETENTION/RETENTION BASIN LOCATED WITHIN SAGUARO VISTA SUBDIVISION
1027          KM        MAXIMUM VOLUME DIVERSION = 4.0 ACRE-FEET
              *      1
1028          DT   BS401     4.0
1029          DI       0   10000
1030          DQ       0   10000
              * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 27

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


1031          KK   RT401
1032          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1033          DR   BS401
              * DDM   ***** Preserved *****

1034          KK   SR401
1035          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1036          KM     4.0 ACRE-FEETx43560/36x3600= 1.3 cfs
1037          RS       1    STOR       0
1038          SV       0     .01     4.0
1039          SQ       0     1.3     1.3
              * DDM   ***** Preserved *****

1040          KK    C401
1041          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1042          HC       4
              *
              *
              * END OF ALTERNATIVE 15 REVISIONS
              *
              * DDM   ***** Updated *****

1043          KK     420
1044          KM   SUB-BASIN 420
1045          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1046          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .995
1047          KM     L = 1.91  Kb = .042  Adj. Slope =  120.0
1048          BA    .849
1049          LG    .310    .270   3.880    .580  12.000
1050          UC    .512    .325
1051          UA       0       5      16      30      65      77      84      90      94      97
1052          UA     100
              * DDM   ***** Preserved *****

1053          KK    D420
1054          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1055          KM   DETENTION/RETENTION BASINS LOCATED WITHIN GRAY FOX SUBDIVISION
1056          KM        MAXIMUM VOLUME DIVERSION = 8.65 acre-feet
              *      1
1057          DT   BS420    8.65
1058          DI       0   10000
1059          DQ       0   10000
              * DDM   ***** Preserved *****

1060          KK   RT420
1061          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1062          DR   BS420
              * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 28

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


1063          KK   SR420
1064          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1065          KM   38.55 ACRE-FEETx43560/36x3600=13cfs
1066          RS       1    STOR       0
1067          SV       0     .01   38.55
1068          SQ       0      13      13
              * DDM   ***** Preserved *****

1069          KK    420C
1070          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1071          HC       3
              * DDM   ***** Updated *****

1072          KK     370
1073          KM   SUB-BASIN 370
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  .998
1076          KM     L =  .90  Kb = .050  Adj. Slope =  189.0
1077          BA    .257
1078          LG    .310    .280   4.800    .340  16.000
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1079        UC    .271    .173
1080        UA       0       5      16      30      65      77      84      90      94      97
1081        UA     100
            * DDM   ***** Updated *****

1082        KK     395
1083        KM   SUB-BASIN 395
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  .999
1086        KM     L = 1.00  Kb = .052  Adj. Slope =  188.0
1087        BA    .160
1088        LG    .330    .320   5.100    .280  12.000
1089        UC    .300    .276
1090        UA       0       5      16      30      65      77      84      90      94      97
1091        UA     100
            * DDM   ***** Preserved *****

1092        KK    395C
1093        KM   HYDROGRAPH COMBINATION
1094        HC       2
            * DDM   ***** Preserved *****

1095        KK    D395
1096        KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN LOCATED WITHIN
1097        KM   SUB-BASINS 370 AND 395
            *      1
1098        DT   BS395
1099        DI       0      10    5000
1100        DQ       0       0    4990
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1101        KK   RT395
1102        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1103        DR   BS395
            * DDM   ***** Preserved *****

1104        KK   SR395
1105        KM   RETRIEVE FLOW INTO OFFLINE DETENTION BASIN AND BLEED OFF WITHIN 36 HOURS.
1106        KM      50 ACRE-FEETx43560/36x3600 = 17cfs
1107        RS       1    STOR       0
1108        SV       0     .01      50
1109        SQ       0      17      17
            * DDM   ***** Preserved *****

1110        KK    C395
1111        KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1112        HC       2
            * DDM   ***** Preserved *****

1113        KK    R395
1114        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1115        KM   ROUTING OF FLOW FROM SUB-BASINS 370 AND 395 TO SUB-BASIN 390
1116        RS       8    FLOW      -1
1117        RC    .045    .035    .045    2600    .023
1118        RX       0       1      40      46      56      62     102     103
1119        RY       3       2       2       0       0       2       2       3
            * DDM   ***** Updated *****

1120        KK     385
1121        KM   SUB-BASIN 385
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  .999
1124        KM     L =  .90  Kb = .051  Adj. Slope =  309.5
1125        BA    .197
1126        LG    .330    .320   4.800    .310   9.000
1127        UC    .233    .171
1128        UA       0       5      16      30      65      77      84      90      94      97
1129        UA     100
            * DDM   ***** Updated *****

1130        KK     411
1131        KM   SUB-BASIN 411
1132        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1133        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1134        KM     L = 1.38  Kb = .050  Adj. Slope =  315.0
1135        BA    .237
1136        LG    .340    .350   5.000    .270  10.000
1137        UC    .292    .277
1138        UA       0       3       5       8      12      20      43      75      90      96
1139        UA     100
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1140        KK    411C
1141        KM   HYDROGRAPH COMBINATION OF SUB-BASINS 385 & 411
1142        HC       2
            * DDM   ***** Preserved *****

1143        KK    D411
1144        KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN LOCATED WITHIN SUB-BASINS 385 & 411
1145        DT   BS411
1146        DI       0      25    5000
1147        DQ       0       0    4975
            * DDM   ***** Preserved *****

1148        KK   RT411
1149        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1150        DR   BS411
            * DDM   ***** Preserved *****

1151        KK   SR411
1152        KM   RETRIEVE FLOW TO BLEED OFF WITHIN 36 HOURS
1153        KM      50 ACRE-FEETx43560/36x3600 = 17cfs
1154        RS       1    STOR       0
1155        SV       0     .01      50
1156        SQ       0      17      17
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                * DDM   ***** Preserved *****

1157            KK    C411
1158            KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1159            HC       2
                * DDM   ***** Preserved *****

1160            KK    R411
1161            KM   ROUTING OF FLOW FROM C411 TO 390C
1162            RS       7    FLOW      -1
1163            RC    .045    .035    .045    2600    .019
1164            RX       0       1      40      46      56      62     102     103
1165            RY       3       2       2       0       0       2       2       3
                * DDM   ***** Updated *****

1166            KK     390
1167            KM   SUB-BASIN 390
1168            KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1169            KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1170            KM     L =  .70  Kb = .050  Adj. Slope =  299.4
1171            BA    .244
1172            LG    .300    .250   4.700    .380  18.000
1173            UC    .204    .107
1174            UA       0       5      16      30      65      77      84      90      94      97
1175            UA     100
                * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                          PAGE 31

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

1176            KK    D390
1177            KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1178            KM   DETENTION/RETENTION BASINS LOCATED WITHIN THUNDER MOUNTAIN ESTATES
1179            KM        MAXIMUM VOLUME DIVERSION  = 3.5 acre-feet
                *      1
1180            DT   BS390     3.5
1181            DI       0    5000
1182            DQ       0    5000
                * DDM   ***** Preserved *****

1183            KK   RT390
1184            KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1185            DR   BS390
                * DDM   ***** Preserved *****

1186            KK   SR390
1187            KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1188            KM     3.5 ACRE-FEETx43560/36x3600=1.2cfs
1189            RS       1    STOR       0
1190            SV       0     .01     3.5
1191            SQ       0     1.2     1.2
                * DDM   ***** Preserved *****

1192            KK    390C
1193            KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1194            HC       4
                * DDM   ***** Preserved *****

1195            KK   RR390
1196            KM   ATTEMPT TO SIMULATE PIPE FLOW ALONG THIS ROUTING FROM SUB-BASIN 390 TO 415
1197            KM   ARTIFICIALLY ADJUSTING SLOPE TO MORE ACCURATELY DEPICT MODEL RESULTS.
1198            KM   THE SLOPE WAS DECREASED FROM .02 TO .0034
1199            RS       2    FLOW      -1
1200            RK    5600   .0034    .016            CIRC       7
                *      0     .01     .02     .03    5.47    5.48    5.49     5.5
                *      7       0       0       0       0       0       0       7
                * DDM   ***** Updated *****

1201            KK     440
1202            KM   SUB-BASIN 440
1203            KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1204            KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1205            KM     L =  .40  Kb = .039  Adj. Slope =  315.0
1206            BA    .080
1207            LG    .190    .380   6.400    .140  13.000
1208            UC    .129    .077
1209            UA       0       3       5       8      12      20      43      75      90      96
1210            UA     100
                * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                          PAGE 32

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

1211            KK     R70
1212            KM   ROUTE FLOW FROM SUB-BASIN 440 TO C108
1213            RS       1    FLOW      -1
1214            RC     .05    .035     .05    2250     .08
1215            RX    1000    1025    1050    1070    1075    1095    1120    1145
1216            RY      30    22.9    15.7      10      10    15.7    22.9      30
                * DDM   ***** Updated *****

1217            KK     441
1218            KM   SUB-BASIN 441
1219            KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1220            KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1221            KM     L =  .28  Kb = .069  Adj. Slope =  315.0
1222            BA    .010
1223            LG    .300    .250   5.600    .220   5.000
1224            UC    .150    .225
1225            UA       0       5      16      30      65      77      84      90      94      97
1226            UA     100
                * DDM   ***** Preserved *****

1227            KK    C108
1228            KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 440 & 441
1229            HC       2
                * DDM   ***** Preserved *****

1230            KK    DIV4
1231            KM        SPLIT FLOW WITH TWO 42 INCH PIPES TO WEST AND SOUTH
                *      1
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1232          DT   SPLIT
1233          DI       0      14      40      82     120     154     180
1234          DQ       0       7      20      41      60      77      90
              * DDM   ***** Preserved *****

1235          KK    R108
1236          KM        ROUTE FLOW FROM SUB-BASIN C108 TO C67
1237          RS       2    FLOW      -1
1238          RC     .05    .035     .05    3200      .1
1239          RX    1000    1025    1050    1070    1075    1095    1120    1145
1240          RY      30    22.9    15.7      10      10    15.7    22.9      30
              * DDM   ***** Updated *****

1241          KK     442
1242          KM   SUB-BASIN 442
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  .999
1245          KM     L =  .83  Kb = .055  Adj. Slope =  274.2
1246          BA    .100
1247          LG    .300    .270   3.290    .770   5.000
1248          UC    .258    .264
1249          UA       0       5      16      30      65      77      84      90      94      97
1250          UA     100
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 33

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


1251          KK     C67
1252          KM   COMBINE FLOW FROM SUB-BASIN 442 & DIV4
1253          HC       2
              * DDM   ***** Preserved *****

1254          KK    DIV6
1255          KM        OFFLINE BASIN WITH 25 FOOT WEIR SET AT 2.5 FEET ABOVE BOTTOM OF CHANNEL
1256          KM        FLOW CONTINUES BEYOND BASIN THROUGH 2-30" PIPES
              *      1
1257          DT  BASIN4
1258          DI       0      10      32      44    79.9   132.5     198   272.9   356.8
1259          DQ       0       0       0       0    23.9    67.5     124   190.9   266.8
              * DDM   ***** Preserved *****

1260          KK  RTDIV6
1261          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1262          DR  BASIN4
              * DDM   ***** Preserved *****

1263          KK  RFDIV6
1264          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1265          KM     3.3 ACRE-FEETx43560/36x3600=1.1cfs
              *      1
1266          RS       1    STOR       0
1267          SV       0     .01     3.3
1268          SQ       0     1.1     1.1
              * DDM   ***** Preserved *****

1269          KK   CDIV6
1270          KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1271          HC       2
              * DDM   ***** Updated *****

1272          KK     443
1273          KM   SUB-BASIN 443
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 1.000
1276          KM     L =  .71  Kb = .050  Adj. Slope =  315.0
1277          BA    .080
1278          LG    .250    .190   8.000    .080  10.000
1279          UC    .196    .194
1280          UA       0       5      16      30      65      77      84      90      94      97
1281          UA     100
              * DDM   ***** Preserved *****

1282          KK   DIV66
1283          KM        DIVERT FLOW INTO 3 NATURAL WASHES WITH ONE 24" PIPE IN EACH WASH.
1284          KM        EACH PIPE CAPACITY BASED ON 4 FEET OF HEAD
1285          DT   WSH66
1286          DI       0      78     100     200
1287          DQ       0      78      78      78
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 34

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


1288          KK    R113
1289          KM        ROUTE FLOW FROM C113 TO C114
1290          RS       1    FLOW      -1
1291          RC    .019    .019    .019    1300    .029
1292          RX    1000    1004    1008    1012    1018    1022    1026    1030
1293          RY      17   15.33   12.67      10      10   12.67   15.33      17
              * DDM   ***** Preserved *****

1294          KK    C114
1295          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 67 AND C113
1296          HC       2
              * DDM   ***** Updated *****

1297          KK     444
1298          KM   SUB-BASIN 444
1299          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1300          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1301          KM     L =  .33  Kb = .034  Adj. Slope =  315.0
1302          BA    .040
1303          LG    .130    .350   4.450    .320   1.000
1304          UC    .112    .084
1305          UA       0       3       5       8      12      20      43      75      90      96
1306          UA     100
              * DDM   ***** Preserved *****

1307          KK     R58
1308          KM   ROUTE FLOW FROM SUB-BASIN 444 TO C107
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1309        RS       1    FLOW      -1
1310        RC     .05    .035     .05    2370   .0516
1311        RX    1000    1010    1020    1050    1055    1085    1095    1105
1312        RY      19      18      17      10      10      17      18      19
            * DDM   ***** Updated *****

1313        KK     445
1314        KM   SUB-BASIN 445
1315        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1316        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1317        KM     L =  .82  Kb = .036  Adj. Slope =  315.0
1318        BA    .190
1319        LG    .170    .320   3.470    .590   3.000
1320        UC    .192    .130
1321        UA       0       5      16      30      65      77      84      90      94      97
1322        UA     100
            * DDM   ***** Preserved *****

1323        KK    C107
1324        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 444 & 445
1325        HC       2
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1326        KK    R107
1327        KM        ROUTE FLOW FROM C107 TO C109
1328        RS       1    FLOW      -1
1329        RC     .05    .035     .05     700   .0516
1330        RX    1000    1010    1020    1050    1055    1085    1095    1105
1331        RY      19      18      17      10      10      17      18      19
            * DDM   ***** Preserved *****

1332        KK    RTB2
1333        KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
            *      1
1334        DR   SPLIT
            * DDM   ***** Preserved *****

1335        KK  RSPLIT
1336        KM        ROUTE FLOW FROM SPLIT TO C109
1337        RS       1    FLOW      -1
1338        RC     .05    .035     .05     800     .05
1339        RX    1000    1025    1050    1070    1075    1095    1120    1145
1340        RY      30    22.9    15.7      10      10    15.7    22.9      30
            * DDM   ***** Updated *****

1341        KK     446
1342        KM   SUB-BASIN 446
1343        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1344        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1345        KM     L =  .46  Kb = .061  Adj. Slope =  303.9
1346        BA    .040
1347        LG    .270    .250   4.500    .400  19.000
1348        UC    .183    .189
1349        UA       0       5      16      30      65      77      84      90      94      97
1350        UA     100
            * DDM   ***** Preserved *****

1351        KK    C109
1352        KM        COMBINE HYDROGRAPHS FROM COMBINES C107 AND C108
1353        HC       3
            * DDM   ***** Preserved *****

1354        KK    DIV5
1355        KM        DIVERT FLOW INTO WASHES TOWARDS WEST
1356        KM        DIVERSION THROUGH 36" PIPE WITH 3 FEET OF HEAD
            *      1
1357        DT  WSH404
1358        DI       0    40.7    71.2   121.6     190     276   379.4   500.6
1359        DQ       0      35      35      35      35      35      35      35
            * DDM   ***** Preserved *****

1360        KK    R109
1361        KM        ROUTE FLOW FROM C109 TO C110
1362        RS       1    FLOW      -1
1363        RC    .019    .019    .019    3080     .05
1364        RX    1000    1005    1010    1015    1025    1030    1035    1040
1365        RY   13.75    12.5   11.25      10      10   11.25    12.5   13.75
            * DDM   ***** Updated *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1366        KK     447
1367        KM   SUB-BASIN 447
1368        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1369        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1370        KM     L =  .49  Kb = .056  Adj. Slope =  221.0
1371        BA    .090
1372        LG    .250    .270   3.350    .870  30.000
1373        UC    .208    .145
1374        UA       0       5      16      30      65      77      84      90      94      97
1375        UA     100
            * DDM   ***** Preserved *****

1376        KK   RT404
1377        KM        RETRIEVE DIVERTED FLOW FOR WASH 109
1378        DR  WSH404
            * DDM   ***** Preserved *****

1379        KK    R404
1380        KM        ROUTE FLOW FROM C110 TO C110
1381        RS       5    FLOW      -1
1382        RC    .019    .019    .019    3540     .03
1383        RX    1000    1012    1016    1020    1025    1029    1033    1045
1384        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Preserved *****

1385        KK    C110
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1386        KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 447 AND R404
1387        HC       3
            * DDM   ***** Preserved *****

1388        KK    R110
1389        KM        ROUTE FLOW FROM C110 TO C115
1390        RS       1    FLOW      -1
1391        RC    .019    .019    .019     580   .0291
1392        RX    1000    1012    1016    1020    1035    1039    1043    1055
1393        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Preserved *****

1394        KK    C115
1395        KM        COMBINE HYDROGRAPHS FROM C114 AND C110
1396        HC       2
            * DDM   ***** Preserved *****

1397        KK    R115
1398        KM        ROUTE FLOW FROM C115 TO C119
1399        RS       1    FLOW      -1
1400        RC    .019    .019    .019    2125    .029
1401        RC    .019    .019    .019     580   .0291
1402        RX    1000    1012    1016    1020    1035    1039    1043    1055
1403        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Updated *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1404        KK     448
1405        KM   SUB-BASIN 448
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 =  .36  Kb = .042  Adj. Slope =  315.0
1409        BA    .045
1410        LG    .170    .310   4.200    .390  11.000
1411        UC    .133    .102
1412        UA       0       5      16      30      65      77      84      90      94      97
1413        UA     100
            * DDM   ***** Updated *****

1414        KK     449
1415        KM   SUB-BASIN 449
1416        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1417        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1418        KM     L =  .40  Kb = .054  Adj. Slope =  315.0
1419        BA    .050
1420        LG    .260    .280   3.500    .640   6.000
1421        UC    .167    .134
1422        UA       0       5      16      30      65      77      84      90      94      97
1423        UA     100
            * DDM   ***** Preserved *****

1424        KK   C6364
1425        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 448 & 449
1426        HC       2
            * DDM   ***** Preserved *****

1427        KK   R6364
1428        KM   ROUTE FLOW FROM C116 AND SUB-BASINS 448 AND 449
1429        RS       4    FLOW      -1
1430        RC     .05    .035     .05    4375   .0333
1431        RX    1000    1027    1053    1080    1090    1117    1143    1170
1432        RY      15   13.33   11.67      10      10   11.67   13.33      15
            * DDM   ***** Updated *****

1433        KK     450
1434        KM   SUB-BASIN 450
1435        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1436        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1437        KM     L =  .85  Kb = .057  Adj. Slope =  210.5
1438        BA    .070
1439        LG    .340    .350   3.630    .570   4.000
1440        UC    .296    .383
1441        UA       0       3       5       8      12      20      43      75      90      96
1442        UA     100
            * DDM   ***** Updated *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1443        KK     451
1444        KM   SUB-BASIN 451
1445        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1446        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1447        KM     L =  .57  Kb = .063  Adj. Slope =  175.0
1448        BA    .025
1449        LG    .340    .340   3.290    .750   3.000
1450        UC    .271    .453
1451        UA       0       3       5       8      12      20      43      75      90      96
1452        UA     100
            * DDM   ***** Preserved *****

1453        KK    RT66
1454        KM        RETRIEVE DIVERTED FLOW FROM SUB-BASIN 66
1455        DR   WSH66
            * DDM   ***** Updated *****

1456        KK     452
1457        KM   SUB-BASIN 452
1458        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1459        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1460        KM     L =  .43  Kb = .055  Adj. Slope =  315.0
1461        BA    .040
1462        LG    .260    .280   3.700    .550   9.000
1463        UC    .171    .166
1464        UA       0       5      16      30      65      77      84      90      94      97
1465        UA     100
            * DDM   ***** Preserved *****

1466        KK   C6465
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1467          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 443 AND 452
1468          HC       2
              * DDM   ***** Preserved *****

1469          KK   R6566
1470          KM        ROUTE FLOW FROM DIVERSIONS 65 AND 66 TO C116
1471          RS       2    FLOW      -1
1472          RC     .05    .035     .05    2435   .0282
1473          RX    1000    1045    1090    1150    1160    1220    1265    1310
1474          RY      25      23      20      10      10      20      23      25
              * DDM   ***** Preserved *****

1475          KK    C116
1476          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 450 & 451 AND R6364 & R6465
1477          HC       4
              * DDM   ***** Preserved *****

1478          KK  BASIN5
1479          KM        RESERVOIR WITHIN PARCEL 31      2-48 INCH PIPES AT OUTFALL
1480          KM        BASIN 5 FEET DEEP
1481          RS       1    ELEV       0
1482          SV       0     4.5     9.9
1483          SQ       0      69     190
1484          SE       0     2.5       5
              * DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1485          KK    R116
1486          KM   ROUTE FLOW FROM C116 TO C117
1487          RS       2    FLOW      -1
1488          RC     .05    .035     .05    1300   .0333
1489          RX    1000    1100    1200    1300    1320    1420    1520    1620
1490          RY      13      12      11      10      10      11      12      13
              * DDM   ***** Updated *****

1491          KK     453
1492          KM   SUB-BASIN 453
1493          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1494          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1495          KM     L =  .58  Kb = .058  Adj. Slope =  138.0
1496          BA    .060
1497          LG    .290    .300   3.290    .820  18.000
1498          UC    .275    .284
1499          UA       0       5      16      30      65      77      84      90      94      97
1500          UA     100
              * DDM   ***** Preserved *****

1501          KK    C117
1502          KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 453 AND R116
1503          HC       2
              * DDM   ***** Preserved *****

1504          KK    C118
1505          KM   COMBINE HYDROGRAPHS FROM R115 AND C117
1506          HC       2
              * DDM   ***** Preserved *****

1507          KK    R118
1508          KM        ROUTE FLOW FROM C118 TO  DIV7
1509          RS       1    FLOW      -1
1510          RC    .019    .019    .019    1500    .024
1511          RX    1000    1012    1016    1020    1035    1039    1043    1055
1512          RY      15      12      11      10      10      11      12      15
              * DDM   ***** Preserved *****

1513          KK    DIV7
1514          KM        OFFLINE BASIN AT NORTH MOUNTAIN RIDGE   FLOWS ENTER BASIN OVER
1515          KM        30' WEIR SET AT 5.3' ABOVE THE CHANNEL BOTTOM
              *      1
1516          DT  BASIN6
1517          DI       0     363     487     563     645     844
1518          DQ       0       3      47      83     125     244
              * DDM   ***** Preserved *****

1519          KK  RTDIV7
1520          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1521          DR  BASIN6
              * DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1522          KK  RFDIV7
1523          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1524          KM     3.6 ACRE-FEETx43560/36x3600=1.2cfs
1525          RS       1    STOR       0
1526          SV       0     .01     3.6
1527          SQ       0     1.2     1.2
              * DDM   ***** Preserved *****

1528          KK   CDIV7
1529          KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1530          HC       2
              * DDM   ***** Updated *****

1531          KK     454
1532          KM   SUB-BASIN 454
1533          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1534          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1535          KM     L = 1.23  Kb = .051  Adj. Slope =  163.0
1536          BA    .180
1537          LG    .300    .310   3.780    .560  14.000
1538          UC    .379    .395
1539          UA       0       5      16      30      65      77      84      90      94      97
1540          UA     100
              * DDM   ***** Preserved *****

1541          KK    C119
1542          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 454 AND C119
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                 *      1       2
1543             HC       2
                 * DDM   ***** Preserved *****

1544             KK    R454
1545             KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1546             KM   ROUTE FLOW FROM C119 TO 415C
1547             RS       2    FLOW      -1
1548             RC    .045    .035    .045    2200    .009
1549             RX       0      .5       1      33      42      67    67.5      68
1550             RY       5       4       4       0       0       6       6       6
                 * DDM   ***** Updated *****

1551             KK     415
1552             KM   SUB-BASIN 415
1553             KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1554             KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1555             KM     L = 1.10  Kb = .049  Adj. Slope =  155.0
1556             BA    .281
1557             LG    .300    .260   3.630    .710  15.000
1558             UC    .358    .264
1559             UA       0       5      16      30      65      77      84      90      94      97
1560             UA     100
                 * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                          PAGE 41

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

1561             KK    415C
1562             KM   HYDROGRAPH COMBINATION OF SUB-BASINS 415, R454, AND 390C
1563             HC       3
                 * DDM   ***** Preserved *****

1564             KK    R415
1565             KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1566             KM   ROUTING OF FLOW FROM 415C TO 455C
1567             RS       2    FLOW      -1
1568             RC    .045     .03    .045    4100    .024
1569             RX       0      .5       1       8      16      23    23.5      24
1570             RY       8       8       8       0       0       8       8       8
                 * DDM   ***** Updated *****

1571             KK     455
1572             KM   SUB-BASIN 455
1573             KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1574             KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
1575             KM     L = 1.70  Kb = .041  Adj. Slope =  146.0
1576             BA   1.111
1577             LG    .270    .280   3.700    .640  24.000
1578             UC    .421    .204
1579             UA       0       5      16      30      65      77      84      90      94      97
1580             UA     100
                 * DDM   ***** Preserved *****

1581             KK    D455
1582             KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1583             KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1584             KM   FOR BASIN #: 30      34      43      47&58
1585             KM        MAXIMUM VOLUME DIVERSION = 74.1 acre-feet
                 *      1
1586             DT   BS455    74.1
1587             DI       0   10000
1588             DQ       0   10000
                 * DDM   ***** Preserved *****

1589             KK   RT455
1590             KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1591             DR   BS455
                 * DDM   ***** Preserved *****

1592             KK   SR455
1593             KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1594             KM    74.1 ACRE-FEETx43560/36x3600=25cfs
1595             RS       1    STOR       0
1596             SV       0     .01    74.1
1597             SQ       0      25      25
                 * DDM   ***** Preserved *****
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LINE             ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1598             KK    C455
1599             KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 455 AND DIVERTED BASIN STORAGE OF 455
1600             HC       2
                 * DDM   ***** Preserved *****

1601             KK    455C
1602             KM  HYDROGRAPH COMBINATION OF 420C, R415 AND C455
                 *      1       2
1603             HC       3
                 * DDM   ***** Preserved *****

1604             KK   SR440
1605             KM   SPOOK HILL FRS PLANS DATED 6/15/77
1606             KM   OUTLET PIPE=7'x7.5'RCBC; L=70 INLET INV.=1566; OUTLET INV.=1566
1607             KM   EMERGENCY SPILLWAY ELEV.=1582; PRINCIPLE SPILLWAY ELEV.=1577.5
1608             KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 200 ACRE-FEET
1609             RS       1    STOR       0
1610             SV       0      10     100     300     500     680
1611             SQ       0     640     720     780     825     860
1612             SE      66    77.5      79    80.2    81.2      82
                 * DDM   ***** Preserved *****

1613             KK   RR455
1614             KM   ROUTE FLOW FROM SPOOK HILL FRS TO SUB-BASIN 462
1615             RS      10    FLOW      -1
1616             RC    .035    .025    .035    9200    .002
1617             RX       0       1       2      28      58      84      85      86
1618             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 *****

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 *****
```



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

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 *****

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

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
RX    1000    1010    1020    1036    1041    1057    1067    1077
RY      15    14.5      14      10      10      14    14.5      15
* DDM   ***** Updated *****

KK     458
KM   SUB-BASIN 458
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 =  .76  Kb = .048  Adj. Slope =  299.0
BA    .190
LG    .290    .330   5.800    .190   6.000
UC    .204    .131
UA       0       5      16      30      65      77      84      90      94      97
UA     100
* DDM   ***** Preserved *****

KK    C103
KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 55 AND C101
HC       2
* DDM   ***** Preserved *****
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1697          KK    R103
1698          KM        ROUTE FLOW FROM SUBBASIN C103 TO C106
1699          RS       1    FLOW      -1
1700          RC     .05    .035     .05     900     .03
1701          RX    1000    1010    1020    1030    1050    1060    1070    1080
1702          RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
              * DDM   ***** Preserved *****

1703          KK    RT30
1704          KM        RETRIEVE DIVERTED FLOW FOR WASH BELOW 30 INCH PIPE
1705          DR    WA30
              * DDM   ***** Preserved *****

1706          KK     R30
1707          KM        ROUTE FLOW FROM WASH DIVERSION TO COMBINE C52
1708          RS       1    FLOW      -1
1709          RC     .05    .035     .05    1630     .05
1710          RX    1000    1010    1020    1036    1041    1057    1067    1077
1711          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                                    PAGE 45

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


1712          KK    RTB1
1713          KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
              *      1        2
1714          DR  BASIN1
              * DDM   ***** Preserved *****

1715          KK      B1
1716          KM        ROUTE FLOW THROUGH OFFLINE DETENTION BASIN
1717          KM        FLOW OUTLETS THROUGH A 30 INCH OUTLET PIPE
              *      1        2
1718          RS       1    ELEV       0
1719          SV              .7     1.4     2.3     2.7     3.2
1720          SQ       0       5      16      28    32.5      37
1721          SE       0       1       2       3     3.5       4
              * DDM   ***** Preserved *****

1722          KK     RB1
1723          KM        ROUTE FLOW FROM BASIN DIVERSION TO COMBINE C52
1724          RS       2    FLOW      -1
1725          RC     .05    .035     .05    1720     .05
1726          RX    1000    1010    1020    1036    1041    1057    1067    1077
1727          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Preserved *****

1728          KK    CDIV
1729          KM        COMBINE FLOWS FROM WA30 AND BASIN 1
1730          HC       2     .12
              * DDM   ***** Updated *****

1731          KK     459
1732          KM   SUB-BASIN 459
1733          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1734          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1735          KM     L =  .35  Kb = .052  Adj. Slope =  251.6
1736          BA    .030
1737          LG    .220    .300   3.330    .710   8.000
1738          UC    .162    .157
1739          UA       0       5      16      30      65      77      84      90      94      97
1740          UA     100
              * DDM   ***** Preserved *****

1741          KK     C52
1742          KM        COMBINE FLOWS FROM SUB-BASIN 52 WA30 AND BASIN 1
1743          HC       2
              * DDM   ***** Preserved *****

1744          KK     R52
1745          KM        ROUTE FLOW FROM SUBBASIN 52 TO C102
1746          RS       2    FLOW      -1
1747          RC     .05    .035     .05    2000     .05
1748          RX    1000    1010    1020    1036    1041    1057    1067    1077
1749          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Updated *****
1                                        HEC-1 INPUT                                                    PAGE 46

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


1750          KK     460
1751          KM   SUB-BASIN 460
1752          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1753          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1754          KM     L =  .62  Kb = .058  Adj. Slope =  194.0
1755          BA    .140
1756          LG    .250    .260   3.740    .690  27.000
1757          UC    .242    .160
1758          UA       0       5      16      30      65      77      84      90      94      97
1759          UA     100
              * DDM   ***** Preserved *****

1760          KK    C102
1761          KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 52 AND 53
1762          HC       2
              * DDM   ***** Preserved *****

1763          KK  BASIN3
1764          KM        RESERVOIR AT CLUBHOUSE LOCATION 1-30 INCH PIPE AT OUTFALL
1765          KM        BOTTOM OF BASIN AT 6 FEET ABOVE 1795 ELEVATION
1766          RS       1    ELEV       0
1767          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
1768          SQ       0      22      45    47.4      48      51      57      62      67      73
1769          SE    1795  1797.5    1800  1800.4  1800.5    1801    1802    1803    1804  1805.5
              * DDM   ***** Preserved *****

1770          KK      R3
1771          KM        ROUTE FLOW FROM C102 to C106
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1772        RS       4    FLOW      -1
1773        RC     .05     .03     .05    2750    .0375
1774        RX    1000    1010    1020    1052    1086    1118    1128    1138
1775        RY    19.2    18.4      18      10      10      18    18.4    19.2
            * DDM   ***** Updated *****

1776        KK     461
1777        KM   SUB-BASIN 461
1778        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1779        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1780        KM     L =  .83  Kb = .052  Adj. Slope =  181.0
1781        BA    .120
1782        LG    .270    .250   4.250    .450  21.000
1783        UC    .271    .250
1784        UA       0       5      16      30      65      77      84      90      94      97
1785        UA     100
            * DDM   ***** Preserved *****

1786        KK    C104
1787        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 54 AND R102
1788        HC       2
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1789        KK    C106
1790        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN C103 AND C104
1791        HC       2
            * DDM   ***** Preserved *****

1792        KK    R106
1793        KM        ROUTE FLOW FROM C106 TO C49
1794        RS       2    FLOW      -1
1795        RC     .05    .035     .05    3950    .033
1796        RX    1000    1010    1020    1030    1050    1060    1070    1080
1797        RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
            * DDM   ***** Updated *****

1798        KK     462
1799        KM   SUB-BASIN 462
1800        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1801        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1802        KM     L =  .97  Kb = .045  Adj. Slope =  297.7
1803        BA    .301
1804        LG    .300    .330   5.300    .240  12.000
1805        UC    .225    .137
1806        UA       0       5      16      30      65      77      84      90      94      97
1807        UA     100
            * DDM   ***** Preserved *****

1808        KK     C56
1809        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 56 AND C106
            *      1       2
1810        HC       2
            * DDM   ***** Updated *****

1811        KK     480
1812        KM   SUB-BASIN 480
1813        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1814        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
1815        KM     L = 1.21  Kb = .042  Adj. Slope =  165.0
1816        BA    .731
1817        LG    .270    .270   3.580    .730  27.000
1818        UC    .325    .148
1819        UA       0       5      16      30      65      77      84      90      94      97
1820        UA     100
            * DDM   ***** Preserved *****

1821        KK    D480
1822        KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1823        KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1824        KM   FOR BASIN #: 18 & 26
1825        KM        MAXIMUM VOLUME DIVERSION = 16.5 acre-feet
            *      1
1826        DT   BS480    16.5
1827        DI       0   10000
1828        DQ       0   10000
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1829        KK   RT480
1830        KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1831        DR   BS480
            * DDM   ***** Preserved *****

1832        KK   SR480
1833        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1834        KM    16.5 ACRE-FEETx43560/36x3600=5.5cfs
1835        RS       1    STOR       0
1836        SV       0     .01    16.5
1837        SQ       0     5.6     5.6
            * DDM   ***** Preserved *****

1838        KK    C480
1839        KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1840        HC       2
            * DDM   ***** Preserved *****

1841        KK    480C
1842        KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1843        HC       3    2.09
            * DDM   ***** Preserved *****

1844        KK   RR480
1845        KM   ROUTE FLOW FROM SUB-BASIN 480 TO SUB-BASIN 500
1846        RS       1    FLOW      -1
1847        RC    .025    .025    .025    6500     .05
1848        RX       0       1       2      28      58      84      85      86
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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

   61          10
                V
                V
   71         R10
                V
                V
   77         R12
                .
                .
   83           .          20
                .           .
                .           .
   93         C20............
                .
                .
   96           .          40
                .           .
                .           .
  106           .           .          60
                .           .           .
                .           .           .
  116         60C........................
                V
                V
  119        SR60
                V
                V
  128         R60
                V
                V
  134        RR60
                .
                .
  140           .          80
                .           .
                .           .
  150         80C............
                V
                V
  153         R80
                .
                .
  159           .         100
                .           .
                .           .
  169        100C............
                V
                V
  172        R100
                .
                .
  178           .         120
                .           .
                .           .
  188        120C............
                V
                V
  191        R120
                .
                .
  197           .         140
                .           .
                .           .
  207           .           .         150
                .           .           V
                .           .           V
  217           .           .        R150
                .           .           V
                .           .           V
  223           .           .        R152
                .           .           .
                .           .           .
  229           .           .           .         160
                .           .           .           .
                .           .           .           .
  239           .           .           .           .         180
                .           .           .           .           .
                .           .           .           .           .
  249        180C...............................................
                .
                .
  252           .         383
                .           V
                .           V
  262           .        R383
                .           .
                .           .
  271           .           .         393
                .           .           .
                .           .           .
  281           .        393C............
                .           V
                .           V
  284           .        R393
                .           .
                .           .
  291           .           .         365
                .           .           .
                .           .           .
  301           .        365C............
                .           V
                .           V
  304           .        R365
                .           V
                .           V
  311           .        365R
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                .          .
                .          .
320             .          .        353
                .          .          .
                .          .          .
330             .       353C............
                .          V
                .          V
333             .       R353
                .          V
                .          V
342             .       353R
                .          .
                .          .
349             .          .        350
                .          .          V
                .          .          V
359             .          .       350R
                .          .          .
                .          .          .
366             .          .          .        310
                .          .          .          .
                .          .          .          .
376             .       C310........................
                .          V
                .          V
379             .       R310
                .          V
                .          V
386             .       R312
                .          .
                .          .
395             .          .        295
                .          .          .
                .          .          .
405             .       295C............
                .          V
                .          V
408             .       295R
                .          .
                .          .
417             .          .        210
                .          .          V
                .          .          V
427             .          .       R210
                .          .          .
                .          .          .
433             .          .          .        240
                .          .          .          .
                .          .          .          .
443             .       240C........................
                .          V
                .          V
446             .      SR240
                .          .
                .          .
455             .          .        220
                .          .          .
                .          .          .
465             .       220C............
                .          V
                .          V
468             .      SR220
                .          .
                .          .
477             .          .        190
                .          .          V
                .          .          V
487             .          .       R190
                .          .          V
                .          .          V
493             .          .       R192
                .          .          .
                .          .          .
499             .          .          .        200
                .          .          .          .
                .          .          .          .
509             .       200C........................
                .          V
                .          V
512             .      SR200
                .          V
                .          V
519             .      200SR
                .          .
                .          .
529          C180............
                V
                V
532         SR180
                V
                V
541         R180
                .
                .
548             .        260
                .          .
                .          .
558          260C............
                V
                V
561          R260
                .
                .
568             .        280
                .          .
                .          .
578          280C............
                V
                V
581          R280
                .
                .
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```
588          .         300
             .           .
             .           .
598       C300............
             .
             .
604          .------->   DIV30
601       D300
             .
             .
609          .           .<-------   DIV30
607          .       RTDIV
             .           V
             .           V
610          .       SRDIV
             .           .
             .           .
617       300C............
             .
             .
620          .         305
             .           .
             .           .
633          .           .-------->   305D
630          .        D305
             .           .
             .           .
638          .           .           .<-------    305D
636          .           .       RT305
             .           .           V
             .           .           V
639          .           .       SR305
             .           .           .
             .           .           .
646       305C........................
             V
             V
649       R305
             V
             V
656      RR305
             .
             .
663          .         320
             .           .
             .           .
678          .           .-------->   BS320
673          .        D320
             .           .
             .           .
683          .           .           .<-------   BS320
681          .           .       RT320
             .           .           V
             .           .           V
684          .           .       SR320
             .           .           .
             .           .           .
690       C320........................
             .
             .
693          .         340
             .           .
             .           .
708          .           .-------->   BS340
703          .        D340
             .           .
             .           .
713          .           .           .<-------   BS340
711          .           .       RT340
             .           .           V
             .           .           V
714          .           .       SR340
             .           .           .
             .           .           .
720       C340........................
             .
             .
723          .         360
             .           .
             .           .
737          .           .-------->   BS360
733          .        D360
             .           .
             .           .
742          .           .           .<-------   BS360
740          .           .       RT360
             .           .           V
             .           .           V
743          .           .       SR360
             .           .           .
             .           .           .
749       360C........................
             .
             .
752          .         380
             .           .
             .           .
766          .           .-------->   BS380
762          .        D380
             .           .
             .           .
771          .           .           .<-------   BS380
769          .           .       RT380
             .           .           V
             .           .           V
772          .           .       SR380
             .           .           .
             .           .           .
778       380C........................
             .
             .
781          .         400
             .           .
```

```
795          .          .-------> BS400
791          .       D400
             .          .
             .          .
800          .          .          .<-------  BS400
798          .          .      RT400
             .          .          V
             .          .          V
801          .          .      SR400
             .          .          .
             .          .          .
807          .       C400............
             .          .
             .          .
810       400C............
             .
             .
813          .        355
             .          V
             .          V
823          .       R355
             .          .
             .          .
830          .          .        361
             .          .          .
             .          .          .
844          .          .          .-------> BS361
840          .          .      D361
             .          .          .
             .          .          .
849          .          .          .          .<-------  BS361
847          .          .          .      RT361
             .          .          .          V
             .          .          .          V
850          .          .          .      SR361
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             .          .          .          .
856          .       361C........................
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             .          .
859          .          .        342
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874          .          .          .-------> BS3421
869          .          .      D3421
             .          .          .
             .          .          .
879          .          .          .          .<-------  BS3421
877          .          .          .     RT3421
             .          .          .          V
             .          .          .          V
880          .          .          .     SR3421
             .          .          .          .
             .          .          .          .
886          .          .      C342............
             .          .          .
             .          .          .
893          .          .          .-------> BS3422
889          .          .      D3422
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             .          .          .
898          .          .          .          .<-------  BS3422
896          .          .          .     RT3422
             .          .          .          V
             .          .          .          V
899          .          .          .     SR3422
             .          .          .          .
             .          .          .          .
905          .          .      CC342............
             .          .          V
             .          .          V
908          .          .      R342
             .          .          .
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914          .          .          .        341
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929          .          .          .          .-------> BS341
924          .          .          .      D341
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             .          .          .          .
934          .          .          .          .          .<-------  BS341
932          .          .          .          .      RT341
             .          .          .          .          V
             .          .          .          .          V
935          .          .          .          .      SR341
             .          .          .          .          .
             .          .          .          .          .
941          .          .      C341........................
             .          .          V
             .          .          V
944          .          .      RR341
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951          .       361CC............
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958          .          .-------> BS3612
954          .       D3612
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             .          .
963          .          .          .<-------  BS3612
961          .          .      RT3612
             .          .          V
             .          .          V
964          .          .      SR3612
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970          .       C3612............
             .          V
             .          V
973          .       RR361
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979                 381
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993                   .-------->   BS381
989               D381
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998                   .           .<-------   BS381
996                   .       RT381
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                      .           V
999                   .       SR381
                      .           .
                      .           .
1005          381C.......................
                 V
                 V
1008          RR381
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1014                401
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1028                  .-------->   BS401
1024              D401
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1033                  .           .<-------   BS401
1031                  .       RT401
                      .           V
                      .           V
1034                  .       SR401
                      .           .
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1040      C401....................................
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1043          420
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1057             .-------->   BS420
1053          D420
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1062             .           .<-------   BS420
1060             .       RT420
                 .           V
                 .           V
1063             .       SR420
                 .           .
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1069      420C.......................
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1072          370
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1082             .           395
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                 .           .
1092          395C............
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1098             .-------->   BS395
1095          D395
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1103             .           .<-------   BS395
1101             .       RT395
                 .           V
                 .           V
1104             .       SR395
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1110          C395............
                 V
                 V
1113          R395
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1120             .           385
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1130             .           .           411
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1140             .       411C............
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                 .           .
1145             .           .-------->   BS411
1143             .       D411
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1150             .           .           .<-------   BS411
1148             .           .       RT411
                 .           .           V
                 .           .           V
1151             .           .       SR411
                 .           .           .
                 .           .           .
1157             .       C411............
                 .           V
                 .           V
1160             .       R411
                 .           .
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1166             .           .           390
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1180             .           .           .-------->   BS390
1176             .           .       D390
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1185                                                  .<-------   BS390
1183                                            RT390
                                                   V
                                                   V
1186                                            SR390
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1192                  390C.....................................
                         V
                         V
1195                  RR390
                         .
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1201                        440
                             V
                             V
1211                        R70
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1217                                   441
                                        .
                                        .
1227                     C108............
                             .
                             .
1232                         .------->   SPLIT
1230                     DIV4
                             V
                             V
1235                     R108
                             .
                             .
1241                                   442
                                        .
                                        .
1251                        C67............
                             .
                             .
1257                         .------->  BASIN4
1254                     DIV6
                             .
                             .
1262                                     .<-------  BASIN4
1260                                RTDIV6
                                        V
                                        V
1263                                RFDIV6
                                        .
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1269                    CDIV6............
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1272                                   443
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1285                                     .------->   WSH66
1282                                 DIV66
                                        V
                                        V
1288                                 R113
                                        .
                                        .
1294                     C114............
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                             .
1297                                   444
                                        V
                                        V
1307                                   R58
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1313                                                445
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1323                                C107............
                                        V
                                        V
1326                                R107
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1334                                                  .<-------   SPLIT
1332                                            RTB2
                                                   V
                                                   V
1335                                         RSPLIT
                                                   .
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1341                                                .          446
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1351                                C109......................
                                        .
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1357                                     .------->  WSH404
1354                                DIV5
                                        V
                                        V
1360                                R109
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1366                                                447
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1378                                                 .            .<-------  WSH404
1376                                                 .        RT404
                                                     .           V
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1379                                                 .        R404
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1385                                C110......................
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1388             .          .          .       R110
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1394             .          .       C115...........
                 .          .          V
                 .          .          V
397              .          .       R115
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1404             .          .          .        448
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1414             .          .          .          .        449
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1424             .          .          .      C6364...........
                 .          .          .          V
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1427             .          .          .      R6364
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1433             .          .          .          .        450
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1443             .          .          .          .          .        451
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1455             .          .          .          .          .          .          .<-------   WSH66
1453             .          .          .          .          .          .      RT66
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1456             .          .          .          .          .          .          .        452
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1466             .          .          .          .          .          .      C6465...........
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1469             .          .          .          .          .          .      R6566
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1475             .          .          .       C116.................................
                 .          .          .          V
                 .          .          .          V
1478             .          .          .     BASIN5
                 .          .          .          V
                 .          .          .          V
1485             .          .          .       R116
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1491             .          .          .          .        453
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1501             .          .          .       C117...........
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1504             .          .       C118...........
                 .          .          V
                 .          .          V
1507             .          .       R118
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                 .          .          .
1516             .          .          .-------> BASIN6
1513             .          .       DIV7
                 .          .          .
                 .          .          .
1521             .          .          .          .<-------  BASIN6
1519             .          .          .     RTDIV7
                 .          .          .          V
                 .          .          .          V
1522             .          .          .     RFDIV7
                 .          .          .          .
                 .          .          .          .
1528             .          .      CDIV7...........
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1531             .          .          .        454
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1541             .          .       C119...........
                 .          .          V
                 .          .          V
1544             .          .       R454
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1551             .          .          .        415
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1561             .       415C.......................
                 .          V
                 .          V
1564             .       R415
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1571             .          .        455
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1586             .          .          .------->  BS455
1581             .          .       D455
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                 .          .          .
1591             .          .          .          .<-------  BS455
1589             .          .          .      RT455
                 .          .          .          V
                 .          .          .          V
1592             .          .          .      SR455
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1598             .          .       C455...........
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1601          455C.......................
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                V
                V
1604        SR440
                V
                V
1613        RR455
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1619            .         456
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1632            .           .-------> BASIN1
1629            .        DIV1
                .           .
                .           .
1638            .           .------->   WA30
1635            .        DIV2
                .           V
                .           V
1641            .        R456
                .           .
                .           .
1647            .           .         457
                .           .           .
                .           .           .
1657            .        C101............
                .           .
                .           .
1663            .           .-------> BASIN2
1660            .        DIV3
                .           .
                .           .
1668            .           .           .<-------  BASIN2
1666            .           .      RTDIV3
                .           .           V
                .           .           V
1669            .           .      RFDIV3
                .           .           .
                .           .           .
1675            .       CDIV3............
                .           V
                .           V
1678            .        R101
                .           .
                .           .
1684            .           .         458
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                .           .           .
1694            .        C103............
                .           V
                .           V
1697            .        R103
                .           .
                .           .
1705            .           .           .<-------    WA30
1703            .           .        RT30
                .           .           V
                .           .           V
1706            .           .         R30
                .           .           .
                .           .           .
1714            .           .           .           .<-------  BASIN1
1712            .           .           .        RTB1
                .           .           .           V
                .           .           .           V
1715            .           .           .          B1
                .           .           .           V
                .           .           .           V
1722            .           .           .         RB1
                .           .           .           .
                .           .           .           .
1728            .           .        CDIV............
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1731            .           .           .         459
                .           .           .           .
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1741            .           .         C52............
                .           .           V
                .           .           V
1744            .           .         R52
                .           .           .
                .           .           .
1750            .           .           .         460
                .           .           .           .
                .           .           .           .
1760            .           .        C102............
                .           .           V
                .           .           V
1763            .           .      BASIN3
                .           .           V
                .           .           V
1770            .           .          R3
                .           .           .
                .           .           .
1776            .           .           .         461
                .           .           .           .
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1786            .           .        C104............
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1789            .        C106............
                .           V
                .           V
1792            .        R106
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1798            .           .         462
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1808            .         C56............
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1811          .          .         480
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1826          .          .           .-------->   BS480
1821          .          .        D480
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1831          .          .           .           .<--------   BS480
1829          .          .           .       RT480
              .          .           .           V
              .          .           .           V
1832          .          .           .       SR480
              .          .           .           .
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1838          .          .        C480............
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1841       480C........................
              V
              V
1844      RR480
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1850          .        500
              .          .
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1860       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	572.	12.17	49.	13.	6.	.41		
+	ROUTED TO	R150	546.	12.23	49.	13.	6.	.41		
+	ROUTED TO	R152	504.	12.37	49.	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	7163.	12.30	860.	285.	168.	6.54		
+	HYDROGRAPH AT	383	650.	12.17	60.	17.	8.	.42		
+	ROUTED TO	R383	647.	12.17	60.	17.	8.	.42		
+	HYDROGRAPH AT	393	44.	12.13	4.	1.	0.	.04		
+	2 COMBINED AT	393C	687.	12.17	64.	18.	9.	.46		
+	ROUTED TO	R393	681.	12.20	64.	18.	9.	.46		
+	HYDROGRAPH AT	365	380.	12.27	45.	12.	6.	.41		
+	2 COMBINED AT	365C	1028.	12.20	108.	29.	14.	.88		
+	ROUTED TO	R365	1018.	12.23	108.	29.	14.	.88		

+	ROUTED TO 365R	970.	12.33	108.	29.	14.	.88
+	HYDROGRAPH AT 353	401.	12.30	49.	12.	6.	.50
+	2 COMBINED AT 353C	1349.	12.33	155.	41.	20.	1.38
+	ROUTED TO R353	1308.	12.40	155.	41.	20.	1.38
+	ROUTED TO 353R	1291.	12.43	155.	41.	20.	1.38
+	HYDROGRAPH AT 350	1151.	12.20	102.	27.	13.	.94
+	ROUTED TO 350R	992.	12.47	102.	27.	13.	.94
+	HYDROGRAPH AT 310	376.	12.33	49.	12.	6.	.56
+	3 COMBINED AT C310	2548.	12.43	301.	79.	38.	2.87
+	ROUTED TO R310	2407.	12.63	301.	79.	38.	2.87
+	ROUTED TO R312	2333.	12.73	301.	79.	38.	2.87
+	HYDROGRAPH AT 295	364.	12.30	40.	10.	5.	.38
+	2 COMBINED AT 295C	2456.	12.73	339.	89.	43.	3.25
+	ROUTED TO 295R	2423.	12.80	339.	89.	43.	3.25
+	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
+	3 COMBINED AT 240C	3025.	12.73	565.	147.	71.	5.23
+	ROUTED TO SR240	1562.	13.13	498.	130.	62.	5.23
+	HYDROGRAPH AT 220	1126.	12.17	98.	25.	12.	.73
+	2 COMBINED AT 220C	1582.	13.10	587.	154.	74.	5.95
+	ROUTED TO SR220	1517.	13.27	576.	151.	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	806.	12.17	69.	19.	9.	.54
+	3 COMBINED AT 200C	2561.	12.30	748.	197.	95.	7.41
+	ROUTED TO SR200	2435.	12.37	743.	194.	93.	7.41
+	ROUTED TO 200SR	1687.	12.63	623.	164.	79.	7.41
+	2 COMBINED AT C180	7163.	12.30	1475.	450.	247.	13.94
+	ROUTED TO SR180	142.	19.17	142.	142.	114.	13.94
+	ROUTED TO R180	142.	19.23	142.	142.	114.	13.94
+	HYDROGRAPH AT 260	418.	12.10	43.	12.	6.	.27
+	2 COMBINED AT 260C	527.	12.10	179.	153.	122.	.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	181.	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	1060.	12.20	142.	43.	21.	1.02
+	DIVERSION TO	BS340	1060.	12.20	71.	20.	9.	1.02
+	HYDROGRAPH AT	D340	948.	12.30	84.	23.	11.	1.02
+	HYDROGRAPH AT	RT340	1060.	12.20	71.	20.	9.	1.02
+	ROUTED TO	SR340	13.	8.47	13.	13.	9.	1.02
+	3 COMBINED AT	C340	2106.	12.30	465.	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	2109.	12.30	488.	255.	175.	3.45
+	HYDROGRAPH AT	380	323.	12.13	32.	9.	4.	.27
+	DIVERSION TO	BS380	271.	12.03	13.	4.	2.	.27
+	HYDROGRAPH AT	D380	323.	12.13	21.	6.	3.	.27
+	HYDROGRAPH AT	RT380	271.	12.03	13.	4.	2.	.27
+	ROUTED TO	SR380	2.	8.20	2.	2.	2.	.27

+	3 COMBINED AT	380C	2311.	12.30	510.	263.	179.	3.72
+	HYDROGRAPH AT	400	55.	12.10	4.	1.	0.	.05
+	DIVERSION TO	BS400	55.	12.10	3.	1.	0.	.05
+	HYDROGRAPH AT	D400	18.	12.37	1.	0.	0.	.05
+	HYDROGRAPH AT	RT400	55.	12.10	3.	1.	0.	.05
+	ROUTED TO	SR400	1.	11.87	1.	0.	0.	.05
+	2 COMBINED AT	C400	19.	12.37	1.	1.	0.	.05
+	2 COMBINED AT	400C	2311.	12.30	511.	264.	180.	3.77
+	HYDROGRAPH AT	355	235.	12.10	22.	6.	3.	.17
+	ROUTED TO	R355	212.	12.27	22.	6.	3.	.17
+	HYDROGRAPH AT	361	523.	12.10	51.	15.	7.	.37
+	DIVERSION TO	BS361	474.	12.03	23.	7.	3.	.37
+	HYDROGRAPH AT	D361	505.	12.13	32.	9.	4.	.37
+	HYDROGRAPH AT	RT361	474.	12.03	23.	7.	3.	.37
+	ROUTED TO	SR361	4.	8.23	4.	4.	3.	.37
+	3 COMBINED AT	361C	653.	12.13	57.	19.	10.	.54
+	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	653.	12.13	88.	35.	20.	1.07
+	DIVERSION TO	BS3612	652.	12.13	84.	25.	12.	1.07
+	HYDROGRAPH AT	D3612	22.	17.90	21.	16.	8.	1.07

+	HYDROGRAPH AT RT3612	652.	12.13	84.	25.	12.	1.07
+	ROUTED TO SR3612	17.	11.90	17.	17.	12.	1.07
+	2 COMBINED AT C3612	39.	17.90	37.	32.	20.	1.07
+	ROUTED TO RR361	39.	18.23	37.	32.	20.	1.07
+	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	75.	50.	31.	1.80
+	ROUTED TO RR381	588.	12.40	74.	50.	31.	1.80
+	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	641.	329.	219.	6.17
+	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
+	3 COMBINED AT 420C	3597.	12.33	727.	351.	231.	7.02
+	HYDROGRAPH AT 370	406.	12.07	34.	10.	5.	.26
+	HYDROGRAPH AT 395	204.	12.10	21.	6.	3.	.16
+	2 COMBINED AT 395C	599.	12.07	55.	15.	7.	.42
+	DIVERSION TO BS395	589.	12.07	47.	12.	6.	.42
+	HYDROGRAPH AT D395	10.	11.20	7.	4.	2.	.42
+	HYDROGRAPH AT RT395	589.	12.07	47.	12.	6.	.42
+	ROUTED TO SR395	17.	11.63	17.	12.	6.	.42
+	2 COMBINED AT C395	27.	11.63	23.	15.	7.	.42
+	ROUTED TO R395	27.	11.83	23.	15.	7.	.42
+	HYDROGRAPH AT 385	314.	12.07	24.	7.	3.	.20
+	HYDROGRAPH AT 411	304.	12.17	30.	8.	4.	.24
+	2 COMBINED AT 411C	566.	12.10	53.	15.	7.	.43
+	DIVERSION TO BS411	541.	12.10	43.	11.	5.	.43
+	HYDROGRAPH AT D411	25.	11.63	10.	4.	2.	.43
+	HYDROGRAPH AT RT411	541.	12.10	43.	11.	5.	.43

+	ROUTED TO	SR411	17.	11.70	17.	11.	5.	.43
+	2 COMBINED AT	C411	42.	11.70	26.	14.	7.	.43
	ROUTED TO	R411	42.	11.93	26.	14.	7.	.43
+	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	525.	12.03	79.	38.	19.	1.10
+	ROUTED TO	RR390	517.	12.10	79.	38.	19.	1.10
+	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	294.	12.13	31.	9.	4.	.28
	3 COMBINED AT							
+		415C	1466.	12.13	215.	77.	39.	2.48
	ROUTED TO							
+		R415	1432.	12.20	215.	77.	39.	2.48

+	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	4716.	12.30	964.	450.	287.	10.61
+	ROUTED TO	SR440	756.	13.57	743.	450.	287.	10.61
+	ROUTED TO	RR455	756.	13.90	742.	449.	284.	10.61
+	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

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        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      2500.   12.10       924.       524.      324.     2.09
        ROUTED TO
+                      RR480      2337.   12.13       922.       524.      324.     2.09
        HYDROGRAPH AT
+                       500      1073.   12.27       122.        33.       16.      .93
        2 COMBINED AT
+                       500C      3226.   12.17      1033.       552.      338.     3.02
1
                                   SUMMARY OF KINEMATIC WAVE - MUSKINGUM-CUNGE ROUTING
                                       (FLOW IS DIRECT RUNOFF WITHOUT BASE FLOW)
                                                                          INTERPOLATED TO
                                                                       COMPUTATION INTERVAL
          ISTAQ    ELEMENT      DT        PEAK    TIME TO     VOLUME      DT      PEAK    TIME TO     VOLUME
                                                    PEAK                                    PEAK
                                (MIN)      (CFS)    (MIN)      (IN)     (MIN)    (CFS)     (MIN)       (IN)

         FOR STORM = 1  STORM AREA (SQ MI) =        .01
            RR390  MANE          2.00    544.17   726.43      1.41      2.00   539.58    726.00       1.41

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8225E+02 EXCESS= .0000E+00 OUTFLOW= .8233E+02 BASIN STORAGE= .4970E-07 PERCENT ERROR=   -.1

         FOR STORM = 2  STORM AREA (SQ MI) =      10.00
            RR390  MANE          2.00    506.95   726.09      1.29      2.00   505.80    726.00       1.29

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7522E+02 EXCESS= .0000E+00 OUTFLOW= .7520E+02 BASIN STORAGE= .7983E-07 PERCENT ERROR=    .0

         FOR STORM = 3  STORM AREA (SQ MI) =      30.00
            RR390  MANE          1.90    482.53   727.27      1.21      2.00   478.48    728.00       1.21

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7062E+02 EXCESS= .0000E+00 OUTFLOW= .7068E+02 BASIN STORAGE= .6923E-07 PERCENT ERROR=   -.1

         FOR STORM = 4  STORM AREA (SQ MI) =      60.00
            RR390  MANE          1.84    457.80   728.15      1.13      2.00   457.41    728.00       1.13

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6597E+02 EXCESS= .0000E+00 OUTFLOW= .6597E+02 BASIN STORAGE= .4625E-07 PERCENT ERROR=    .0

         FOR STORM = 5  STORM AREA (SQ MI) =      90.00
            RR390  MANE          1.83    450.11   727.22      1.10      2.00   447.19    728.00       1.10

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6410E+02 EXCESS= .0000E+00 OUTFLOW= .6423E+02 BASIN STORAGE= .7121E-07 PERCENT ERROR=   -.2

         FOR STORM = 6  STORM AREA (SQ MI) =     120.00
            RR390  MANE          1.95    441.29   727.46      1.08      2.00   438.35    728.00       1.08

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6285E+02 EXCESS= .0000E+00 OUTFLOW= .6293E+02 BASIN STORAGE= .4489E-07 PERCENT ERROR=   -.1

         FOR STORM = 7  STORM AREA (SQ MI) =     150.00
            RR390  MANE          1.82    438.56   727.60      1.06      2.00   436.72    728.00       1.06

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6160E+02 EXCESS= .0000E+00 OUTFLOW= .6164E+02 BASIN STORAGE= .5396E-07 PERCENT ERROR=   -.1

         FOR STORM = 8  STORM AREA (SQ MI) =     300.00
            RR390  MANE          1.87    418.17   728.61      1.01      2.00   417.95    728.00       1.01
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CONTINUITY SUMMARY (AC-FT) - INFLOW= .5876E+02 EXCESS= .0000E+00 OUTFLOW= .5881E+02 BASIN STORAGE= .5108E-07 PERCENT ERROR=   -.1

        FOR STORM = 9  STORM AREA (SQ MI) =      500.00
           RR390  MANE          1.97    404.01    727.00        .96       2.00    402.70    728.00          .96

NTINUITY SUMMARY (AC-FT) - INFLOW= .5621E+02 EXCESS= .0000E+00 OUTFLOW= .5632E+02 BASIN STORAGE= .6580E-07 PERCENT ERROR=   -.2


*** NORMAL END OF HEC-1 ***
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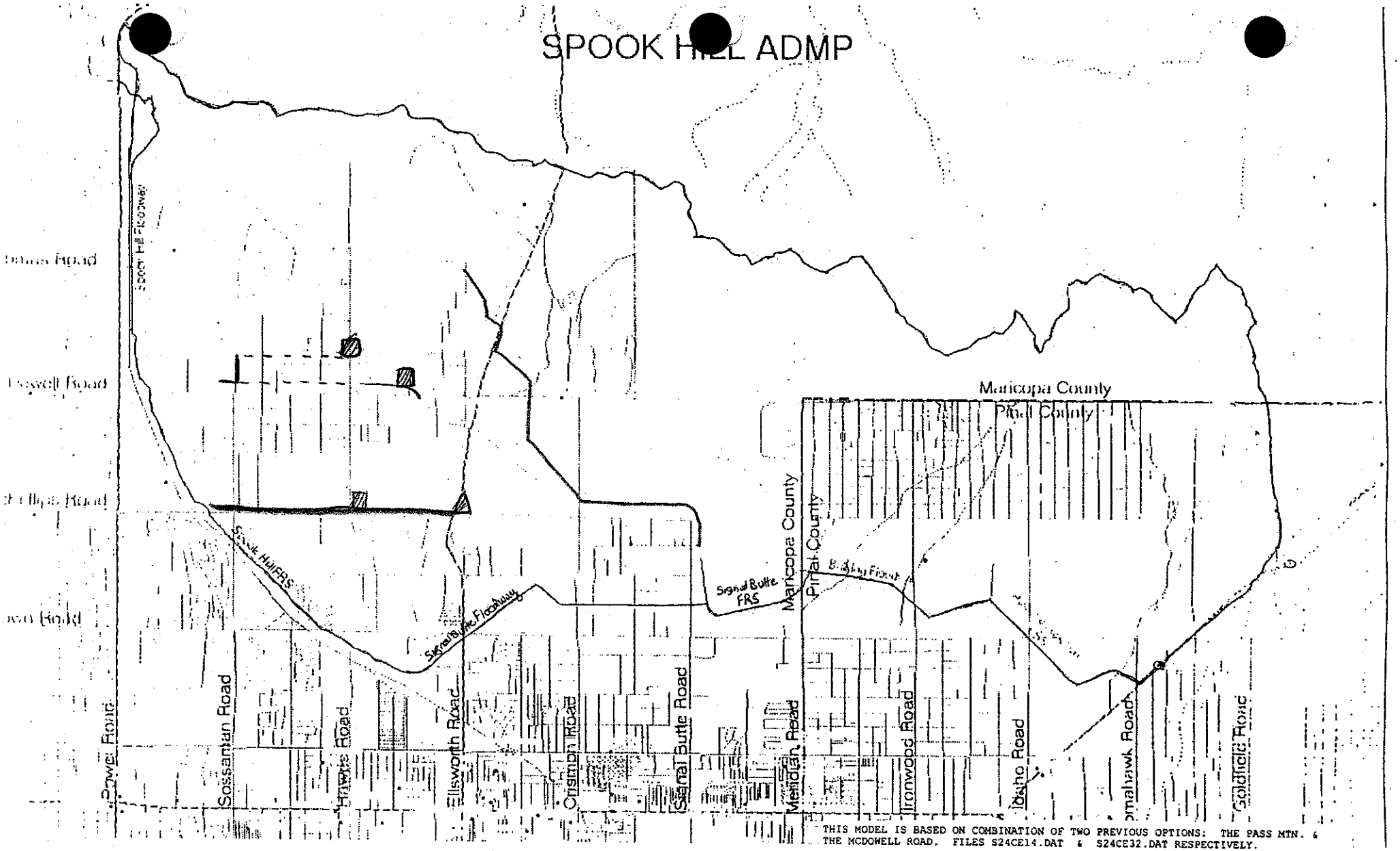
SPOOK HILL ADMP



THIS MODEL IS BASED ON COMBINATION OF TWO PREVIOUS OPTIONS: THE PASS MTN. & THE MCDOWELL ROAD. FILES S24CE14.DAT & S24CE32.DAT RESPECTIVELY.

THE PASS MTN. OPTION HAS LEVEE EXTENDED NORTH-WEST CREATING NEW SUB-BASIN BOUNDARIES: 295, 300 & 305 FROM 300; 353 & 355 FROM 355; 365 & 370 FROM 370; 383 & 385 FROM 385; 393 & 395 FROM 395. DETENTION BASINS ARE ADDED TO SUB-BASINS 300 AND 305.

THE MCDOWELL OPTION HAS DETENTION BASINS LOCATED AT MEETING OF 370 & 395; AND MEETING OF 385 & 411. THE DETENTION BASIN LOCATED AT 385 & 411 WILL BE ROUTED VIA RGRCP TO CHANNEL AT SOSSAMAN ROAD. THE DETENTION BASIN LOCATED AT 370 & 395 WILL BE ROUTED BY CHANNEL TO COMBINE WITH SUB-BASIN 390 AND THEN BE ROUTED BY RGRCP TO OUTLET INTO NATURAL CHANNEL LOCATED IN SUB-BASIN 455.

THE MCKELLIPS OPTION REFLECTS INTERCEPTOR CHANNEL EXTENDING FROM JUST EAST OF ELLSWORTH ROAD TO THE SPOOK HILL FRS. ORIGINAL SUB-BASIN 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.

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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   18JUL00  TIME  13:11:00 *                    *          (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   THIS MODEL IS BASED ON COMBINATION OF TWO PREVIOUS OPTIONS:  THE PASS MTN. &
 13           ID   THE MCDOWELL ROAD.  FILES S24CE14.DAT  &  S24CE32.DAT RESPECTIVELY.
 14           ID
 15           ID   THE PASS MTN. OPTION HAS LEVEE EXTENDED NORTH-WEST CREATING NEW
 16           ID   SUB-BASIN BOUNDARIES:  295, 300 & 305 FROM 300; 353 & 355 FROM 355;
 17           ID   365 & 370 FROM 370; 383 & 385 FROM 385; 393 & 395 FROM 395.  DETENTION BASINS
 18           ID   ARE ADDED TO SUB-BASINS 300 AND 305.
 19           ID
 20           ID   THE MCDOWELL OPTION HAS DETENTION BASINS LOCATED AT MEETING OF 370 & 395;
 21           ID   AND MEETING OF 385 & 411.  THE DETENTION BASIN LOCATED AT 385 & 411 WILL
 22           ID   BE ROUTED VIA RGRCP TO CHANNEL AT SOSSAMAN ROAD.  THE DETENTION BASIN
 23           ID   LOCATED AT 370 & 395 WILL BE ROUTED BY CHANNEL TO COMBINE WITH SUB-BASIN
 24           ID   390 AND THEN BE ROUTED BY RGRCP TO OUTLET INTO NATURAL CHANNEL
 25           ID   LOCATED IN SUB-BASIN 455.
 26           ID
 27           ID   THE MCKELLIPS OPTION REFLECTS INTERCEPTOR CHANNEL EXTENDING FROM JUST EAST
 28           ID   OF ELLSWORTH ROAD TO THE SPOOK HILL FRS. oRIGINAL SUB-BASIN 340, 360,
 29           ID   380, AND 400 ARE SUBDIVIDED INTO 340, 341, 342, 360, 361, 380, 381, 400 AND
 30           ID   401. CONCEPTUAL DETENTION BASINS ARE ALSO INCLUDED AT THE INTERSECTIONS OF
 31           ID   MCKELLIPS/HAWES AND MCKELLIPS/ELLSWORTH.
 32           ID
 33           ID   ANALYSIS PERFORMED BY WOOD/PATEL; MW;        07/18/00  FILE: S24CE42.DAT
 34           ID
 35           ID   DDM MCUHP1 SPOOK HILL AMDP
              *DIAGRAM
 36           IT       2                  1500
 37           IO       3
 38           IN      15
 39           JD    3.81    0.01
 40           PC    .000    .002    .005    .008    .011    .014    .017    .020    .023    .026
 41           PC    .029    .032    .035    .038    .041    .044    .048    .052    .056    .060
 42           PC    .064    .068    .072    .076    .080    .085    .090    .095    .100    .105
 43           PC    .110    .115    .120    .126    .133    .140    .147    .155    .163    .172
 44           PC    .181    .191    .203    .218    .236    .257    .283    .387    .663    .707
 45           PC    .735    .758    .776    .791    .804    .815    .825    .834    .842    .849
 46           PC    .856    .863    .869    .875    .881    .887    .893    .898    .903    .908
 47           PC    .913    .918    .922    .926    .930    .934    .938    .942    .946    .950
 48           PC    .953    .956    .959    .962    .965    .968    .971    .974    .977    .980
 49           PC    .983    .986    .989    .992    .995    .998   1.000
 50           JD    3.58   10.00
 51           JD    3.43   30.00
 52           JD    3.28   60.00
 53           JD    3.22   90.00
 54           JD    3.18  120.00
1                                          HEC-1 INPUT                                                    PAGE  2

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

 55           JD    3.14  150.00
 56           JD    3.05  300.00
 57           JD    2.97  500.00
              * DDM   ***** Updated *****

 58           KK      10
 59           KM   SUB-BASIN 10
 60           KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 61           KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
 62           KM     L = 2.00  Kb = .044  Adj. Slope =  165.0
 63           BA    .702
 64           LG    .350    .320   7.600    .090  15.000
 65           UC    .421    .302
 66           UA       0       3       5       8      12      20      43      75      90      96
 67           UA     100
              * DDM   ***** Preserved *****
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 68          KK     R10
 69          KM   ROUTING OF FLOW FROM SUB-BASIN 10 TO R12
 70          RS       4    FLOW      -1
 71          RC    .045     .03    .045    8700     .021
 72          RX       0       1       2      17       27      42      43      44
 73          RY       5       5       5       0        0       5       5       5
             * DDM   ***** Preserved *****

 74          KK     R12
 75          KM   ROUTING OF FLOW FROM R12 TO SUB-BASIN 20
 76          RS       6    FLOW      -1
 77          RC    .045     .03    .045    4500      .01
 78          RX       0       1      30    37.5    57.5      65      94      95
 79          RY       3     2.5     2.5       0       0     2.5     2.5       3
             * DDM   ***** Updated *****

 80          KK      20
 81          KM   SUB-BASIN 20
 82          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 83          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
 84          KM     L = 2.50  Kb = .041  Adj. Slope =   88.0
 85          BA   1.120
 86          LG    .350    .390   5.800    .190   1.000
 87          UC    .658    .454
 88          UA       0       3       5       8      12      20      43      75      90      96
 89          UA     100
             * DDM   ***** Preserved *****

 90          KK     C20
 91          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 10 AND 20
 92          HC       2
             * DDM   ***** Updated *****
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1 HEC-1 INPUT PAGE 3

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

 93          KK      40
 94          KM   SUB-BASIN 40
 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  .987
 97          KM     L = 3.08  Kb = .036  Adj. Slope =  189.0
 98          BA   2.233
 99          LG    .340    .340   4.900    .280   5.000
100          UC    .496    .264
101          UA       0       3       5       8      12      20      43      75      90      96
102          UA     100
             * DDM   ***** Updated *****

103          KK      60
104          KM   SUB-BASIN 60
105          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
106          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .990
107          KM     L = 4.19  Kb = .038  Adj. Slope =  209.6
108          BA   1.746
109          LG    .330    .350   5.800    .190   9.000
110          UC    .596    .477
111          UA       0       3       5       8      12      20      43      75      90      96
112          UA     100
             * DDM   ***** Preserved *****

113          KK     60C
114          KM   HYDROGRAPH COMBINATION FOR APACHE JUNCTION FRS
             *      I       2
115          HC       3
             * DDM   ***** Preserved *****

116          KK    SR60
117          KM   APACHE JUNCTION FRS AS-BUILT PLANS 12/19/88
118          KM   OUTLET PIPE=30"RCP; L=136.6'; INLET INV.=1783.5; OUTLET INV.=1783
119          KM   EMERGENCY SPILLWAY ELEV.=1799.77'; PRINCIPLE SPILLWAY ELEV.=1793.5'
120          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 100 ACRE-FEET
121          RS       1    STOR       0
122          SV       0       1     100     200     300     400
123          SQ       0      71      81      87    91.5      94
124          SE    83.5    93.5      96    97.7      99   99.77
             * DDM   ***** Preserved *****

125          KK     R60
126          KM        ROUTE FLOW THROUGH BULLDOG FLOODWAY FROM APACHE JUNCTION FRS
127          RS       1    FLOW      -1
128          RC    .016    .016    .016    2850     .012
129          RX       0       1       2     2.1      5.6     5.7       6       7
130          RY     3.5     3.5     3.5       0        0     3.5     3.5     3.5
             * DDM   ***** Preserved *****
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1 HEC-1 INPUT PAGE 4

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

131          KK    RR60
132          KM   ROUTE FLOW FROM BULLDOG FLOODWAY TO SUB-BASIN 80
133          RS       4    FLOW      -1
134          RC    .016    .016    .016    3500     .005
135          RX       0       1       2     2.1      7.1     7.2       8       9
136          RY     3.5     3.5     3.5       0        0     3.5     3.5     3.5
             * DDM   ***** Updated *****

137          KK      80
138          KM   SUB-BASIN 80
139          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
140          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .991
141          KM     L = 2.69  Kb = .039  Adj. Slope =  229.8
142          BA   1.475
143          LG    .330    .330   5.600    .210   4.000
144          UC    .433    .259
145          UA       0       3       5       8      12      20      43      75      90      96
146          UA     100
             * DDM   ***** Preserved *****

147          KK     80C
148          KM   HYDROGRAPH COMBINATION FOR FLOW FROM APACHE JUNCTION FRS & SUB-BASIN 80
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149          HC       2   1.475
             * DDM   ***** Preserved *****

150          KK     R80
151          KM   ROUTE FLOW FROM SUB-BASIN 80 TO SUB-BASIN 100
152          RS       1    FLOW      -1
153          RC    .025    .016    .025    1200    .003
154          RX       0       2       6     6.1    41.1    41.2    56.2    58.2
155          RY     5.5     4.5     4.5       0       0     4.5     4.5     5.5
             * DDM   ***** Updated *****

156          KK     100
157          KM   SUB-BASIN 100
158          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
159          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
160          KM     L = 1.94  Kb = .046  Adj. Slope =  108.0
161          BA    .484
162          LG    .320    .290   5.100    .260   3.000
163          UC    .533    .473
164          UA       0       5      16      30      65      77      84      90      94      97
165          UA     100
             * DDM   ***** Preserved *****

166          KK    100C
167          KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 80 & 100
168          HC       2
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE  5

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

169          KK    R100
170          KM   ROUTE FLOW FROM SUB-BASIN 100 TO SUB-BASIN 120
171          RS       1    FLOW      -1
172          RC    .016    .016    .016     940    .005
173          RX       0       1       2     2.1    52.1    52.2      53      54
174          RY     4.5     4.5     4.5       0       0     4.5     4.5     4.5
             * DDM   ***** Updated *****

175          KK     120
176          KM   SUB-BASIN 120
177          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
178          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
179          KM     L = 3.07  Kb = .037  Adj. Slope =  239.0
180          BA   2.202
181          LG    .330    .280   6.800    .130  11.000
182          UC    .429    .226
183          UA       0       3       5       8      12      20      43      75      90      96
184          UA     100
             * DDM   ***** Preserved *****

185          KK    120C
186          KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 100 & 120
187          HC       2
             * DDM   ***** Preserved *****

188          KK    R120
189          KM   ROUTE FLOW FROM SUB-BASIN 120 TO SIGNAL BUTTE FRS
190          RS       1    FLOW      -1
191          RC    .025    .016    .025    2100    .005
192          RX       0       6      10    10.1    60.1    60.2    74.2    80.2
193          RY       8       5       5       0       0       5       5       8
             * DDM   ***** Updated *****

194          KK     140
195          KM   SUB-BASIN 140
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  .996
198          KM     L = 1.61  Kb = .044  Adj. Slope =  149.0
199          BA    .598
200          LG    .310    .280   4.200    .440   5.000
201          UC    .421    .278
202          UA       0       5      16      30      65      77      84      90      94      97
203          UA     100
             * DDM   ***** Updated *****

204          KK     150
205          KM   SUB-BASIN 150
206          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
207          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
208          KM     L = 1.50  Kb = .047  Adj. Slope =  314.6
209          BA    .408
210          LG    .350    .360   5.100    .260   7.000
211          UC    .296    .221
212          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

213          UA     100
             * DDM   ***** Preserved *****

214          KK    R150
215          KM   ROUTING OF FLOW FROM SUB-BASIN 150 TO R152
216          RS       2    FLOW      -1
217          RC    .045     .04    .045    3100    .032
218          RX       0       1       2      23      33      54      55      56
219          RY       7       7       7       0       0       7       7       7
             * DDM   ***** Preserved *****

220          KK    R152
221          KM   ROUTING OF FLOW FROM R152 TO SUB-BASIN 160
222          RS       4    FLOW      -1
223          RC    .045     .03    .045    5900    .019
224          RX       0       1       2       8      33      39      40      41
225          RY       2       2       2       0       0       2       2       2
             * DDM   ***** Updated *****

226          KK     160
227          KM   SUB-BASIN 160
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  .998
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230          KM     L = 2.10  Kb = .047  Adj. Slope =  129.0
231          BA    .369
232          LG    .340    .330   4.150    .440   1.000
233          UC    .587    .655
234          UA       0       3       5       8      12      20      43      75      90      96
235          UA     100
             * DDM   ***** Updated *****

236          KK     180
237          KM   SUB-BASIN 180
238          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
239          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
240          KM     L = 2.42  Kb = .041  Adj. Slope =  140.0
241          BA   1.000
242          LG    .350    .350   4.150    .430    .000
243          UC    .571    .403
244          UA       0       3       5       8      12      20      43      75      90      96
245          UA     100
             * DDM   ***** Preserved *****

246          KK    180C
247          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
248          HC       5
             * ******************************************************************************
             * ******************************************************************************
             * ******THIS MARKS THE BEGINNING OF THE PASS MOUNTAIN PORTION OF THIS
             * ******COMBINATION OPTION MODEL
             * ******************************************************************************
             * ******************************************************************************
             * DDM   ***** Updated *****
1                                        HEC-1 INPUT                                          PAGE  7

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

249          KK     383
250          KM   SUB-BASIN 383
251          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
252          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
253          KM     L = 1.49  Kb = .047  Adj. Slope =  315.0
254          BA    .420
255          LG    .350    .400   6.000    .170  16.000
256          UC    .287    .209
257          UA       0       3       5       8      12      20      43      75      90      96
258          UA     100
             * DDM   ***** Preserved *****

259          KK    R383
260          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
261          KM   ROUTING OF FLOW FROM SUB-BASIN 383 TO SUB-BASIN 393
262          KM   OVERBANK MANNINGS INCREASED TO ACCOUNT FOR SKEWED FLOW TO NATURAL
263          KM   WATERCOURSE FLOW PATH
264          RS       2    FLOW      -1
265          RC     .07     .03     .07    1115    .045
266          RX       0       1       3       9      39      45      46      47
267          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

268          KK     393
269          KM   SUB-BASIN 393
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 1.000
272          KM     L =  .61  Kb = .061  Adj. Slope =  246.2
273          BA    .040
274          LG    .350    .350   4.200    .420    .000
275          UC    .233    .310
276          UA       0       3       5       8      12      20      43      75      90      96
277          UA     100
             * DDM   ***** Preserved *****

278          KK    393C
279          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 383 & 393
280          HC       2
             * DDM   ***** Preserved *****

281          KK    R393
282          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
283          KM   ROUTING OF FLOW FROM SUB-BASIN 393 TO SUB-BASIN 365
284          RS       1    FLOW      -1
285          RC    .055     .03    .055    1115    .045
286          RX       0       1       3       9      39      45      46      47
287          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****
1                                        HEC-1 INPUT                                          PAGE  8

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

288          KK     365
289          KM   SUB-BASIN 365
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  .998
292          KM     L = 2.20  Kb = .047  Adj. Slope =  299.5
293          BA    .415
294          LG    .350    .350   4.600    .330   4.000
295          UC    .400    .415
296          UA       0       3       5       8      12      20      43      75      90      96
297          UA     100
             * DDM   ***** Preserved *****

298          KK    365C
299          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 393 & 365
300          HC       2
             * DDM   ***** Preserved *****

301          KK    R365
302          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
303          KM   ROUTING OF FLOW FROM SUB-BASIN 365 TO ROUTING 365R
304          RS       2    FLOW      -1
305          RC    .045     .03    .045    1000    .025
306          RX       0       1      50      56      76      82     131     132
307          RY     2.5       2       2       0       0       2       2     2.5
             * DDM   ***** Preserved *****
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308          KK    365R
309          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
310          KM   ROUTING OF FLOW FROM 365R TO SUB-BASIN 353
311          KM   OVERBANK MANNINGS INCREASED TO ACCOUNT FOR SKEWED FLOW TO NATURAL
312          KM   WATERCOURSE FLOW PATH
313          RS       3    FLOW      -1
314          RC     .07     .03     .07    1300    .008
315          RX       0       3       5      11      41      47     147     247
316          RY       3     2.5       2       0       0       2     2.5       3
             * DDM   ***** Updated *****

317          KK     353
318          KM   SUB-BASIN 353
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 = 2.50  Kb = .046  Adj. Slope =  297.9
322          BA    .502
323          LG    .350    .350   4.350    .380   1.000
324          UC    .442    .460
325          UA       0       3       5       8      12      20      43      75      90      96
326          UA     100
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE  9

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

327          KK    353C
328          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 365 & 353
329          HC       2
             * DDM   ***** Preserved *****

330          KK    R353
331          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
332          KM   ROUTING OF FLOW FROM SUB-BASIN 353 TO ROUTING 353R
333          KM   OVERBANK MANNINGS INCREASED TO ACCOUNT FOR SKEWED FLOW TO NATURAL
334          KM   WATERCOURSE FLOW PATH
335          RS       2    FLOW      -1
336          RC     .07     .03     .07    1100    .009
337          RX       0       3       5      11      41      47     172     302
338          RY     3.5     2.5       2       0       0       2     2.5     3.5
             * DDM   ***** Preserved *****

339          KK    353R
340          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
341          KM   ROUTING OF FLOW FROM 353R TO SUB-BASIN 310
342          RS       1    FLOW      -1
343          RC    .045     .03    .045    1692     .03
344          RX       0       1      25      31      51      57      81      82
345          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

346          KK     350
347          KM   SUB-BASIN 350
348          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
349          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
350          KM     L = 2.22  Kb = .042  Adj. Slope =  311.0
351          BA    .935
352          LG    .350    .350   4.600    .330   5.000
353          UC    .367    .239
354          UA       0       3       5       8      12      20      43      75      90      96
355          UA     100
             * DDM   ***** Preserved *****

356          KK    350R
357          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
358          KM   SUB-BASIN 350 HAS A SPLIT FLOW; HOWEVER BECAUSE OF THE PASS MTN. DIVERSION
359          KM   EXTENSION IN THIS OPTION ALL OF THE FLOW SPLIT OR OTHERWISE IS ROUTED TO THE
360          KM   SIGNAL BUTTE FRS.  SO, FOR SIMPLICITY SUB-BASIN 350 IS MODELED WITHOUT
361          KM   THE SPLIT FLOW.
362          RS       8    FLOW      -1
363          RC    .045    .035    .045    7650    .025
364          RX       0       1      50      56      86      92     141     142
365          RY       3       2       2       0       0       2       2       3
             *      1       2
             * DDM   ***** Updated *****
1                                        HEC-1 INPUT                                          PAGE 10

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

366          KK     310
367          KM   SUB-BASIN 310
368          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
369          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
370          KM     L = 2.70  Kb = .045  Adj. Slope =  283.5
371          BA    .555
372          LG    .350    .350   3.910    .480    .000
373          UC    .483    .511
374          UA       0       3       5       8      12      20      43      75      90      96
375          UA     100
             * DDM   ***** Preserved *****

376          KK    C310
377          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 350 & 310
378          HC       3
             * DDM   ***** Preserved *****

379          KK    R310
380          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
381          KM   ROUTING OF FLOW FROM SUB-BASIN 310 TO 320
382          RS       6    FLOW      -1
383          RC    .045    .035    .045   10050    .022
384          RX       0       1      40      46      61      67     106     107
385          RY       4       2       2       0       0       2       2       4
             * DDM   ***** Preserved *****

386          KK    R312
387          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
388          KM   ROUTING OF FLOW FROM R312 TO SUB-BASIN 295
389          KM   OVERBANK MANNINGS INCREASED TO ACCOUNT FOR SKEWED FLOW TO NATURAL
390          KM   WATERCOURSE FLOW PATH
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391          RS       3    FLOW      -1
392          RC     .07     .03     .07    2100    .0124
393          RX       0       3       5      11      61      67     200     395
394          RY       4     2.5       2       0       0       2     2.5       4
             * DDM   ***** Updated *****

395          KK     295
396          KM   SUB-BASIN 295
397          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
398          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
399          KM     L = 1.60  Kb = .047  Adj. Slope =  131.0
400          BA    .380
401          LG    .350    .350   4.900    .280    .000
402          UC    .450    .386
403          UA       0       3       5       8      12      20      43      75      90      96
404          UA     100
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 11

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

405          KK    295C
406          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 310 & 295
407          HC       2
             * DDM   ***** Preserved *****

408          KK    295R
409          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
410          KM   ROUTING OF FLOW FROM SUB-BASIN 295 TO BEGINNING OF PASS MTN. DIVERSION.
411          KM   OVERBANK MANNINGS INCREASED TO ACCOUNT FOR SKEWED FLOW TO NATURAL
412          KM   WATERCOURSE FLOW PATH
413          RS       2    FLOW      -1
414          RC     .07     .03     .07    1100    .013
415          RX       0       3       5      11      51      57     200     400
416          RY       4     2.5       2       0       0       2     2.5       4
             * DDM   ***** Updated *****

417          KK     210
418          KM   SUB-BASIN 210
419          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
420          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
421          KM     L = 1.84  Kb = .045  Adj. Slope =  315.0
422          BA    .583
423          LG    .350    .350   7.000    .120   5.000
424          UC    .321    .232
425          UA       0       3       5       8      12      20      43      75      90      96
426          UA     100
             * DDM   ***** Preserved *****

427          KK    R210
428          KM   ROUTING OF FLOW FROM SUB-BASIN 210 TO SUB-BASIN 220
429          RS       2    FLOW      -1
430          RC    .045     .03    .045    5100    .022
431          RX       0       1       2      14      34      46      47      48
432          RY       4       4       4       0       0       4       4       4
             * DDM   ***** Updated *****

433          KK     240
434          KM   SUB-BASIN 240
435          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
436          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .992
437          KM     L = 3.50  Kb = .039  Adj. Slope =  298.6
438          BA   1.398
439          LG    .350    .370   5.200    .240   2.000
440          UC    .471    .361
441          UA       0       3       5       8      12      20      43      75      90      96
442          UA     100
             * DDM   ***** Preserved *****

443          KK    240C
444          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
445          HC       3
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 12

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

446          KK   SR240
447          KM   DIGITAL MAPPING SHOWS SEDIMENTATION.  FOR SIMPLICITY NO ADDITIONAL
448          KM   SEDIMENTATION WILL BE CONSIDERED FOR STORAGE ROUTING ANALYSIS. 5/11/00
449          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
450          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
451          RS       1    STOR       0
452          SA    1.38    14.2    36.5
453          SE       0       5      11
454          SS       5      42       3     1.5
             * DDM   ***** Updated *****

455          KK     220
456          KM   SUB-BASIN 220
457          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
458          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
459          KM     L = 1.92  Kb = .043  Adj. Slope =  315.0
460          BA    .725
461          LG    .350    .350   7.000    .120   4.000
462          UC    .317    .209
463          UA       0       3       5       8      12      20      43      75      90      96
464          UA     100
             * DDM   ***** Preserved *****

465          KK    220C
466          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
467          HC       2
             * DDM   ***** Preserved *****

468          KK   SR220
469          KM   DIGITAL MAPPING SHOWS SEDIMENTATION.  FOR SIMPLICITY NO ADDITIONAL
470          KM   SEDIMENTATION WILL BE CONSIDERED FOR STORAGE ROUTING ANALYSIS. 5/11/00
471          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
472          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
473          RS       1    STOR       0
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474          SA     .78     4.1    13.7
475          SE       0       3      10
476          SS       3      65       3     1.5
             * DDM   ***** Updated *****

477          KK     190
478          KM   SUB-BASIN 190
479          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
480          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
481          KM     L = 1.91  Kb = .042  Adj. Slope =  315.0
482          BA    .918
483          LG    .350    .390   5.800    .190   8.000
484          UC    .321    .185
485          UA       0       3       5       8      12      20      43      75      90      96
486          UA     100
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 13

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

487          KK    R190
488          KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
489          RS       2    FLOW      -1
490          RC    .045     .03    .045    4740     .03
491          RX       0       1       2      17      37      52      53      54
492          RY       5       5       5       0       0       5       5       5
             * DDM   ***** Preserved *****

493          KK    R192
494          KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
495          RS       2    FLOW      -1
496          RC    .045    .035    .045    2200    .018
497          RX       0       1      50      59      79      88     137     138
498          RY     3.5       3       3       0       0       3       3     3.5
             * DDM   ***** Updated *****

499          KK     200
500          KM   SUB-BASIN 200
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  .997
503          KM     L = 1.58  Kb = .045  Adj. Slope =  305.6
504          BA    .535
505          LG    .350    .390   5.700    .200  10.000
506          UC    .300    .200
507          UA       0       3       5       8      12      20      43      75      90      96
508          UA     100
             * DDM   ***** Preserved *****

509          KK    200C
510          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 220 & 200
511          HC       3
             * DDM   ***** Preserved *****

512          KK   SR200
513          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
514          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
515          RS       1    STOR       0
516          SA    2.56     3.1     9.4
517          SE       0       3      10
518          SS       3     112       3     1.5
             * DDM   ***** Preserved *****

519          KK   200SR
520          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
521          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
             *      1       2
522          RS       1    STOR       0
523          SA       8     9.2     9.2
524          SE       0       7      10
525          SS       7     251       3     1.5
526          KM   ******************************************************************
527          KM   ************* END OF PASS MOUNTAIN ALTERNATIVE UPDATE. **************
528          KM
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 14

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

529          KK    C180
530          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
             *      1       2
531          HC       2
             * DDM   ***** Preserved *****

532          KK   SR180
533          KM   SIGNAL BUTTE FRS DATED 1/28/85
534          KM   OUTLET PIPE=36"RCP; L= 147';  INLET INV.=1690; OUTLET INV.=1687
535          KM   EMERGENCY SPILLWAY ELEV.=1712.4; PRINCIPLE SPILLWAY ELEV.=1701
536          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 250 ACRE-FEET
537          RS       1    STOR       0
538          SV       0       1     250     500     750    1060
539          SQ       0   106.5   125.5   137.5     146     160
540          SE      90     101   104.5     107     109   112.4
             * DDM   ***** Preserved *****

541          KK    R180
542          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
543          KM   ROUTE FLOW FROM SIGNAL BUTTE FRS TO SUB-BASIN 260
544          RS       2    FLOW      -1
545          RC    .035    .025    .035    1500    .003
546          RX       0       1       2    22.6    38.6    59.2      60      61
547          RY     9.3     9.3     9.3       0       0     9.3     9.3     9.3
             * DDM   ***** Updated *****

548          KK     260
549          KM   SUB-BASIN 260
550          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
551          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
552          KM     L =  .81  Kb = .049  Adj. Slope =   68.0
553          BA    .267
554          LG    .300    .170   6.800    .160  15.000
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555          UC    .363    .215
556          UA       0       5      16      30      65      77      84      90      94      97
557          UA     100
             * DDM   ***** Preserved *****

558          KK    260C
559          KM   HYDROGRAPH COMBINATION FOR OUTFLOW OF SIGNAL BUTTE FRS & SUB-BASIN 260
560          HC       2    .267
             * DDM   ***** Preserved *****

561          KK    R260
562          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
563          KM   ROUTE FLOW FROM SUB-BASIN 260 TO SUB-BASIN 280
564          RS       3    FLOW      -1
565          RC    .035    .025    .035    2300    .003
566          RX       0       1       2    23.4    43.4    64.8      65      66
567          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

568          KK     280
569          KM   SUB-BASIN 280
570          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
571          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
572          KM     L =  .77  Kb = .049  Adj. Slope =   84.0
573          BA    .304
574          LG    .300    .250   5.300    .290  15.000
575          UC    .333    .175
576          UA       0       5      16      30      65      77      84      90      94      97
577          UA     100
             * DDM   ***** Preserved *****

578          KK    280C
579          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 260 & SUB-BASIN 280
580          HC       2
             * DDM   ***** Preserved *****

581          KK    R280
582          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
583          KM   ROUTE FLOW FROM SUB-BASIN 280 TO SUB-BASIN 300
584          RS       2    FLOW      -1
585          RC    .035    .025    .035    2500    .003
586          RX       0       1       2    23.4    43.4    64.8      65      66
587          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Updated *****

588          KK     300
589          KM   SUB-BASIN 300
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  .998
592          KM     L =  .80  Kb = .049  Adj. Slope =  100.0
593          BA    .297
594          LG    .320    .280   4.200    .480  11.000
595          UC    .333    .183
596          UA       0       5      16      30      65      77      84      90      94      97
597          UA     100
             * DDM   ***** Preserved *****

598          KK    C300
599          KM   HYDROGRAPH COMBINATION OF DIVERTED FLOW
600          HC       2
             * DDM   ***** Preserved *****

601          KK    D300
602          KM   DIVERT FLOW INTO OFFLINE BASIN AT SIGNAL BUTTE FLOODWAY TO BE COMBINED
603          KM   LATER WITH BASIN 305 AT END OF SIGNAL BUTTE FLOODWAY
604          DT   DIV300
605          DI       0     300    5000
606          DQ       0       0    4700
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 16

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

607          KK   RTDIV300
608          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
609          DR   DIV300
             * DDM   ***** Preserved *****

610          KK   SRDIV300
611          KM   RETRIEVE FLOW INTO BASIN AND BLEED OFF WITHIN 36 HOURS
612          KM
613          RS       1    STOR       0
614          SV       0      60
615          SE       0      12
616          SQ       0     300
             * DDM   ***** Preserved *****

617          KK    300C
618          KM   HYDROGRAPH COMBINATION OF DIVERTED FLOW
619          HC       2
             * DDM   ***** Updated *****

620          KK     305
621          KM   SUB-BASIN 305
622          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
623          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
624          KM     L = 1.20  Kb = .047  Adj. Slope =   92.0
625          BA    .377
626          LG    .340    .330   4.450    .380   8.000
627          UC    .438    .298
628          UA       0       3       5       8      12      20      43      75      90      96
629          UA     100
             * DDM   ***** Preserved *****

630          KK    D305
631          KM   DIVERT FLOW INTO OFFLINE BASIN TO BE COMBINED LATER WITH PASS MOUNTAIN
632          KM   DIVERSION FLOW AT END OF SIGNAL BUTTE FLOODWAY
633          DT    305D
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634          DI       0    1000
635          DQ       0    1000
             * DDM   ***** Preserved *****

636          KK   RT305D
637          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
638          DR    305D
             * DDM   ***** Preserved *****

639          KK   SR305D
640          KM   RETRIEVE FLOW INTO BASIN AND BLEED OFF WITHIN 36 HOURS
641          KM
642          RS       1    STOR       0
643          SV       0      25
644          SE       0       6
645          SQ       0     100
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                                    PAGE 17

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

646          KK    305C
647          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 280 & 300
648          HC       3
             * DDM   ***** Preserved *****

649          KK    R305
650          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
651          KM   ROUTE FLOW FROM SUB-BASIN 300 TO START OF FLOODWAY CONCRETE CHANNEL
652          RS       2    FLOW      -1
653          RC    .035    .025    .035    2200    .003
654          RX       0       1       2    23.4    55.4    76.8      77      78
655          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Preserved *****

656          KK   RR305
657          KM   CHANNEL GEOMETRY FOR SPOOK HILL FRS OBTAINED FROM AS-BUILTS PLANS.
658          KM   CONTINUE TO ROUTE FLOW WITHIN CONCRETE CHANNEL TO SPOOK HILL FRS
659          RS       1    FLOW      -1
660          RC    .016    .016    .016    6050   .0146
661          RX       0       1       2     2.1    16.1    16.2      17      18
662          RY     7.5     7.5     7.5       0       0     7.5     7.5     7.5
             * DDM   ***** Updated *****

663          KK     320
664          KM   SUB-BASIN 320
665          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
666          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .995
667          KM     L = 1.60  Kb = .042  Adj. Slope =  106.0
668          BA    .870
669          LG    .310    .290   4.500    .380  15.000
670          UC    .450    .240
671          UA       0       5      16      30      65      77      84      90      94      97
672          UA     100
             * DDM   ***** Preserved *****

673          KK    D320
674          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
675          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
676          KM   SIERRA HEIGHTS       FALCON RIDGE    & MARBLE CREEK
677          KM        MAXIMUM VOLUME DIVERSION = 12.27acre-feet
             *      1
678          DT   BS320   12.27
679          DI       0   10000
680          DQ       0   10000
             * DDM   ***** Preserved *****

681          KK   RT320
682          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
683          DR   BS320
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                                    PAGE 18

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

684          KK   SR320
685          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
686          KM   12.27 ACRE-FEETx43560/36x3600=4.1cfs
             *      1
687          RS       1    STOR       0
688          SV       0     .01    12.3
689          SQ       0     4.2     4.2
             * DDM   ***** Preserved *****

690          KK    C320
691          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
692          HC       3
             *
             * BEGINNING OF MCKELLIPS TWO DETENTION BASIN OPTION WITH DETENTION BASINS
             * LOCATED AT INTERSECTION OF MCKELLIPS & HAWES; AND MCKELLIPS & ELLSWORTH
             *
             *
             * DDM   ***** Updated *****

693          KK     340
694          KM   SUB-BASIN 340
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  .994
697          KM     L = 1.78  Kb = .047  Adj. Slope =   99.0
698          BA   1.024
699          LG    .250    .250   4.250    .520  25.000
700          UC    .546    .296
701          UA       0       5      16      30      65      77      84      90      94      97
702          UA     100
             * DDM   ***** Preserved *****

703          KK    D340
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 =39.2 acre feet
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                *      1
708             DT   BS340    39.2
709             DI       0   10000
710             DQ       0   10000
                * DDM   ***** Preserved *****

711             KK   RT340
712             KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
713             DR   BS340
                * DDM   ***** Preserved *****

714             KK   SR340
715             KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
716             KM    39.2 ACRE-FEETx43560\36x3600=13.2cfs
                *      1
717             RS       1    STOR       0
718             SV       0     .01    39.2
719             SQ       0    13.2    13.2
                * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                                    PAGE 19

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


720             KK    C340
721             KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
722             HC       3
                * DDM   ***** Updated *****

723             KK     360
724             KM   SUB-BASIN 360
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  .998
727             KM     L = 1.21  Kb = .062  Adj. Slope =  104.0
728             BA    .315
729             LG    .220    .250   4.100    .640  29.000
730             UC    .504    .389
731             UA       0       5      16      30      65      77      84      90      94      97
732             UA     100
                * DDM   ***** Preserved *****

733             KK    D360
734             KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
735             KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
736             KM        MAXIMUM VOLUME DIVERSION = 15.7 acre-feet
                *      1
737             DT   BS360    15.7
738             DI       0   10000
739             DQ       0   10000
                * DDM   ***** Preserved *****

740             KK   RT360
741             KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
742             DR   BS360
                * DDM   ***** Preserved *****

743             KK   SR360
744             KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
745             KM    15.7 ACRE-FEETx43560/36x3600=5.3 cfs
746             RS       1    STOR       0
747             SV       0     .01    15.7
748             SQ       0     5.3     5.3
                * DDM   ***** Preserved *****

749             KK    360C
750             KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
751             HC       3
                * DDM   ***** Updated *****

752             KK     380
753             KM   SUB-BASIN 380
754             KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
755             KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
756             KM     L =  .67  Kb = .077  Adj. Slope =  119.0
757             BA    .268
758             LG    .180    .250   4.100    .710  19.000
759             UC    .387    .199
760             UA       0       5      16      30      65      77      84      90      94      97
1                                          HEC-1 INPUT                                                    PAGE 20

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

761             UA     100
                * DDM   ***** Preserved *****

762             KK    D380
763             KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
764             KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
765             KM        MAXIMUM VOLUME DIVERSION  = 7.1 acre-feet
                *      1
766             DT   BS380     7.1
767             DI       0   10000
768             DQ       0   10000
                * DDM   ***** Preserved *****

769             KK   RT380
770             KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
771             DR   BS380
                * DDM   ***** Preserved *****

772             KK   SR380
773             KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
774             KM    7.1  ACRE-FEETx43560\36x3600=2.4 cfs
775             RS       1    STOR       0
776             SV       0     .01     7.1
777             SQ       0     2.4     2.4
                * DDM   ***** Preserved *****

778             KK    380C
779             KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
780             HC       3
                * DDM   ***** Updated *****
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781          KK     400
782          KM   SUB-BASIN 400
783          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
784          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
785          KM     L =  .30  Kb = .112  Adj. Slope =  107.0
786          BA    .051
787          LG    .200    .250   4.000    .740    .000
788          UC    .321    .218
789          UA       0       5      16      30      65      77      84      90      94      97
790          UA     100
             * DDM   ***** Preserved *****

791          KK    D400
792          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
793          KM   DETENTION/RETENTION BASIN LOCATED WITHIN SAGUARO VISTA SUBDIVISION
794          KM        MAXIMUM VOLUME DIVERSION = 1.6 ACRE-FEET
             *      1
795          DT   BS400     1.6
796          DI       0   10000
797          DQ       0   10000
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 21

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

798          KK   RT400
799          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
800          DR   BS400
             * DDM   ***** Preserved *****

801          KK   SR400
802          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
803          KM     1.6 ACRE-FEETx43560/36x3600 = 0.5 cfs
804          RS       1    STOR       0
805          SV       0     .01     1.6
806          SQ       0     0.5     0.5
             * DDM   ***** Preserved *****

807          KK    C400
808          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
809          HC       2
             * DDM   ***** Preserved *****

810          KK    400C
811          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
812          HC       2
             * DDM   ***** Updated *****

813          KK     355
814          KM   SUB-BASIN 355
815          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
816          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
817          KM     L =  .80  Kb = .052  Adj. Slope =  125.0
818          BA    .174
819          LG    .320    .300   4.550    .360  12.000
820          UC    .308    .227
821          UA       0       5      16      30      65      77      84      90      94      97
822          UA     100
             * DDM   ***** Preserved *****

823          KK    R355
824          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
825          KM   ROUTING OF FLOW FROM SUB-BASIN 355 TO SUB-BASIN 361
826          RS       5    FLOW      -1
827          RC    .045    .035    .045    5868   0.021
828          RX       0       1      40      46      56      62     102     103
829          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

830          KK     361
831          KM   SUB-BASIN 361
832          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
833          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
834          KM     L = 1.03  Kb = .046  Adj. Slope =  142.0
835          BA    .369
836          LG    .270    .260   4.150    .530  24.000
837          UC    .321    .189
838          UA       0       5      16      30      65      77      84      90      94      97
839          UA     100
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 22

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

840          KK    D361
841          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
842          KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
843          KM        MAXIMUM VOLUME DIVERSION = 12.9 acre-feet
             *      1
844          DT   BS361    12.9
845          DI       0   10000
846          DQ       0   10000
             * DDM   ***** Preserved *****

847          KK   RT361
848          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
849          DR   BS361
             * DDM   ***** Preserved *****

850          KK   SR361
851          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
852          KM    12.9 ACRE-FEETx43560/36x3600=4.3 cfs
853          RS       1    STOR       0
854          SV       0     .01    12.9
855          SQ       0     4.3     4.3
             * DDM   ***** Preserved *****

856          KK    361C
857          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
858          HC       3
             * DDM   ***** Updated *****
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859          KK     342
860          KM   SUB-BASIN 342
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  .998
863          KM     L = 1.01  Kb = .048  Adj. Slope =  213.1
864          BA    .298
865          LG    .310    .280   3.950    .530  16.000
866          UC    .279    .180
867          UA       0       5      16      30      65      77      84      90      94      97
868          UA     100
             *
             * DDM   ***** Preserved *****

869          KK   D3421
870          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
871          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
872          KM   GRANDVIEW ESTATES    BOULDER MOUNTAIN & 33% OF MESA HIGHLANDS
873          KM        MAXIMUM VOLUME DIVERSION  =8.4 Acre feet
             *       1
874          DT  BS3421     8.4
875          DI       0   10000
876          DQ       0   10000
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

877          KK  RT3421
878          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
879          DR  BS3421
             * DDM   ***** Preserved *****

880          KK  SR3421
881          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
882          KM     8.4 ACRE-FEETx43560\36x3600=2.8 cfs
             *      1
883          RS       1    STOR       0
884          SV       0     .01     8.4
885          SQ       0     2.8     2.8
             * DDM   ***** Preserved *****

886          KK    C342
887          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
888          HC       2
             *
             * DDM   ***** Preserved *****

889          KK   D3422
890          KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN AT NE CORNER OF ELLSWORTH
891          KM   AND  McKELLIPS ROAD
892          KM   MAXIMUM VOLUME OF DIVERSION IS 15 ACRE FEET
893          DT  BS3422      15
894          DI       0   10000
895          DQ       0   10000
             *
             * DDM   ***** Preserved *****

896          KK  RT3422
897          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
898          DR  BS3422
             *
             * DDM   ***** Preserved *****

899          KK  SR3422
900          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS
901          KM     15 ACRE-FEETx43560/36x3600 =5.0 cfs
902          RS       1    STOR       0
903          SV       0     .01      15
904          SQ       0     5.0     5.0
             *
             * DDM   ***** Preserved *****

905          KK   CC342
906          KM   HYDROGRAPH COMBINATION AT McKELLIPS RD CHANNEL
907          HC       2
             *
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

908          KK    R342
909          KM   ROUTING OF FLOW FROM SUB-BASIN 342 TO 341
910          RS       9    FLOW      -1
911          RC    0.05    0.03    0.05    2198  0.0118
912          RX       0     0.1     0.2       4       9      13     213   213.1
913          RY     3.0     1.5     1.0       0       0     1.0     2.0     3.0
             *
             * DDM   ***** Updated *****

914          KK     341
915          KM   SUB-BASIN 341
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  .999
918          KM     L = 1.01  Kb = .048  Adj. Slope =  123.0
919          BA    .229
920          LG    .250    .250   3.910    .600  34.000
921          UC    .346    .266
922          UA       0       5      16      30      65      77      84      90      94      97
923          UA     100
             *
             * DDM   ***** Preserved *****

924          KK    D341
925          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
926          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
927          KM   GRANDVIEW ESTATES    BOULDER MOUNTAIN & 33% OF MESA HIGHLANDS
928          KM        MAXIMUM VOLUME DIVERSION  =8.4 Acre feet
             *
929          DT   BS341     8.4
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930          DI       0   10000
931          DQ       0   10000
             * DDM   ***** Preserved *****

932          KK   RT341
933          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
934          DR   BS341
             * DDM   ***** Preserved *****

935          KK   SR341
936          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
937          KM     8.4 ACRE-FEETx43560\36x3600=2.8 cfs
             *
938          RS       1    STOR       0
939          SV       0     .01     8.4
940          SQ       0     2.8     2.8
             * DDM   ***** Preserved *****

941          KK    C341
942          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
943          HC       3
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 25

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

944          KK   RR341
945          KM   ROUTING OF FLOW FROM SUB-BASIN 341 TO 361
946          KM   ARTIFICIALLY HIGH VALUE FOR NSTPS IS USED TO PRESERVE PEAK INFLOW
947          RS      15    FLOW      -1
948          RC   0.050   0.030   0.050    4143  0.0126
949          RX       0     0.1     0.2       4       9      13     213   213.1
950          RY     3.0     1.5     1.0       0       0     1.0     2.0     3.0
             * DDM   ***** Preserved *****

951          KK   361CC
952          KM   HYDROGRAPH COMBINATION AT McKELLIPS ROAD INTERCEPTOR CHANNEL
953          HC       2
             *
             * DDM   ***** Preserved *****

954          KK   D3612
955          KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN AT NE CORNER OF ELLSWORTH
956          KM   AND  McKELLIPS ROAD
957          KM   MAXIMUM VOLUME OF DIVERSION IS 50 ACRE FEET
958          DT  BS3612      50
959          DI       0   10000
960          DQ       0   10000
             *
             * DDM   ***** Preserved *****

961          KK  RT3612
962          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
963          DR  BS3612
             *
             * DDM   ***** Preserved *****

964          KK  SR3612
965          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS
966          KM    50.0 ACRE-FEETx43560/36x3600=16.8 cfs
967          RS       1    STOR       0
968          SV       0     .01      50
969          SQ       0    16.8    16.8
             *
             * DDM   ***** Preserved *****

970          KK   C3612
971          KM   HYDROGRAPH COMBINATION AT McKELLIPS RD CHANNEL
972          HC       2
             * DDM   ***** Preserved *****

973          KK   RR361
974          KM   ROUTING OF FLOW FROM SUB-BASIN 361 TO 381
975          RS       9    FLOW      -1
976          RC   0.050   0.030   0.050    3854  0.0156
977          RX       0     0.1     0.2       8      28      36     236   236.1
978          RY     3.5     2.5       2       0       0       2       3     3.5
             * DDM   ***** Updated *****
1                                    HEC-1 INPUT                                          PAGE 26

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

979          KK     381
980          KM   SUB-BASIN 381
981          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
982          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
983          KM     L = 1.65  Kb = .043  Adj. Slope =  119.0
984          BA    .726
985          LG    .310    .280   4.200    .490  13.000
986          UC    .463    .282
987          UA       0       5      16      30      65      77      84      90      94      97
988          UA     100
             * DDM   ***** Preserved *****

989          KK    D381
990          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
991          KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
992          KM        MAXIMUM VOLUME DIVERSION  =21.5 acre-feet
             *      1
993          DT   BS381    21.5
994          DI       0   10000
995          DQ       0   10000
             * DDM   ***** Preserved *****

996          KK   RT381
997          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
998          DR   BS381
             * DDM   ***** Preserved *****

999          KK   SR381
1000         KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
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1001          KM   21.5  ACRE-FEETx43560/36x3600=7.2 cfs
1002          RS       1    STOR       0
1003          SV       0     .01    21.5
1004          SQ       0     7.2     7.2
              * DDM   ***** Preserved *****

1005          KK    381C
1006          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1007          HC       3
              *
              * DDM   ***** Preserved *****

1008          KK   RR381
1009          KM   ROUTING OF FLOW FROM SUB-BASIN 381 TO 401
1010          RS       4    FLOW      -1
1011          RC    0.05    0.03    0.05    2992  0.0134
1012          RX       0     0.1     0.2       8      33      41     241   241.1
1013          RY     3.5     2.5       2       0       0       2       3     3.5
              * DDM   ***** Updated *****
1                                        HEC-1 INPUT                                                    PAGE 27

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

1014          KK     401
1015          KM   SUB-BASIN 401
1016          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1017          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
1018          KM     L = 1.71  Kb = .051  Adj. Slope =   97.0
1019          BA    .605
1020          LG    .280    .250   4.150    .570  12.000
1021          UC    .604    .433
1022          UA       0       5      16      30      65      77      84      90      94      97
1023          UA     100
              * DDM   ***** Preserved *****

1024          KK    D401
1025          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1026          KM   DETENTION/RETENTION BASIN LOCATED WITHIN SAGUARO VISTA SUBDIVISION
1027          KM        MAXIMUM VOLUME DIVERSION = 4.0 ACRE-FEET
              *      1
1028          DT   BS401     4.0
1029          DI       0   10000
1030          DQ       0   10000
              * DDM   ***** Preserved *****

1031          KK   RT401
1032          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1033          DR   BS401
              * DDM   ***** Preserved *****

1034          KK   SR401
1035          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1036          KM     4.0 ACRE-FEETx43560/36x3600= 1.3 cfs
1037          RS       1    STOR       0
1038          SV       0     .01     4.0
1039          SQ       0     1.3     1.3
              * DDM   ***** Preserved *****

1040          KK    C401
1041          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1042          HC       4
              *
              *
              * END OF ALTERNATIVE 15 REVISIONS
              *
              * DDM   ***** Updated *****

1043          KK     420
1044          KM   SUB-BASIN 420
1045          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1046          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .995
1047          KM     L = 1.91  Kb = .042  Adj. Slope =  120.0
1048          BA    .849
1049          LG    .310    .270   3.880    .580  12.000
1050          UC    .512    .325
1051          UA       0       5      16      30      65      77      84      90      94      97
1052          UA     100
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                                    PAGE 28

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

1053          KK    D420
1054          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1055          KM   DETENTION/RETENTION BASINS LOCATED WITHIN GRAY FOX SUBDIVISION
1056          KM        MAXIMUM VOLUME DIVERSION = 8.65 acre-feet
              *      1
1057          DT   BS420    8.65
1058          DI       0   10000
1059          DQ       0   10000
              * DDM   ***** Preserved *****

1060          KK   RT420
1061          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1062          DR   BS420
              * DDM   ***** Preserved *****

1063          KK   SR420
1064          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1065          KM   38.55 ACRE-FEETx43560/36x3600=13cfs
1066          RS       1    STOR       0
1067          SV       0     .01   38.55
1068          SQ       0      13      13
              * DDM   ***** Preserved *****

1069          KK    420C
1070          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1071          HC       3
              * DDM   ***** Updated *****

1072          KK     370
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1073          KM   SUB-BASIN 370
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  .998
1076          KM     L =  .90  Kb = .050  Adj. Slope =  189.0
1077          BA    .257
1078          LG    .310    .280   4.800    .340  16.000
1079          UC    .271    .173
1080          UA       0       5      16      30      65      77      84      90      94      97
1081          UA     100
              * DDM   ***** Updated *****

1082          KK     395
1083          KM   SUB-BASIN 395
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  .999
1086          KM     L = 1.00  Kb = .052  Adj. Slope =  188.0
1087          BA    .160
1088          LG    .330    .320   5.100    .280  12.000
1089          UC    .300    .276
1090          UA       0       5      16      30      65      77      84      90      94      97
1091          UA     100
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 29

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


1092          KK    395C
1093          KM   HYDROGRAPH COMBINATION
1094          HC       2
              * DDM   ***** Preserved *****

1095          KK    D395
1096          KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN LOCATED WITHIN
1097          KM   SUB-BASINS 370 AND 395
              *      1
1098          DT   BS395
1099          DI       0      10    5000
1100          DQ       0       0    4990
              * DDM   ***** Preserved *****

1101          KK   RT395
1102          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1103          DR   BS395
              * DDM   ***** Preserved *****

1104          KK   SR395
1105          KM   RETRIEVE FLOW INTO OFFLINE DETENTION BASIN AND BLEED OFF WITHIN 36 HOURS.
1106          KM      50 ACRE-FEETx43560/36x3600 = 17cfs
1107          RS       1    STOR       0
1108          SV       0     .01      50
1109          SQ       0      17      17
              * DDM   ***** Preserved *****

1110          KK    C395
1111          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1112          HC       2
              * DDM   ***** Preserved *****

1113          KK    R395
1114          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1115          KM   ROUTING OF FLOW FROM SUB-BASINS 370 AND 395 TO SUB-BASIN 390
1116          RS       8    FLOW      -1
1117          RC    .045    .035    .045    2600    .023
1118          RX       0       1      40      46      56      62     102     103
1119          RY       3       2       2       0       0       2       2       3
              * DDM   ***** Updated *****

1120          KK     390
1121          KM   SUB-BASIN 390
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  .999
1124          KM     L =  .70  Kb = .050  Adj. Slope =  299.4
1125          BA    .244
1126          LG    .300    .250   4.700    .380  18.000
1127          UC    .204    .107
1128          UA       0       5      16      30      65      77      84      90      94      97
1129          UA     100
              * DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1130          KK    D390
1131          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1132          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THUNDER MOUNTAIN ESTATES
1133          KM        MAXIMUM VOLUME DIVERSION  = 3.5 acre-feet
              *      1
1134          DT   BS390     3.5
1135          DI       0    5000
1136          DQ       0    5000
              * DDM   ***** Preserved *****

1137          KK   RT390
1138          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1139          DR   BS390
              * DDM   ***** Preserved *****

1140          KK   SR390
1141          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1142          KM     3.5 ACRE-FEETx43560/36x3600=1.2cfs
1143          RS       1    STOR       0
1144          SV       0     .01     3.5
1145          SQ       0     1.2     1.2
              * DDM   ***** Preserved *****

1146          KK    390C
1147          KM   HYDROGRAPH COMBINATION
1148          HC       3
              * DDM   ***** Preserved *****

1149          KK   RR390
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1150        KM   ATTEMPT TO SIMULATE PIPE FLOW ALONG THIS ROUTING FROM SUB-BASIN 390 TO 415
1151        KM   ARTIFICIALLY ADJUSTING SLOPE TO MORE ACCURATELY DEPICT MODEL RESULTS.
1152        KM   THE SLOPE WAS DECREASED FROM .02 TO .01
1153        RS       2    FLOW      -1
1154        RK    5600     .01    .016            CIRC      . 6
            * DDM   ***** Updated *****

1155        KK     440
1156        KM   SUB-BASIN 440
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 = .039  Adj. Slope =  315.0
1160        BA    .080
1161        LG    .190    .380   6.400    .140  13.000
1162        UC    .129    .077
1163        UA       0       3       5       8      12      20      43      75      90      96
1164        UA     100
            * DDM   ***** Preserved *****

1165        KK     R70
1166        KM   ROUTE FLOW FROM SUB-BASIN 440 TO C108
1167        RS       1    FLOW      -1
1168        RC     .05    .035     .05    2250     .08
1169        RX    1000    1025    1050    1070    1075    1095    1120    1145
1170        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

1171        KK     441
1172        KM   SUB-BASIN 441
1173        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1174        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1175        KM     L =  .28  Kb = .069  Adj. Slope =  315.0
1176        BA    .010
1177        LG    .300    .250   5.600    .220   5.000
1178        UC    .150    .225
1179        UA       0       5      16      30      65      77      84      90      94      97
1180        UA     100
            * DDM   ***** Preserved *****

1181        KK    C108
1182        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 440 & 441
1183        HC       2
            * DDM   ***** Preserved *****

1184        KK    DIV4
1185        KM        SPLIT FLOW WITH TWO 42 INCH PIPES TO WEST AND SOUTH
            *      1
1186        DT   SPLIT
1187        DI       0      14      40      82     120     154     180
1188        DQ       0       7      20      41      60      77      90
            * DDM   ***** Preserved *****

1189        KK    R108
1190        KM        ROUTE FLOW FROM SUB-BASIN C108 TO C67
1191        RS       2    FLOW      -1
1192        RC     .05    .035     .05    3200      .1
1193        RX    1000    1025    1050    1070    1075    1095    1120    1145
1194        RY      30    22.9    15.7      10      10    15.7    22.9      30
            * DDM   ***** Updated *****

1195        KK     442
1196        KM   SUB-BASIN 442
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 =  .83  Kb = .055  Adj. Slope =  274.2
1200        BA    .100
1201        LG    .300    .270   3.290    .770   5.000
1202        UC    .258    .264
1203        UA       0       5      16      30      65      77      84      90      94      97
1204        UA     100
            * DDM   ***** Preserved *****

1205        KK     C67
1206        KM   COMBINE FLOW FROM SUB-BASIN 442 & DIV4
1207        HC       2
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1208        KK    DIV6
1209        KM        OFFLINE BASIN WITH 25 FOOT WEIR SET AT 2.5 FEET ABOVE BOTTOM OF CHANNEL
1210        KM        FLOW CONTINUES BEYOND BASIN THROUGH 2-30" PIPES
            *      1
1211        DT  BASIN4
1212        DI       0      10      32      44    79.9   132.5     198   272.9   356.8
1213        DQ       0       0       0       0    23.9    67.5     124   190.9   266.8
            * DDM   ***** Preserved *****

1214        KK  RTDIV6
1215        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1216        DR  BASIN4
            * DDM   ***** Preserved *****

1217        KK  RFDIV6
1218        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1219        KM     3.3 ACRE-FEETx43560/36x3600=1.1cfs
            *      1
1220        RS       1    STOR       0
1221        SV       0     .01     3.3
1222        SQ       0     1.1     1.1
            * DDM   ***** Preserved *****

1223        KK   CDIV6
1224        KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1225        HC       2
            * DDM   ***** Updated *****
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1226          KK     443
1227          KM   SUB-BASIN 443
1228          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1229          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1230          KM     L =  .71  Kb = .050  Adj. Slope =  315.0
1231          BA    .080
1232          LG    .250    .190   8.000    .080  10.000
1233          UC    .196    .194
1234          UA       0       5      16      30      65      77      84      90      94      97
1235          UA     100
              * DDM   ***** Preserved *****

1236          KK   DIV66
1237          KM        DIVERT FLOW INTO 3 NATURAL WASHES WITH ONE 24" PIPE IN EACH WASH.
1238          KM        EACH PIPE CAPACITY BASED ON 4 FEET OF HEAD
1239          DT   WSH66
1240          DI       0      78     100     200
1241          DQ       0      78      78      78
              * DDM   ***** Preserved *****

1242          KK    R113
1243          KM        ROUTE FLOW FROM C113 TO C114
1244          RS       1    FLOW      -1
1245          RC    .019    .019    .019    1300    .029
1246          RX    1000    1004    1008    1012    1018    1022    1026    1030
1247          RY      17   15.33   12.67      10      10   12.67   15.33      17
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                                    PAGE 33

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


1248          KK    C114
1249          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 67 AND C113
1250          HC       2
              * DDM   ***** Updated *****

1251          KK     444
1252          KM   SUB-BASIN 444
1253          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1254          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1255          KM     L =  .33  Kb = .034  Adj. Slope =  315.0
1256          BA    .040
1257          LG    .130    .350   4.450    .320   1.000
1258          UC    .112    .084
1259          UA       0       3       5       8      12      20      43      75      90      96
1260          UA     100
              * DDM   ***** Preserved *****

1261          KK     R58
1262          KM   ROUTE FLOW FROM SUB-BASIN 444 TO C107
1263          RS       1    FLOW      -1
1264          RC     .05    .035     .05    2370   .0516
1265          RX    1000    1010    1020    1050    1055    1085    1095    1105
1266          RY      19      18      17      10      10      17      18      19
              * DDM   ***** Updated *****

1267          KK     445
1268          KM   SUB-BASIN 445
1269          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1270          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1271          KM     L =  .82  Kb = .036  Adj. Slope =  315.0
1272          BA    .190
1273          LG    .170    .320   3.470    .590   3.000
1274          UC    .192    .130
1275          UA       0       5      16      30      65      77      84      90      94      97
1276          UA     100
              * DDM   ***** Preserved *****

1277          KK    C107
1278          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 444 & 445
1279          HC       2
              * DDM   ***** Preserved *****

1280          KK    R107
1281          KM        ROUTE FLOW FROM C107 TO C109
1282          RS       1    FLOW      -1
1283          RC     .05    .035     .05     700   .0516
1284          RX    1000    1010    1020    1050    1055    1085    1095    1105
1285          RY      19      18      17      10      10      17      18      19
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                                    PAGE 34

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


1286          KK    RTB2
1287          KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
              *      1
1288          DR   SPLIT
              * DDM   ***** Preserved *****

1289          KK  RSPLIT
1290          KM        ROUTE FLOW FROM SPLIT TO C109
1291          RS       1    FLOW      -1
1292          RC     .05    .035     .05     800     .05
1293          RX    1000    1025    1050    1070    1075    1095    1120    1145
1294          RY      30    22.9    15.7      10      10    15.7    22.9      30
              * DDM   ***** Updated *****

1295          KK     446
1296          KM   SUB-BASIN 446
1297          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1298          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1299          KM     L =  .46  Kb = .061  Adj. Slope =  303.9
1300          BA    .040
1301          LG    .270    .250   4.500    .400  19.000
1302          UC    .183    .189
1303          UA       0       5      16      30      65      77      84      90      94      97
1304          UA     100
              * DDM   ***** Preserved *****

1305          KK    C109
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1306        KM        COMBINE HYDROGRAPHS FROM COMBINES C107 AND C108
1307        HC       3
            * DDM   ***** Preserved *****

1308        KK    DIV5
1309        KM        DIVERT FLOW INTO WASHES TOWARDS WEST
1310        KM        DIVERSION THROUGH 36" PIPE WITH 3 FEET OF HEAD
            *      1
1311        DT  WSH404
1312        DI       0    40.7    71.2   121.6     190     276   379.4   500.6
1313        DQ       0      35      35      35      35      35      35      35
            * DDM   ***** Preserved *****

1314        KK    R109
1315        KM        ROUTE FLOW FROM C109 TO C110
1316        RS       1    FLOW      -1
1317        RC    .019    .019    .019    3080     .05
1318        RX    1000    1005    1010    1015    1025    1030    1035    1040
1319        RY   13.75    12.5   11.25      10      10   11.25    12.5   13.75
            * DDM   ***** Updated *****

1320        KK     447
1321        KM   SUB-BASIN 447
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 =  .49  Kb = .056  Adj. Slope =  221.0
1325        BA    .090
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1326        LG    .250    .270   3.350    .870  30.000
1327        UC    .208    .145
1328        UA       0       5      16      30      65      77      84      90      94      97
1329        UA     100
            * DDM   ***** Preserved *****

1330        KK   RT404
1331        KM        RETRIEVE DIVERTED FLOW FOR WASH 109
1332        DR  WSH404
            * DDM   ***** Preserved *****

1333        KK    R404
1334        KM        ROUTE FLOW FROM C110 TO C110
1335        RS       5    FLOW      -1
1336        RC    .019    .019    .019    3540     .03
1337        RX    1000    1012    1016    1020    1025    1029    1033    1045
1338        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Preserved *****

1339        KK    C110
1340        KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 447 AND R404
1341        HC       3
            * DDM   ***** Preserved *****

1342        KK    R110
1343        KM        ROUTE FLOW FROM C110 TO C115
1344        RS       1    FLOW      -1
1345        RC    .019    .019    .019     580   .0291
1346        RX    1000    1012    1016    1020    1035    1039    1043    1055
1347        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Preserved *****

1348        KK    C115
1349        KM        COMBINE HYDROGRAPHS FROM C114 AND C110
1350        HC       2
            * DDM   ***** Preserved *****

1351        KK    R115
1352        KM        ROUTE FLOW FROM C115 TO C119
1353        RS       1    FLOW      -1
1354        RC    .019    .019    .019    2125    .029
1355        RC    .019    .019    .019     580   .0291
1356        RX    1000    1012    1016    1020    1035    1039    1043    1055
1357        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Updated *****

1358        KK     448
1359        KM   SUB-BASIN 448
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 1.000
1362        KM     L =  .36  Kb = .042  Adj. Slope =  315.0
1363        BA    .045
1364        LG    .170    .310   4.200    .390  11.000
1365        UC    .133    .102
1366        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

1367        UA     100
            * DDM   ***** Updated *****

1368        KK     449
1369        KM   SUB-BASIN 449
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 =  .40  Kb = .054  Adj. Slope =  315.0
1373        BA    .050
1374        LG    .260    .280   3.500    .640   6.000
1375        UC    .167    .134
1376        UA       0       5      16      30      65      77      84      90      94      97
1377        UA     100
            * DDM   ***** Preserved *****

1378        KK   C6364
1379        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 448 & 449
1380        HC       2
            * DDM   ***** Preserved *****

1381        KK   R6364
1382        KM   ROUTE FLOW FROM C116 AND SUB-BASINS 448 AND 449
1383        RS       4    FLOW      -1
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1384          RC     .05    .035     .05    4375   .0333
1385          RX    1000    1027    1053    1080    1090    1117    1143    1170
1386          RY      15   13.33   11.67      10      10   11.67   13.33      15
              * DDM   ***** Updated *****

1387          KK     450
1388          KM   SUB-BASIN 450
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 1.000
1391          KM     L =  .85  Kb = .057  Adj. Slope =  210.5
1392          BA    .070
1393          LG    .340    .350   3.630    .570   4.000
1394          UC    .296    .383
1395          UA       0       3       5       8      12      20      43      75      90      96
1396          UA     100
              * DDM   ***** Updated *****

1397          KK     451
1398          KM   SUB-BASIN 451
1399          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1400          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1401          KM     L =  .57  Kb = .063  Adj. Slope =  175.0
1402          BA    .025
1403          LG    .340    .340   3.290    .750   3.000
1404          UC    .271    .453
1405          UA       0       3       5       8      12      20      43      75      90      96
1406          UA     100
              * DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1407          KK    RT66
1408          KM        RETRIEVE DIVERTED FLOW FROM SUB-BASIN 66
1409          DR   WSH66
              * DDM   ***** Updated *****

1410          KK     452
1411          KM   SUB-BASIN 452
1412          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1413          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1414          KM     L =  .43  Kb = .055  Adj. Slope =  315.0
1415          BA    .040
1416          LG    .260    .280   3.700    .550   9.000
1417          UC    .171    .166
1418          UA       0       5      16      30      65      77      84      90      94      97
1419          UA     100
              * DDM   ***** Preserved *****

1420          KK   C6465
1421          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 443 AND 452
1422          HC       2
              * DDM   ***** Preserved *****

1423          KK   R6566
1424          KM        ROUTE FLOW FROM DIVERSIONS 65 AND 66 TO C116
1425          RS       2    FLOW      -1
1426          RC     .05    .035     .05    2435   .0282
1427          RX    1000    1045    1090    1150    1160    1220    1265    1310
1428          RY      25      23      20      10      10      20      23      25
              * DDM   ***** Preserved *****

1429          KK    C116
1430          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 450 & 451 AND R6364 & R6465
1431          HC       4
              * DDM   ***** Preserved *****

1432          KK  BASIN5
1433          KM        RESERVOIR WITHIN PARCEL 31      2-48 INCH PIPES AT OUTFALL
1434          KM        BASIN 5 FEET DEEP
1435          RS       1    ELEV       0
1436          SV       0     4.5     9.9
1437          SQ       0      69     190
1438          SE       0     2.5       5
              * DDM   ***** Preserved *****

1439          KK    R116
1440          KM   ROUTE FLOW FROM C116 TO C117
1441          RS       2    FLOW      -1
1442          RC     .05    .035     .05    1300   .0333
1443          RX    1000    1100    1200    1300    1320    1420    1520    1620
1444          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

1445          KK     453
1446          KM   SUB-BASIN 453
1447          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1448          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1449          KM     L =  .58  Kb = .058  Adj. Slope =  138.0
1450          BA    .060
1451          LG    .290    .300   3.290    .820  18.000
1452          UC    .275    .284
1453          UA       0       5      16      30      65      77      84      90      94      97
1454          UA     100
              * DDM   ***** Preserved *****

1455          KK    C117
1456          KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 453 AND R116
1457          HC       2
              * DDM   ***** Preserved *****

1458          KK    C118
1459          KM   COMBINE HYDROGRAPHS FROM R115 AND C117
1460          HC       2
              * DDM   ***** Preserved *****

1461          KK    R118
1462          KM        ROUTE FLOW FROM C118 TO  DIV7
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1463          RS       1    FLOW      -1
1464          RC    .019    .019    .019    1500    .024
1465          RX    1000    1012    1016    1020    1035    1039    1043    1055
1466          RY      15      12      11      10      10      11      12      15
              * DDM   ***** Preserved *****

1467          KK    DIV7
1468          KM        OFFLINE BASIN AT NORTH MOUNTAIN RIDGE   FLOWS ENTER BASIN OVER
1469          KM        30' WEIR SET AT 5.3' ABOVE THE CHANNEL BOTTOM
              *      1
1470          DT  BASIN6
1471          DI       0     363     487     563     645     844
1472          DQ       0       3      47      83     125     244
              * DDM   ***** Preserved *****

1473          KK  RTDIV7
1474          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1475          DR  BASIN6
              * DDM   ***** Preserved *****

1476          KK  RFDIV7
1477          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1478          KM     3.6 ACRE-FEETx43560/36x3600=1.2cfs
1479          RS       1    STOR       0
1480          SV       0     .01     3.6
1481          SQ       0     1.2     1.2
              * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 39

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

1482          KK   CDIV7
1483          KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1484          HC       2
              * DDM   ***** Updated *****

1485          KK     454
1486          KM   SUB-BASIN 454
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  .999
1489          KM     L = 1.23  Kb = .051  Adj. Slope =  163.0
1490          BA    .180
1491          LG    .300    .310   3.780    .560  14.000
1492          UC    .379    .395
1493          UA       0       5      16      30      65      77      84      90      94      97
1494          UA     100
              * DDM   ***** Updated *****

1495          KK     385
1496          KM   SUB-BASIN 385
1497          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1498          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1499          KM     L =  .90  Kb = .051  Adj. Slope =  309.5
1500          BA    .197
1501          LG    .330    .320   4.800    .310   9.000
1502          UC    .233    .171
1503          UA       0       5      16      30      65      77      84      90      94      97
1504          UA     100
              * DDM   ***** Updated *****

1505          KK     411
1506          KM   SUB-BASIN 411
1507          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1508          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1509          KM     L = 1.38  Kb = .050  Adj. Slope =  315.0
1510          BA    .237
1511          LG    .340    .350   5.000    .270  10.000
1512          UC    .292    .277
1513          UA       0       3       5       8      12      20      43      75      90      96
1514          UA     100
              * DDM   ***** Preserved *****

1515          KK    411C
1516          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 385 & 411
1517          HC       2
              * DDM   ***** Preserved *****

1518          KK    D411
1519          KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN LOCATED WITHIN SUB-BASINS 385 & 411
1520          DT   BS411
1521          DI       0      25    5000
1522          DQ       0       0    4975
              * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 40

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

1523          KK   RT411
1524          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1525          DR   BS411
              * DDM   ***** Preserved *****

1526          KK   SR411
1527          KM   RETRIEVE FLOW TO BLEED OFF WITHIN 36 HOURS
1528          KM      50 ACRE-FEETx43560/36x3600 = 17cfs
1529          RS       1    STOR       0
1530          SV       0     .01      50
1531          SQ       0      17      17
              * DDM   ***** Preserved *****

1532          KK    C411
1533          KM   HYDROGRAPH COMBINATION
1534          HC       2
              * DDM   ***** Preserved *****

1535          KK    R411
1536          KM   ATTEMPT TO SIMULATE PIPE FLOW ALONG THIS ROUTING FROM C411 TO C119
1537          RS       3    FLOW      -1
1538          RK    5300    .025    .016            CIRC       4
              * DDM   ***** Preserved *****
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1539        KK    C119
1540        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 454 AND C119
            *      1       2
1541        HC       3
            * DDM   ***** Preserved *****

1542        KK    R454
1543        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1544        KM   ROUTE FLOW FROM C119 TO 415C
1545        RS       2    FLOW      -1
1546        RC    .045    .035    .045    2200    .009
1547        RX       0      .5       1      33      42      67    67.5      68
1548        RY       5       4       4       0       0       6       6       6
            * DDM   ***** Updated *****

1549        KK     415
1550        KM   SUB-BASIN 415
1551        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1552        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1553        KM     L = 1.10  Kb = .049  Adj. Slope =  155.0
1554        BA    .281
1555        LG    .300    .260   3.630    .710  15.000
1556        UC    .358    .264
1557        UA       0       5      16      30      65      77      84      90      94      97
1558        UA     100
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1559        KK    415C
1560        KM   HYDROGRAPH COMBINATION OF SUB-BASIN 415, C411, AND 390C
1561        HC       3
            * DDM   ***** Preserved *****

1562        KK    R415
1563        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1564        KM   ROUTING OF FLOW FROM 415C TO 455C
1565        RS       2    FLOW      -1
1566        RC    .045     .03    .045    4100    .024
1567        RX       0      .5       1       8      16      23    23.5      24
1568        RY       8       8       8       0       0       8       8       8
            * DDM   ***** Updated *****

1569        KK     455
1570        KM   SUB-BASIN 455
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  .993
1573        KM     L = 1.70  Kb = .041  Adj. Slope =  146.0
1574        BA   1.111
1575        LG    .270    .280   3.700    .640  24.000
1576        UC    .421    .204
1577        UA       0       5      16      30      65      77      84      90      94      97
1578        UA     100
            * DDM   ***** Preserved *****

1579        KK    D455
1580        KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1581        KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1582        KM   FOR BASIN #: 30      34      43      47&58
1583        KM        MAXIMUM VOLUME DIVERSION = 74.1 acre-feet
            *      1
1584        DT   BS455    74.1
1585        DI       0   10000
1586        DQ       0   10000
            * DDM   ***** Preserved *****

1587        KK   RT455
1588        KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1589        DR   BS455
            * DDM   ***** Preserved *****

1590        KK   SR455
1591        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1592        KM    74.1 ACRE-FEETx43560/36x3600=25cfs
1593        RS       1    STOR       0
1594        SV       0     .01    74.1
1595        SQ       0      25      25
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1596        KK    C455
1597        KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 455 AND DIVERTED BASIN STORAGE OF 455
1598        HC       2
            * DDM   ***** Preserved *****

1599        KK    455C
1600        KM  HYDROGRAPH COMBINATION OF 420C, R415 AND C455
            *      1       2
1601        HC       3
            * DDM   ***** Preserved *****

1602        KK   SR440
1603        KM   SPOOK HILL FRS PLANS DATED 6/15/77
1604        KM   OUTLET PIPE=7'x7.5'RCBC; L=70 INLET INV.=1566; OUTLET INV.=1566
1605        KM   EMERGENCY SPILLWAY ELEV.=1582; PRINCIPLE SPILLWAY ELEV.=1577.5
1606        KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 200 ACRE-FEET
1607        RS       1    STOR       0
1608        SV       0      10     100     300     500     680
1609        SQ       0     640     720     780     825     860
1610        SE      66    77.5      79    80.2    81.2      82
            * DDM   ***** Preserved *****

1611        KK   RR455
1612        KM   ROUTE FLOW FROM SPOOK HILL FRS TO SUB-BASIN 462
1613        RS      10    FLOW      -1
1614        RC    .035    .025    .035    9200    .002
1615        RX       0       1       2      28      58      84      85      86
1616        RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
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            * DDM   ***** Updated *****

1617        KK     456
1618        KM   SUB-BASIN 456
1619        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1620        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1621        KM     L =  .94  Kb = .045  Adj. Slope =  315.0
1622        BA    .260
1623        LG    .300    .380   5.600    .200  12.000
1624        UC    .217    .139
1625        UA       0       5      16      30      65      77      84      90      94      97
1626        UA     100
            * DDM   ***** Preserved *****

1627        KK    DIV1
1628        KM        DIVERT FLOW INTO OFFLINE DETENTION BASIN
1629        KM        WEIR FOR BASIN SET AT 4 FEET ABOVE CHANNEL BOTTOM
            *      1
1630        DT  BASIN1
1631        DI       0    11.1   127.9   234.4   577.7   789.9  1025.5  1280.9  1555.7
1632        DQ       0       0       0    47.7     248   381.8   533.6   701.5     884
            * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                                    PAGE 43

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

1633        KK    DIV2
1634        KM        SPLIT OUT FLOW FOR WASHES THAT FLOW TO THE SOUTH FROM
1635        KM        WASHES THAT DRAIN TO THE WES, SOUTHERN WASHES FED BY 30" & 24" PIPE
1636        DT    WA30
1637        DI       0    11.1   127.9   189.6   329.7     408   491.9   579.4   671.7
1638        DQ       0    11.1    38.4    48.2      63    69.5      76      81      86
            * DDM   ***** Preserved *****

1639        KK    R456
1640        KM        ROUTE FLOW FROM SUB-BASIN 51 TO C101
1641        RS       2    FLOW      -1
1642        RC     .05    .035     .05    3800    .044
1643        RX    1000    1010    1020    1036    1041    1057    1067    1077
1644        RY   14.88   14.44      14      10      10      14   14.44   14.88
            * DDM   ***** Updated *****

1645        KK     457
1646        KM   SUB-BASIN 457
1647        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1648        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1649        KM     L = 1.01  Kb = .045  Adj. Slope =  308.8
1650        BA    .190
1651        LG    .270    .330   3.950    .460   6.000
1652        UC    .237    .195
1653        UA       0       5      16      30      65      77      84      90      94      97
1654        UA     100
            * DDM   ***** Preserved *****

1655        KK    C101
1656        KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 50 AND 51
1657        HC       2
            * DDM   ***** Preserved *****

1658        KK    DIV3
1659        KM        RESERVOIR AT THE EDGE OF THE PROPERTY   FLOW FROM CHANNEL
1660        KM        DIVERTED  INTO OFFLINE BASIN A 25' WEIR SET AT ELEVATION 1808 FT
            *      1
1661        DT  BASIN2
1662        DI       0      36      70     110     180   313.5     402   500.9
1663        DQ       0       0       0       0       0    67.5     124   190.9
            * DDM   ***** Preserved *****

1664        KK  RTDIV3
1665        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1666        DR  BASIN2
            * DDM   ***** Preserved *****

1667        KK  RFDIV3
1668        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1669        KM     5.0 ACRE-FEETx43560/36x3600=1.7cfs
1670        RS       1    STOR       0
1671        SV       0     .01       5
1672        SQ       0     1.7     1.7
            * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                                    PAGE 44

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

1673        KK   CDIV3
1674        KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1675        HC       2
            * DDM   ***** Preserved *****

1676        KK    R101
1677        KM        ROUTE FLOW FROM SUBBASIN C101 TO C103
1678        RS       1    FLOW      -1
1679        RC     .05    .035     .05    1450     .05
1680        RX    1000    1010    1020    1036    1041    1057    1067    1077
1681        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Updated *****

1682        KK     458
1683        KM   SUB-BASIN 458
1684        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1685        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1686        KM     L =  .76  Kb = .048  Adj. Slope =  299.0
1687        BA    .190
1688        LG    .290    .330   5.800    .190   6.000
1689        UC    .204    .131
1690        UA       0       5      16      30      65      77      84      90      94      97
1691        UA     100
            * DDM   ***** Preserved *****

1692        KK    C103
1693        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 55 AND C101
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1694          HC       2
              * DDM   ***** Preserved *****

1695          KK    R103
1696          KM        ROUTE FLOW FROM SUBBASIN C103 TO C106
1697          RS       1    FLOW      -1
1698          RC     .05    .035     .05     900     .03
1699          RX    1000    1010    1020    1030    1050    1060    1070    1080
1700          RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
              * DDM   ***** Preserved *****

1701          KK    RT30
1702          KM        RETRIEVE DIVERTED FLOW FOR WASH BELOW 30 INCH PIPE
1703          DR    WA30
              * DDM   ***** Preserved *****

1704          KK     R30
1705          KM        ROUTE FLOW FROM WASH DIVERSION TO COMBINE C52
1706          RS       1    FLOW      -1
1707          RC     .05    .035     .05    1630     .05
1708          RX    1000    1010    1020    1036    1041    1057    1067    1077
1709          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                                    PAGE 45

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


1710          KK    RTB1
1711          KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
              *      1        2
1712          DR  BASIN1
              * DDM   ***** Preserved *****

1713          KK      B1
1714          KM        ROUTE FLOW THROUGH OFFLINE DETENTION BASIN
1715          KM        FLOW OUTLETS THROUGH A 30 INCH OUTLET PIPE
              *      1        2
1716          RS       1    ELEV       0
1717          SV              .7     1.4     2.3     2.7     3.2
1718          SQ       0       5      16      28    32.5      37
1719          SE       0       1       2       3     3.5       4
              * DDM   ***** Preserved *****

1720          KK     RB1
1721          KM        ROUTE FLOW FROM BASIN DIVERSION TO COMBINE C52
1722          RS       2    FLOW      -1
1723          RC     .05    .035     .05    1720     .05
1724          RX    1000    1010    1020    1036    1041    1057    1067    1077
1725          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Preserved *****

1726          KK    CDIV
1727          KM        COMBINE FLOWS FROM WA30 AND BASIN 1
1728          HC       2     .12
              * DDM   ***** Updated *****

1729          KK     459
1730          KM   SUB-BASIN 459
1731          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1732          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1733          KM     L =  .35  Kb = .052  Adj. Slope =  251.6
1734          BA    .030
1735          LG    .220    .300   3.330    .710   8.000
1736          UC    .162    .157
1737          UA       0       5      16      30      65      77      84      90      94      97
1738          UA     100
              * DDM   ***** Preserved *****

1739          KK     C52
1740          KM        COMBINE FLOWS FROM SUB-BASIN 52 WA30 AND BASIN 1
1741          HC       2
              * DDM   ***** Preserved *****

1742          KK     R52
1743          KM        ROUTE FLOW FROM SUBBASIN 52 TO C102
1744          RS       2    FLOW      -1
1745          RC     .05    .035     .05    2000     .05
1746          RX    1000    1010    1020    1036    1041    1057    1067    1077
1747          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Updated *****
1                                        HEC-1 INPUT                                                    PAGE 46

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


1748          KK     460
1749          KM   SUB-BASIN 460
1750          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1751          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1752          KM     L =  .62  Kb = .058  Adj. Slope =  194.0
1753          BA    .140
1754          LG    .250    .260   3.740    .690  27.000
1755          UC    .242    .160
1756          UA       0       5      16      30      65      77      84      90      94      97
1757          UA     100
              * DDM   ***** Preserved *****

1758          KK    C102
1759          KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 52 AND 53
1760          HC       2
              * DDM   ***** Preserved *****

1761          KK  BASIN3
1762          KM        RESERVOIR AT CLUBHOUSE LOCATION 1-30 INCH PIPE AT OUTFALL
1763          KM        BOTTOM OF BASIN AT 6 FEET ABOVE 1795 ELEVATION
1764          RS       1    ELEV       0
1765          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
1766          SQ       0      22      45    47.4      48      51      57      62      67      73
1767          SE    1795  1797.5    1800  1800.4  1800.5    1801    1802    1803    1804  1805.5
              * DDM   ***** Preserved *****
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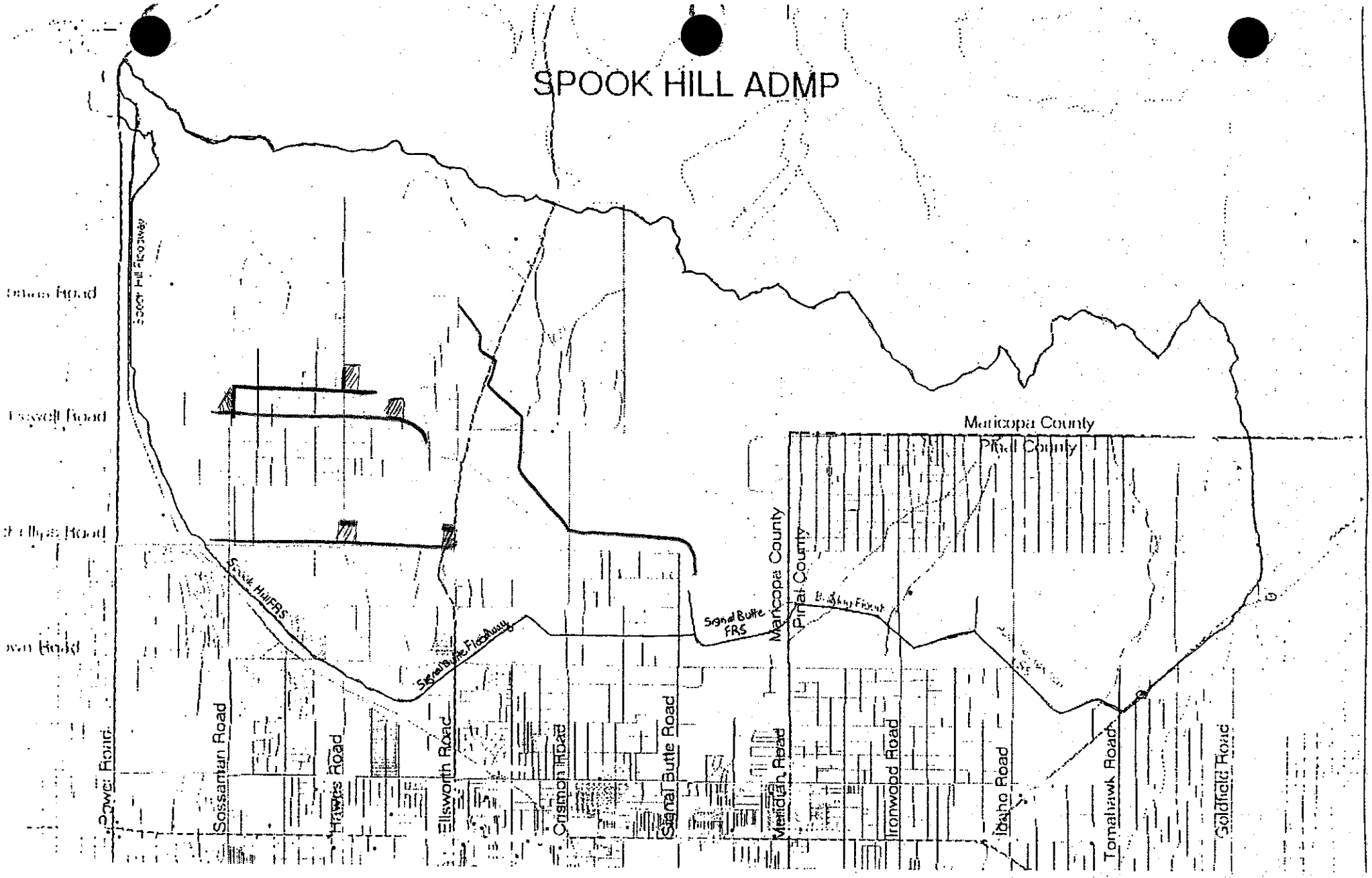
SPOOK HILL ADMP



MODEL UPDATE BASED ON COMBINATION OF THREE PREVIOUS MODEL RUNS:
S24CE15.DAT, S24CE18.DAT. OVERVIEW OF EACH WILL FOLLOW RESPECTIVELY.

****

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.
MODEL IS CREATED FROM THE BASE EXISTING MODEL S24CE10.DAT
GENERATED BY SC ON 05/24/00 FILE: S24CE15.DAT

****

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 SOSSAMAN & THUNDER MTN., ALONG HAWES NORTH OF OAK ST., AND ALONG SOSSAMAN BETWEEN MCDOWELL & OAK ST. THIS WILL GENERATE NEW SUB-BASINS 410, 411, AND 413 FROM SUB-BASINS 415 & 420 DETENTION BASINS WILL BE ADDED TO SUB-BASINS 370 & 395, 385 & 411, AND 455.

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ANALYSIS FOR CURRENT ALTERNATIVE PERFORMED BY: WOOD/PATEL, MW 07/19/00

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1768          KK      R3
1769          KM        ROUTE FLOW FROM C102 to C106
1770          RS       4    FLOW      -1
1771          RC     .05     .03     .05    2750   .0375
1772          RX    1000    1010    1020    1052    1086    1118    1128    1138
1773          RY    19.2    18.4      18      10      10      18    18.4    19.2
              * DDM   ***** Updated *****

1774          KK     461
1775          KM   SUB-BASIN 461
1776          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1777          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1778          KM     L =  .83  Kb = .052  Adj. Slope =  181.0
1779          BA    .120
1780          LG    .270    .250   4.250    .450  21.000
1781          UC    .271    .250
1782          UA       0       5      16      30      65      77      84      90      94      97
1783          UA     100
              * DDM   ***** Preserved *****

1784          KK    C104
1785          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 54 AND R102
1786          HC       2
              * DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1787          KK    C106
1788          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN C103 AND C104
1789          HC       2
              * DDM   ***** Preserved *****

1790          KK    R106
1791          KM        ROUTE FLOW FROM C106 TO C49
1792          RS       2    FLOW      -1
1793          RC     .05    .035     .05    3950    .033
1794          RX    1000    1010    1020    1030    1050    1060    1070    1080
1795          RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
              * DDM   ***** Updated *****

1796          KK     462
1797          KM   SUB-BASIN 462
1798          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1799          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1800          KM     L =  .97  Kb = .045  Adj. Slope =  297.7
1801          BA    .301
1802          LG    .300    .330   5.300    .240  12.000
1803          UC    .225    .137
1804          UA       0       5      16      30      65      77      84      90      94      97
1805          UA     100
              * DDM   ***** Preserved *****

1806          KK     C56
1807          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 56 AND C106
              *      1       2
1808          HC       2
              * DDM   ***** Updated *****

1809          KK     480
1810          KM   SUB-BASIN 480
1811          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1812          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
1813          KM     L = 1.21  Kb = .042  Adj. Slope =  165.0
1814          BA    .731
1815          LG    .270    .270   3.580    .730  27.000
1816          UC    .325    .148
1817          UA       0       5      16      30      65      77      84      90      94      97
1818          UA     100
              * DDM   ***** Preserved *****

1819          KK    D480
1820          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1821          KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1822          KM   FOR BASIN #: 18 & 26
1823          KM        MAXIMUM VOLUME DIVERSION = 16.5 acre-feet
              *      1
1824          DT   BS480    16.5
1825          DI       0   10000
1826          DQ       0   10000
              * DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1827          KK   RT480
1828          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1829          DR   BS480
              * DDM   ***** Preserved *****

1830          KK   SR480
1831          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1832          KM    16.5 ACRE-FEETx43560/36x3600=5.5cfs
1833          RS       1    STOR       0
1834          SV       0     .01    16.5
1835          SQ       0     5.6     5.6
              * DDM   ***** Preserved *****

1836          KK    C480
1837          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1838          HC       2
              * DDM   ***** Preserved *****

1839          KK    480C
1840          KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1841          HC       3    2.09
              * DDM   ***** Preserved *****

1842          KK   RR480
1843          KM   ROUTE FLOW FROM SUB-BASIN 480 TO SUB-BASIN 500
1844          RS       2    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

  58          10
               V
               V
  68         R10
               V
               V
  74         R12
               .
               .
  80           .          20
               .           .
               .           .
  90         C20............
               .
               .
  93           .          40
               .           .
               .           .
 103           .           .          60
               .           .           .
               .           .           .
 113         60C......................
               V
               V
 116        SR60
               V
               V
 125         R60
               V
               V
 131        RR60
               .
               .
 137           .          80
               .           .
               .           .
 147         80C............
               V
               V
 150         R80
               .
               .
 156           .         100
               .           .
               .           .
 166        100C............
               V
               V
 169        R100
               .
               .
 175           .         120
               .           .
               .           .
 185        120C............
               V
               V
 188        R120
               .
               .
 194           .         140
               .           .
               .           .
 204           .           .         150
               .           .           V
               .           .           V
 214           .           .        R150
               .           .           V
               .           .           V
 220           .           .        R152
               .           .           .
               .           .           .
 226           .           .           .         160
               .           .           .           .
               .           .           .           .
 236           .           .           .           .         180
               .           .           .           .           .
               .           .           .           .           .
 246        180C...............................................
               .
               .
 249           .         383
               .           V
               .           V
 259           .        R383
               .           .
               .           .
 268           .           .         393
               .           .           .
               .           .           .
 278           .        393C............
               .           V
               .           V
 281           .        R393
               .           .
               .           .
 288           .           .         365
               .           .           .
               .           .           .
 298           .        365C............
               .           V
               :           V
 301           .        R365
               .           V
               .           V
 308           .        365R
```

```
317          .          .
             .          .
             .          .        353
             .          .          .
             .          .          .
327          .       353C...........
             .          V
             .          V
330          .       R353
             .          V
             .          V
339          .       353R
             .          .
             .          .
346          .          .        350
             .          .          V
             .          .          V
356          .          .       350R
             .          .          .
             .          .          .
366          .          .          .        310
             .          .          .          .
             .          .          .          .
376          .       C310......................
             .          V
             .          V
379          .       R310
             .          V
             .          V
386          .       R312
             .          .
             .          .
395          .          .        295
             .          .          .
             .          .          .
405          .       295C...........
             .          V
             .          V
408          .       295R
             .          .
             .          .
417          .          .        210
             .          .          V
             .          .          V
427          .          .       R210
             .          .          .
             .          .          .
433          .          .          .        240
             .          .          .          .
             .          .          .          .
443          .       240C......................
             .          V
             .          V
446          .      SR240
             .          .
             .          .
455          .          .        220
             .          .          .
             .          .          .
465          .       220C...........
             .          V
             .          V
468          .      SR220
             .          .
             .          .
477          .          .        190
             .          .          V
             .          .          V
487          .          .       R190
             .          .          V
             .          .          V
493          .          .       R192
             .          .          .
             .          .          .
499          .          .          .        200
             .          .          .          .
             .          .          .          .
509          .       200C......................
             .          V
             .          V
512          .      SR200
             .          V
             .          V
519          .      200SR
             .          .
             .          .
529       C180...........
             V
             V
532      SR180
             V
             V
541       R180
             .
             .
548          .        260
             .          .
             .          .
558       260C...........
             V
             V
561       R260
             .
             .
568          .        280
             .          .
             .          .
578       280C...........
             V
             V
581       R280
             .
             .
```

```
588          .         300
             .           .
             .           .
598       C300............
             .
             .
604          .-------->   DIV30
601       D300
             .
             .
609          .           .<-------   DIV30
607          .       RTDIV
             .           V
             .           V
610          .       SRDIV
             .           .
             .           .
617       300C............
             .
             .
620          .         305
             .           .
             .           .
633          .           .-------->    305D
630          .        D305
             .           .
             .           .
638          .           .           .<-------    305D
636          .           .       RT305
             .           .           V
             .           .           V
639          .           .       SR305
             .           .           .
             .           .           .
646       305C........................
             V
             V
649       R305
             V
             V
656      RR305
             .
             .
663          .         320
             .           .
             .           .
678          .           .-------->   BS320
673          .        D320
             .           .
             .           .
683          .           .           .<-------   BS320
681          .           .       RT320
             .           .           V
             .           .           V
684          .           .       SR320
             .           .           .
             .           .           .
690       C320........................
             .
             .
693          .         340
             .           .
             .           .
708          .           .-------->   BS340
703          .        D340
             .           .
             .           .
713          .           .           .<-------   BS340
711          .           .       RT340
             .           .           V
             .           .           V
714          .           .       SR340
             .           .           .
             .           .           .
720       C340........................
             .
             .
723          .         360
             .           .
             .           .
737          .           .-------->   BS360
733          .        D360
             .           .
             .           .
742          .           .           .<-------   BS360
740          .           .       RT360
             .           .           V
             .           .           V
743          .           .       SR360
             .           .           .
             .           .           .
749       360C........................
             .
             .
752          .         380
             .           .
             .           .
766          .           .-------->   BS380
762          .        D380
             .           .
             .           .
771          .           .           .<-------   BS380
769          .           .       RT380
             .           .           V
             .           .           V
772          .           .       SR380
             .           .           .
             .           .           .
778       380C........................
             .
             .
781          .         400
             .           .
```

```
795          .          .-------> BS400
791          .       D400
             .          .
             .          .
800          .          .          .<-------  BS400
798          .          .      RT400
             .          .          V
             .          .          V
801          .          .      SR400
             .          .          .
             .          .          .
807          .       C400............
             .          .
             .          .
810       400C............
             .
             .
813          .        355
             .          V
             .          V
823          .       R355
             .          .
             .          .
830          .          .        361
             .          .          .
             .          .          .
844          .          .          .-------> BS361
840          .          .      D361
             .          .          .
             .          .          .
849          .          .          .          .<-------  BS361
847          .          .          .      RT361
             .          .          .          V
             .          .          .          V
850          .          .          .      SR361
             .          .          .          .
             .          .          .          .
856          .       361C......................
             .          .
             .          .
859          .          .        342
             .          .          .
             .          .          .
874          .          .          .-------> BS3421
869          .          .      D3421
             .          .          .
             .          .          .
879          .          .          .          .<-------  BS3421
877          .          .          .     RT3421
             .          .          .          V
             .          .          .          V
880          .          .          .     SR3421
             .          .          .          .
             .          .          .          .
886          .          .      C342............
             .          .          .
             .          .          .
893          .          .          .-------> BS3422
889          .          .      D3422
             .          .          .
             .          .          .
898          .          .          .          .<-------  BS3422
896          .          .          .     RT3422
             .          .          .          V
             .          .          .          V
899          .          .          .     SR3422
             .          .          .          .
             .          .          .          .
905          .          .      CC342............
             .          .          V
             .          .          V
908          .          .      R342
             .          .          .
             .          .          .
914          .          .          .        341
             .          .          .          .
             .          .          .          .
929          .          .          .          .-------> BS341
924          .          .          .      D341
             .          .          .          .
             .          .          .          .
934          .          .          .          .          .<-------  BS341
932          .          .          .          .      RT341
             .          .          .          .          V
             .          .          .          .          V
935          .          .          .          .      SR341
             .          .          .          .          .
             .          .          .          .          .
941          .          .      C341......................
             .          .          V
             .          .          V
944          .          .      RR341
             .          .          .
             .          .          .
951          .       361CC............
             .          .
             .          .
958          .          .-------> BS3612
954          .       D3612
             .          .
             .          .
963          .          .          .<-------  BS3612
961          .          .     RT3612
             .          .          V
             .          .          V
964          .          .     SR3612
             .          .          .
             .          .          .
970          .       C3612............
             .          V
             .          V
973          .       RR361
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                .          .
                .          .
 979            .          .        381
                .          .          .
                .          .          .
 993            .          .          .-------->  BS381
 989            .          .       D381
                .          .          .
                .          .          .
 998            .          .          .           .<-------   BS381
 996            .          .          .       RT381
                .          .          .           V
                .          .          .           V
 999            .          .          .       SR381
                .          .          .           .
                .          .          .           .
1005            .       381C.......................
                .          V
                .          V
1008            .      RR381
                .          .
                .          .
1014            .          .        401
                .          .          .
                .          .          .
1028            .          .          .-------->  BS401
1024            .          .       D401
                .          .          .
                .          .          .
1033            .          .          .           .<-------   BS401
1031            .          .          .       RT401
                .          .          .           V
                .          .          .           V
1034            .          .          .       SR401
                .          .          .           .
                .          .          .           .
1040        C401...................................
                .
                .
1043            .        420
                .          .
                .          .
1057            .          .-------->  BS420
1053            .       D420
                .          .
                .          .
1062            .          .          .<-------   BS420
1060            .          .      RT420
                .          .          V
                .          .          V
1063            .          .      SR420
                .          .          .
                .          .          .
1069        420C......................
                .
                .
1072            .        370
                .          .
                .          .
1082            .          .        395
                .          .          .
                .          .          .
1092            .       395C............
                .          .
                .          .
1098            .          .-------->  BS395
1095            .       D395
                .          .
                .          .
1103            .          .          .<-------   BS395
1101            .          .      RT395
                .          .          V
                .          .          V
1104            .          .      SR395
                .          .          .
                .          .          .
1110            .       C395............
                .          V
                .          V
1113            .       R395
                .          .
                .          .
1120            .          .        390
                .          .          .
                .          .          .
1134            .          .          .-------->  BS390
1130            .          .       D390
                .          .          .
                .          .          .
1139            .          .          .           .<-------   BS390
1137            .          .          .       RT390
                .          .          .           V
                .          .          .           V
1140            .          .          .       SR390
                .          .          .           .
                .          .          .           .
1146            .       390C......................
                .          V
                .          V
1149            .      RR390
                .          .
                .          .
1155            .          .        440
                .          .          V
                .          .          V
1165            .          .        R70
                .          .          .
                .          .          .
1171            .          .          .        441
                .          .          .          .
                .          .          .          .
1181            .          .       C108............
                .          .          .
```

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1186                .-------> SPLIT
1184          DIV4
                 V
                 V
1189          R108
                 .
                 .
1195                442
                    .
                    .
1205           C67...........
                 .
                 .
1211                .-------> BASIN4
1208          DIV6
                 .
                 .
1216                    .<------- BASIN4
1214                RTDIV6
                       V
                       V
1217                RFDIV6
                       .
                       .
1223         CDIV6...........
                 .
                 .
1226                443
                    .
                    .
1239                    .-------> WSH66
1236                DIV66
                       V
                       V
1242                R113
                       .
                       .
1248          C114...........
                 .
                 .
1251                444
                       V
                       V
1261                R58
                       .
                       .
1267                    .         445
                        .           .
                        .           .
1277                C107...........
                       V
                       V
1280                R107
                       .
                       .
1288                    .           .<-------  SPLIT
1286                    .        RTB2
                        .          V
                        .          V
1289                    .      RSPLIT
                        .           .
                        .           .
1295                    .           .        446
                        .           .          .
                        .           .          .
1305                C109.......................
                       .
                       .
1311                    .-------> WSH404
1308                DIV5
                       V
                       V
1314                R109
                       .
                       .
1320                    .         447
                        .           .
                        .           .
1332                    .           .           .<-------  WSH404
1330                    .           .      RT404
                        .           .          V
                        .           .          V
1333                    .           .       R404
                        .           .          .
                        .           .          .
1339                C110.......................
                       V
                       V
1342                R110
                       .
                       .
1348          C115...........
                 V
                 V
1351          R115
                 .
                 .
1358                448
                    .
                    .
1368                    .         449
                        .           .
                        .           .
1378                C6364..........
                       V
                       V
1381                R6364
                       .
                       .
1387                    .         450
                        .           .
                        .           .
```

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1397                                                  451
                                                       .
1409                                                   .<-------   WSH66
1407                                                RT66
                                                       .
1410                                                   .         452
                                                       .           .
1420                                                C6465............
                                                       V
                                                       V
1423                                                R6566
                                                       .
1429                                   C116.................................
                                          V
                                          V
1432                                BASIN5
                                          V
                                          V
1439                                   R116
                                          .
1445                                      .         453
                                          .           .
1455                                   C117............
                                          .
1458                             C118............
                                    V
                                    V
1461                             R118
                                    .
                                    .
1470                                .-------> BASIN6
1467                             DIV7
                                    .
1475                                      .<-------  BASIN6
1473                                RTDIV7
                                          V
                                          V
1476                                RFDIV7
                                          .
1482                           CDIV7............
                                    .
1485                                     454
                                          .
1495                                      .         385
                                          .           .
505                                       .           .         411
                                          .           .           .
1515                                      .       411C............
                                          .           .
1520                                      .           .-------> BS411
1518                                      .       D411
                                          .           .
1525                                      .           .           .<-------  BS411
1523                                      .           .       RT411
                                          .           .           V
                                          .           .           V
1526                                      .           .       SR411
                                          .           .           .
1532                                      .       C411............
                                          .           .
                                          .           .           V
1535                                      .       R411
                                          .           .
1539                             C119......................
                                    V
                                    V
1542                             R454
                                    .
1549                                     415
                                          .
1559                        415C......................
                               V
                               V
1562                        R415
                                 .
1569                                455
                                    .
1584                                .-------> BS455
1579                             D455
                                    .
1589                                      .<-------  BS455
1587                                RT455
                                          V
                                          V
1590                                SR455
                                          .
1596                             C455............
                                    .
1599                        455C......................
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                V
                V
1602        SR440
                V
                V
1611        RR455
                .
                .
1617            .         456
                .           .
                .           .
1630            .           .-------> BASIN1
1627            .        DIV1
                .           .
                .           .
1636            .           .------->   WA30
1633            .        DIV2
                .           V
                .           V
1639            .        R456
                .           .
                .           .
1645            .           .         457
                .           .           .
                .           .           .
1655            .        C101............
                .           .
                .           .
1661            .           .-------> BASIN2
1658            .        DIV3
                .           .
                .           .
1666            .           .           .<------- BASIN2
1664            .           .      RTDIV3
                .           .           V
                .           .           V
1667            .           .      RFDIV3
                .           .           .
                .           .           .
1673            .       CDIV3............
                .           V
                .           V
1676            .        R101
                .           .
                .           .
1682            .           .         458
                .           .           .
                .           .           .
1692            .        C103............
                .           V
                .           V
1695            .        R103
                .           .
                .           .
1703            .           .           .<-------   WA30
1701            .           .        RT30
                .           .           V
                .           .           V
1704            .           .         R30
                .           .           .
                .           .           .
1712            .           .           .           .<------- BASIN1
1710            .           .           .        RTB1
                .           .           .           V
                .           .           .           V
1713            .           .           .          B1
                .           .           .           V
                .           .           .           V
1720            .           .           .         RB1
                .           .           .           .
                .           .           .           .
1726            .           .        CDIV............
                .           .           .
                .           .           .
1729            .           .           .         459
                .           .           .           .
                .           .           .           .
1739            .           .         C52............
                .           .           V
                .           .           V
1742            .           .         R52
                .           .           .
                .           .           .
1748            .           .           .         460
                .           .           .           .
                .           .           .           .
1758            .           .        C102............
                .           .           V
                .           .           V
1761            .           .      BASIN3
                .           .           V
                .           .           V
1768            .           .          R3
                .           .           .
                .           .           .
1774            .           .           .         461
                .           .           .           .
                .           .           .           .
1784            .           .        C104............
                .           .           .
                .           .           .
1787            .        C106............
                .           V
                .           V
1790            .        R106
                .           .
                .           .
1796            .           .         462
                .           .           .
                .           .           .
1806            .         C56............
                .           .
                .           .
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1809          .          .        480
              .          .          .
              .          .          .
1824          .          .          .-------->   BS480
1819          .          .       D480
              .          .          .
              .          .          .
1829          .          .          .          .<--------   BS480
1827          .          .          .      RT480
              .          .          .          V
              .          .          .          V
1830          .          .          .      SR480
              .          .          .          .
              .          .          .          .
1836          .          .       C480............
              .          .          .
              .          .          .
1839       480C........................
              V
              V
1842      RR480
              .
              .
1848          .        500
              .          .
              .          .
1858       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	572.	12.17	49.	13.	6.	.41		
+	ROUTED TO	R150	546.	12.23	49.	13.	6.	.41		
+	ROUTED TO	R152	504.	12.37	49.	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	7163.	12.30	860.	285.	168.	6.54		
+	HYDROGRAPH AT	383	650.	12.17	60.	17.	8.	.42		
+	ROUTED TO	R383	647.	12.17	60.	17.	8.	.42		
+	HYDROGRAPH AT	393	44.	12.13	4.	1.	0.	.04		
+	2 COMBINED AT	393C	687.	12.17	64.	18.	9.	.46		
	ROUTED TO	R393	681.	12.20	64.	18.	9.	.46		
	HYDROGRAPH AT	365	380.	12.27	45.	12.	6.	.41		
+	2 COMBINED AT	365C	1028.	12.20	108.	29.	14.	.88		
+	ROUTED TO	R365	1018.	12.23	108.	29.	14.	.88		

+	ROUTED TO 365R	970.	12.33	108.	29.	14.	.88
+	HYDROGRAPH AT 353	401.	12.30	49.	12.	6.	.50
	2 COMBINED AT 353C	1349.	12.33	155.	41.	20.	1.38
	ROUTED TO R353	1308.	12.40	155.	41.	20.	1.38
+	ROUTED TO 353R	1291.	12.43	155.	41.	20.	1.38
+	HYDROGRAPH AT 350	1151.	12.20	102.	27.	13.	.94
+	ROUTED TO 350R	992.	12.47	102.	27.	13.	.94
+	HYDROGRAPH AT 310	376.	12.33	49.	12.	6.	.56
+	3 COMBINED AT C310	2548.	12.43	301.	79.	38.	2.87
+	ROUTED TO R310	2407.	12.63	301.	79.	38.	2.87
+	ROUTED TO R312	2333.	12.73	301.	79.	38.	2.87
+	HYDROGRAPH AT 295	364.	12.30	40.	10.	5.	.38
+	2 COMBINED AT 295C	2456.	12.73	339.	89.	43.	3.25
+	ROUTED TO 295R	2423.	12.80	339.	89.	43.	3.25
+	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
+	3 COMBINED AT 240C	3025.	12.73	565.	147.	71.	5.23
	ROUTED TO SR240	1562.	13.13	498.	130.	62.	5.23
	HYDROGRAPH AT 220	1126.	12.17	98.	25.	12.	.73
+	2 COMBINED AT 220C	1582.	13.10	587.	154.	74.	5.95
+	ROUTED TO SR220	1517.	13.27	576.	151.	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	806.	12.17	69.	19.	9.	.54
+	3 COMBINED AT 200C	2561.	12.30	748.	197.	95.	7.41
+	ROUTED TO SR200	2435.	12.37	743.	194.	93.	7.41
+	ROUTED TO 200SR	1687.	12.63	623.	164.	79.	7.41
+	2 COMBINED AT C180	7163.	12.30	1475.	450.	247.	13.94
+	ROUTED TO SR180	142.	19.17	142.	142.	114.	13.94
+	ROUTED TO R180	142.	19.23	142.	142.	114.	13.94
+	HYDROGRAPH AT 260	418.	12.10	43.	12.	6.	.27
+	2 COMBINED AT 260C	527.	12.10	179.	153.	122.	.27
	ROUTED TO R260	515.	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	181.	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	1060.	12.20	142.	43.	21.	1.02
+	DIVERSION TO	BS340	1060.	12.20	71.	20.	9.	1.02
+	HYDROGRAPH AT	D340	948.	12.30	84.	23.	11.	1.02
+	HYDROGRAPH AT	RT340	1060.	12.20	71.	20.	9.	1.02
+	ROUTED TO	SR340	13.	8.47	13.	13.	9.	1.02
+	3 COMBINED AT	C340	2106.	12.30	465.	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	2109.	12.30	488.	255.	175.	3.45
+	HYDROGRAPH AT	380	323.	12.13	32.	9.	4.	.27
	DIVERSION TO	BS380	271.	12.03	13.	4.	2.	.27
	HYDROGRAPH AT	D380	323.	12.13	21.	6.	3.	.27
+	HYDROGRAPH AT	RT380	271.	12.03	13.	4.	2.	.27
+	ROUTED TO	SR380	2.	8.20	2.	2.	2.	.27

+ 3 COMBINED AT	380C	2311.	12.30	510.	263.	179.	3.72
+ HYDROGRAPH AT	400	55.	12.10	4.	1.	0.	.05
DIVERSION TO	BS400	55.	12.10	3.	1.	0.	.05
HYDROGRAPH AT	D400	18.	12.37	1.	0.	0.	.05
+ HYDROGRAPH AT	RT400	55.	12.10	3.	1.	0.	.05
+ ROUTED TO	SR400	1.	11.87	1.	0.	0.	.05
+ 2 COMBINED AT	C400	19.	12.37	1.	1.	0.	.05
+ 2 COMBINED AT	400C	2311.	12.30	511.	264.	180.	3.77
+ HYDROGRAPH AT	355	235.	12.10	22.	6.	3.	.17
+ ROUTED TO	R355	212.	12.27	22.	6.	3.	.17
+ HYDROGRAPH AT	361	523.	12.10	51.	15.	7.	.37
+ DIVERSION TO	BS361	474.	12.03	23.	7.	3.	.37
+ HYDROGRAPH AT	D361	505.	12.13	32.	9.	4.	.37
+ HYDROGRAPH AT	RT361	474.	12.03	23.	7.	3.	.37
+ ROUTED TO	SR361	4.	8.23	4.	4.	3.	.37
+ 3 COMBINED AT	361C	653.	12.13	57.	19.	10.	.54
+ 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	653.	12.13	88.	35.	20.	1.07
+ DIVERSION TO	BS3612	652.	12.13	84.	25.	12.	1.07
+ HYDROGRAPH AT	D3612	22.	17.90	21.	16.	8.	1.07

+ HYDROGRAPH AT	RT3612	652.	12.13	84.	25.	12.	1.07
+ ROUTED TO	SR3612	17.	11.90	17.	17.	12.	1.07
2 COMBINED AT	C3612	39.	17.90	37.	32.	20.	1.07
ROUTED TO	RR361	39.	18.27	37.	32.	20.	1.07
+ 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	75.	50.	31.	1.80
+ ROUTED TO	RR381	587.	12.40	74.	50.	31.	1.80
+ 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	641.	329.	219.	6.17
+ 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
+ 3 COMBINED AT	420C	3597.	12.33	727.	351.	231.	7.02
+ HYDROGRAPH AT	370	406.	12.07	34.	10.	5.	.26
+ HYDROGRAPH AT	395	204.	12.10	21.	6.	3.	.16
+ 2 COMBINED AT	395C	599.	12.07	55.	15.	7.	.42
+ DIVERSION TO	BS395	589.	12.07	47.	12.	6.	.42
+ HYDROGRAPH AT	D395	10.	11.20	7.	4.	2.	.42
+ HYDROGRAPH AT	RT395	589.	12.07	47.	12.	6.	.42
+ ROUTED TO	SR395	17.	11.63	17.	12.	6.	.42
+ 2 COMBINED AT	C395	27.	11.63	23.	15.	7.	.42
+ ROUTED TO	R395	27.	11.83	23.	15.	7.	.42
+ 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	485.	12.03	54.	24.	12.	.66

+	ROUTED TO RR390	477.	12.10	54.	24.	12.	.66
+	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
+	HYDROGRAPH AT 385	314.	12.07	24.	7.	3.	.20
+	HYDROGRAPH AT 411	304.	12.17	30.	8.	4.	.24
+	2 COMBINED AT 411C	566.	12.10	53.	15.	7.	.43
+	DIVERSION TO BS411	541.	12.10	43.	11.	5.	.43
+	HYDROGRAPH AT D411	25.	11.63	10.	4.	2.	.43
+	HYDROGRAPH AT RT411	541.	12.10	43.	11.	5.	.43
+	ROUTED TO SR411	17.	11.70	17.	11.	5.	.43
+	2 COMBINED AT C411	42.	11.70	26.	14.	7.	.43
+	ROUTED TO R411	42.	11.80	26.	14.	7.	.43
+	3 COMBINED AT C119	788.	12.13	134.	46.	23.	1.53
	ROUTED TO R454	763.	12.20	134.	46.	23.	1.53
	HYDROGRAPH AT 415	294.	12.13	31.	9.	4.	.28
+	3 COMBINED AT 415C	1445.	12.13	215.	77.	39.	2.48
+	ROUTED TO R415	1402.	12.20	215.	77.	39.	2.48

+ 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	4674.	12.30	964.	450.	287.	10.61
+ ROUTED TO	SR440	756.	13.57	743.	450.	287.	10.61
+ ROUTED TO	RR455	756.	13.90	742.	449.	284.	10.61
+ 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

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+        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     2502.   12.10        925.        524.        324.       2.09
+        ROUTED TO
                       RR480      2412.   12.13        923.        524.        324.       2.09
+        HYDROGRAPH AT
                         500      1073.   12.27        122.         33.         16.        .93
+        2 COMBINED AT
                         500C     3301.   12.17       1034.        552.        338.       3.02
1
                                 SUMMARY OF KINEMATIC WAVE - MUSKINGUM-CUNGE ROUTING
                                     (FLOW IS DIRECT RUNOFF WITHOUT BASE FLOW)
                                                                          INTERPOLATED TO
                                                                        COMPUTATION INTERVAL
          ISTAQ    ELEMENT      DT        PEAK    TIME TO     VOLUME      DT       PEAK    TIME TO     VOLUME
                                                    PEAK                                              PEAK
                               (MIN)      (CFS)    (MIN)      (IN)      (MIN)     (CFS)     (MIN)       (IN)
        FOR STORM = 1  STORM AREA (SQ MI) =        .01
           RR390  MANE          1.69    499.93   724.47      1.47       2.00    498.74    726.00       1.48

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5194E+02 EXCESS= .0000E+00 OUTFLOW= .5199E+02 BASIN STORAGE= .7991E-08 PERCENT ERROR=   -.1

        FOR STORM = 2  STORM AREA (SQ MI) =      10.00
           RR390  MANE          1.64    464.29   724.59      1.35       2.00    462.76    726.00       1.35

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4761E+02 EXCESS= .0000E+00 OUTFLOW= .4768E+02 BASIN STORAGE= .9768E-08 PERCENT ERROR=   -.1

        FOR STORM = 3  STORM AREA (SQ MI) =      30.00
           RR390  MANE          1.74    440.94   725.86      1.27       2.00    439.63    726.00       1.27

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4477E+02 EXCESS= .0000E+00 OUTFLOW= .4484E+02 BASIN STORAGE= .1119E-07 PERCENT ERROR=   -.1

        FOR STORM = 4  STORM AREA (SQ MI) =      60.00
           RR390  MANE          1.63    415.36   726.18      1.19       2.00    415.31    726.00       1.19

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4191E+02 EXCESS= .0000E+00 OUTFLOW= .4202E+02 BASIN STORAGE= .1121E-07 PERCENT ERROR=   -.2

        FOR STORM = 5  STORM AREA (SQ MI) =      90.00
           RR390  MANE          1.72    408.90   725.58      1.16       2.00    406.06    726.00       1.16

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4076E+02 EXCESS= .0000E+00 OUTFLOW= .4083E+02 BASIN STORAGE= .1116E-07 PERCENT ERROR=   -.2

        FOR STORM = 6  STORM AREA (SQ MI) =     120.00
           RR390  MANE          1.70    399.05   724.79      1.14       2.00    397.33    726.00       1.14

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4000E+02 EXCESS= .0000E+00 OUTFLOW= .4005E+02 BASIN STORAGE= .8323E-08 PERCENT ERROR=   -.1

        FOR STORM = 7  STORM AREA (SQ MI) =     150.00
           RR390  MANE          1.66    396.78   725.39      1.12       2.00    393.62    726.00       1.11

NTINUITY SUMMARY (AC-FT) - INFLOW= .3922E+02 EXCESS= .0000E+00 OUTFLOW= .3931E+02 BASIN STORAGE= .8058E-08 PERCENT ERROR=   -.2

        FOR STORM = 8  STORM AREA (SQ MI) =     300.00
           RR390  MANE          1.72    378.31   726.05      1.07       2.00    378.18    726.00       1.07
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CONTINUITY SUMMARY (AC-FT) - INFLOW= .3748E+02 EXCESS= .0000E+00 OUTFLOW= .3760E+02 BASIN STORAGE= .9310E-08 PERCENT ERROR=   -.3

          FOR STORM = 9  STORM AREA (SQ MI) =      500.00
             RR390  MANE          1.78    365.69    725.95      1.02      2.00    365.35    726.00        1.02

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3591E+02 EXCESS= .0000E+00 OUTFLOW= .3598E+02 BASIN STORAGE= .8906E-08 PERCENT ERROR=   -.2

          FOR STORM = 1  STORM AREA (SQ MI) =          .01
              R411  MANE          1.77     42.01    784.82      1.31      2.00     42.00    784.00        1.31

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3031E+02 EXCESS= .0000E+00 OUTFLOW= .3032E+02 BASIN STORAGE= .3673E-09 PERCENT ERROR=    .0

          FOR STORM = 2  STORM AREA (SQ MI) =       10.00
              R411  MANE          1.87     42.00    714.85      1.19      2.00     42.00    716.00        1.19

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2761E+02 EXCESS= .0000E+00 OUTFLOW= .2762E+02 BASIN STORAGE= .2674E-09 PERCENT ERROR=    .0

          FOR STORM = 3  STORM AREA (SQ MI) =       30.00
              R411  MANE          1.84     42.00    755.72      1.12      2.00     42.00    756.00        1.12

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2585E+02 EXCESS= .0000E+00 OUTFLOW= .2585E+02 BASIN STORAGE= .2396E-09 PERCENT ERROR=    .0

          FOR STORM = 4  STORM AREA (SQ MI) =       60.00
              R411  MANE          1.86     42.00    708.53      1.04      2.00     42.00    710.00        1.04

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2406E+02 EXCESS= .0000E+00 OUTFLOW= .2407E+02 BASIN STORAGE= .2547E-09 PERCENT ERROR=    .0

          FOR STORM = 5  STORM AREA (SQ MI) =       90.00
              R411  MANE          1.87     42.00    712.76      1.01      2.00     42.00    712.00        1.01

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2334E+02 EXCESS= .0000E+00 OUTFLOW= .2335E+02 BASIN STORAGE= .2265E-09 PERCENT ERROR=   -.1

          FOR STORM = 6  STORM AREA (SQ MI) =      120.00
              R411  MANE          1.85     42.00    737.64       .99      2.00     42.00    738.00         .99

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2286E+02 EXCESS= .0000E+00 OUTFLOW= .2286E+02 BASIN STORAGE= .2527E-09 PERCENT ERROR=    .0

          FOR STORM = 7  STORM AREA (SQ MI) =      150.00
              R411  MANE          1.89     42.00    751.31       .97      2.00     42.00    752.00         .97

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2238E+02 EXCESS= .0000E+00 OUTFLOW= .2239E+02 BASIN STORAGE= .2595E-09 PERCENT ERROR=    .0

          FOR STORM = 8  STORM AREA (SQ MI) =      300.00
              R411  MANE          1.91     42.00    742.99       .92      2.00     42.00    744.00         .92

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2129E+02 EXCESS= .0000E+00 OUTFLOW= .2129E+02 BASIN STORAGE= .2265E-09 PERCENT ERROR=    .0

          FOR STORM = 9  STORM AREA (SQ MI) =      500.00
              R411  MANE          1.77     42.00    719.38       .88      2.00     42.00    720.00         .88

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2030E+02 EXCESS= .0000E+00 OUTFLOW= .2031E+02 BASIN STORAGE= .2550E-09 PERCENT ERROR=    .0


*** NORMAL END OF HEC-1 ***
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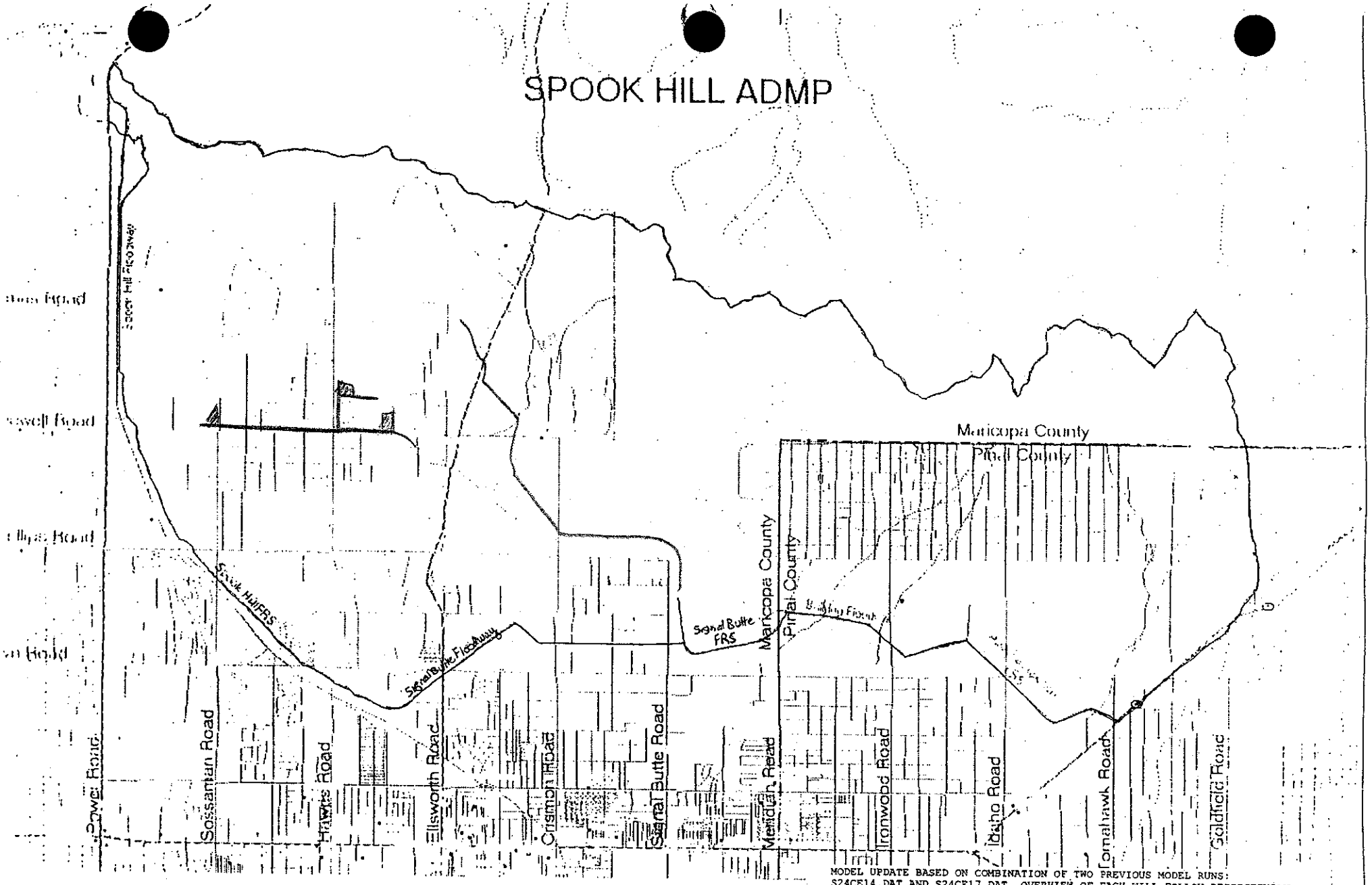
SPOOK HILL ADMP



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   26JUL00  TIME  09:09:11   *                                    *           (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   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; 07/18/00
 30           ID   FILE:        S24CE43.DAT
 31           ID
 32           ID
 33           ID   DDM MCUHP1 SPOOK HILL AMDP
              *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
1                                      HEC-1 INPUT                                                    PAGE  3

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 *****
1                                      HEC-1 INPUT                                                    PAGE  4

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 =  314.6
207          BA    .408
208          LG    .350    .360   5.100    .260   7.000
209          UC    .296    .221
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 = 1.49  Kb = .047  Adj. Slope =  315.0
252          BA    .420
253          LG    .350    .400   6.000    .170  16.000
254          UC    .287    .209
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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 *****
1                                        HEC-1 INPUT                                                    PAGE  9

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 *****
1                                        HEC-1 INPUT                                                    PAGE 10

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   5.000
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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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 = 1.58  Kb = .045  Adj. Slope =  305.6
BA    .535
LG    .350    .390   5.700    .200  10.000
UC    .300    .200
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 *****
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  .997
829          KM     L = 1.69  Kb = .045  Adj. Slope =  107.0
830          BA    .570
831          LG    .320    .280   4.350    .440  10.000
832          UC    .500    .359
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   ***** Updated *****

864          KK     395
865          KM   SUB-BASIN 395
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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  .999
868          KM     L = 1.00  Kb = .052  Adj. Slope =  188.0
869          BA    .160
870          LG    .330    .320   5.100    .280  12.000
871          UC    .300    .276
872          UA       0       5      16      30      65      77      84      90      94      97
873          UA     100
             * DDM   ***** Preserved *****

874          KK    395C
875          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
876          HC       2
             * DDM   ***** Preserved *****

877          KK    D395
878          KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN LOCATED WITHIN SUB-BASINS
879          KM   370 AND 395.
             *     1
880          DT   BS395
881          DI       0      25    5000
882          DQ       0       0    4975
             * DDM   ***** Preserved *****

883          KK   RT395
884          KM   RETRIEVE FLOW FROM DIVERSION
885          DR   BS395
             * DDM   ***** Preserved *****

886          KK   SR395
887          KM   RETRIEVE FLOW INTO OFFLINE BASIN AND BLEED OFF WITHIN 36 HOURS.
888          KM      21 ACRE-FEETx43560/36x3600  = 7cfs
889          RS       1    STOR       0
890          SV       0     .01      21
891          SQ       0       7       7
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 23

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

892          KK    C395
893          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
894          HC       2
             * DDM   ***** Preserved *****

895          KK    R395
896          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
897          KM   ROUTING OF FLOW FROM SUB-BASINS 370 AND 395 TO SUB-BASIN 390
898          RS       8    FLOW      -1
899          RC    .045    .035    .045    2600    .023
900          RX       0       1      40      46      56      62     102     103
901          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

902          KK     385
903          KM   SUB-BASIN 385
904          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
905          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
906          KM     L =  .90  Kb = .051  Adj. Slope =  309.5
907          BA    .197
908          LG    .330    .320   4.800    .310   9.000
909          UC    .233    .171
910          UA       0       5      16      30      65      77      84      90      94      97
911          UA     100
             * DDM   ***** Updated *****

912          KK     411
913          KM   SUB-BASIN 411
914          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
915          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
916          KM     L = 1.38  Kb = .050  Adj. Slope =  315.0
917          BA    .237
918          LG    .340    .350   5.000    .270  10.000
919          UC    .292    .277
920          UA       0       3       5       8      12      20      43      75      90      96
921          UA     100
             * DDM   ***** Preserved *****

922          KK    411C
923          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 411
924          HC       2
             * DDM   ***** Preserved *****

925          KK    D411
926          KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN LOCATED WITHIN SUB-BASINS
927          KM   385 AND 411.
928          DT   SF411
929          DI       0      25    5000
930          DQ       0       0    4975
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 24

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

931          KK   RT411
932          KM   RETRIEVE FLOW FROM DIVERSION OF SUB-BASIN 411.
933          DR   SF411
             * DDM   ***** Preserved *****

934          KK   SR411
935          KM   RETRIEVE FLOW INTO OFFLINE BASIN AND BLEED OFF WITHIN 36 HOURS.
936          KM      21 ACRE-FEETx43560/36x3600  = 7cfs
937          RS       1    STOR       0
938          SV       0     .01      21
939          SQ       0       7       7
             * DDM   ***** Preserved *****

940          KK    C411
941          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 411
942          HC       2
             * DDM   ***** Preserved *****
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 943          KK    R411
 944          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
 945          KM   ROUTING OF SPLIT FLOW FROM SUB-BASIN 385 AND SUB-BASIN 411 TO SUB-BASIN 390.
 946          RS       3    FLOW      -1
 947          RC    .045    .035    .045    1300    .038
 948          RX       0       1      40      46      56      62     102     103
 949          RY       3       2       2       0       0       2       2       3
              * DDM   ***** Updated *****

 950          KK     390
 951          KM   SUB-BASIN 390
 952          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 953          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
 954          KM     L =  .70  Kb = .050  Adj. Slope =  299.4
 955          BA    .244
 956          LG    .300    .250   4.700    .380  18.000
 957          UC    .204    .107
 958          UA       0       5      16      30      65      77      84      90      94      97
 959          UA     100
              * DDM   ***** Preserved *****

 960          KK    D390
 961          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
 962          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THUNDER MOUNTAIN ESTATES
 963          KM        MAXIMUM VOLUME DIVERSION  = 3.5 acre-feet
              *      1
 964          DT   BS390     3.5
 965          DI       0    5000
 966          DQ       0    5000
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                                    PAGE 25

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

 967          KK   RT390
 968          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
 969          DR   BS390
              * DDM   ***** Preserved *****

 970          KK   SR390
 971          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
 972          KM     3.5 ACRE-FEETx43560/36x3600=1.2cfs
 973          RS       1    STOR       0
 974          SV       0     .01     3.5
 975          SQ       0     1.2     1.2
              * DDM   ***** Preserved *****

 976          KK    390C
 977          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
 978          HC       4
              * DDM   ***** Preserved *****

 979          KK   RR390
 980          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
 981          KM   FROM SUB-BASIN 390 TO SUB-BASIN 410.
 982          RS       7    FLOW      -1
 983          RC    .045    .035    .045    5500    .020
 984          RX       0       1      40      46      56      62     102     103
 985          RY       3       2       2       0       0       2       2       3
              * DDM   ***** Updated *****

 986          KK     410
 987          KM   SUB-BASIN 410
 988          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 989          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
 990          KM     L = 1.00  Kb = .049  Adj. Slope =  150.0
 991          BA    .278
 992          LG    .300    .250   3.950    .580  15.000
 993          UC    .329    .224
 994          UA       0       5      16      30      65      77      84      90      94      97
 995          UA     100
              * DDM   ***** Preserved *****

 996          KK    410C
 997          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
 998          HC       2
              * DDM   ***** Updated *****

 999          KK     440
1000          KM   SUB-BASIN 440
1001          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1002          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1003          KM     L =  .40  Kb = .039  Adj. Slope =  315.0
1004          BA    .080
1005          LG    .190    .380   6.400    .140  13.000
1006          UC    .129    .077
1007          UA       0       3       5       8      12      20      43      75      90      96
1008          UA     100
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                                    PAGE 26

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

1009          KK     R70
1010          KM   ROUTE FLOW FROM SUB-BASIN 440 TO C108
1011          RS       1    FLOW      -1
1012          RC     .05    .035     .05    2250     .08
1013          RX    1000    1025    1050    1070    1075    1095    1120    1145
1014          RY      30    22.9    15.7      10      10    15.7    22.9      30
              * DDM   ***** Updated *****

1015          KK     441
1016          KM   SUB-BASIN 441
1017          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1018          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1019          KM     L =  .28  Kb = .069  Adj. Slope =  315.0
1020          BA    .010
1021          LG    .300    .250   5.600    .220   5.000
1022          UC    .150    .225
1023          UA       0       5      16      30      65      77      84      90      94      97
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1024          UA     100
              * DDM   ***** Preserved *****

1025          KK    C108
1026          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 440 & 441
1027          HC       2
              * DDM   ***** Preserved *****

1028          KK    DIV4
1029          KM        SPLIT FLOW WITH TWO 42 INCH PIPES TO WEST AND SOUTH
              *      1
1030          DT   SPLIT
1031          DI       0      14      40      82     120     154     180
1032          DQ       0       7      20      41      60      77      90
              * DDM   ***** Preserved *****

1033          KK    R108
1034          KM        ROUTE FLOW FROM SUB-BASIN C108 TO C67
1035          RS       2    FLOW      -1
1036          RC     .05    .035     .05    3200      .1
1037          RX    1000    1025    1050    1070    1075    1095    1120    1145
1038          RY      30    22.9    15.7      10      10    15.7    22.9      30
              * DDM   ***** Updated *****

1039          KK     442
1040          KM   SUB-BASIN 442
1041          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1042          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1043          KM     L =  .83  Kb = .055  Adj. Slope =  274.2
1044          BA    .100
1045          LG    .300    .270   3.290    .770   5.000
1046          UC    .258    .264
1047          UA       0       5      16      30      65      77      84      90      94      97
1048          UA     100
              * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 27

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


1049          KK     C67
1050          KM   COMBINE FLOW FROM SUB-BASIN 442 & DIV4
1051          HC       2
              * DDM   ***** Preserved *****

1052          KK    DIV6
1053          KM        OFFLINE BASIN WITH 25 FOOT WEIR SET AT 2.5 FEET ABOVE BOTTOM OF CHANNEL
1054          KM        FLOW CONTINUES BEYOND BASIN THROUGH 2-30" PIPES
              *      1
1055          DT  BASIN4
1056          DI       0      10      32      44    79.9   132.5     198   272.9   356.8
1057          DQ       0       0       0       0    23.9    67.5     124   190.9   266.8
              * DDM   ***** Preserved *****

1058          KK  RTDIV6
1059          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1060          DR  BASIN4
              * DDM   ***** Preserved *****

1061          KK  RFDIV6
1062          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1063          KM     3.3 ACRE-FEETx43560/36x3600=1.1cfs
              *      1
1064          RS       1    STOR       0
1065          SV       0     .01     3.3
1066          SQ       0     1.1     1.1
              * DDM   ***** Preserved *****

1067          KK   CDIV6
1068          KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1069          HC       2
              * DDM   ***** Updated *****

1070          KK     443
1071          KM   SUB-BASIN 443
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 =  .71  Kb = .050  Adj. Slope =  315.0
1075          BA    .080
1076          LG    .250    .190   8.000    .080  10.000
1077          UC    .196    .194
1078          UA       0       5      16      30      65      77      84      90      94      97
1079          UA     100
              * DDM   ***** Preserved *****

1080          KK   DIV66
1081          KM        DIVERT FLOW INTO 3 NATURAL WASHES WITH ONE 24" PIPE IN EACH WASH.
1082          KM        EACH PIPE CAPACITY BASED ON 4 FEET OF HEAD
1083          DT   WSH66
1084          DI       0      78     100     200
1085          DQ       0      78      78      78
              * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 28

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


1086          KK    R113
1087          KM        ROUTE FLOW FROM C113 TO C114
1088          RS       1    FLOW      -1
1089          RC    .019    .019    .019    1300    .029
1090          RX    1000    1004    1008    1012    1018    1022    1026    1030
1091          RY      17   15.33   12.67      10      10   12.67   15.33      17
              * DDM   ***** Preserved *****

1092          KK    C114
1093          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 67 AND C113
1094          HC       2
              * DDM   ***** Updated *****

1095          KK     444
1096          KM   SUB-BASIN 444
1097          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
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1098        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1099        KM     L =  .33  Kb = .034  Adj. Slope =  315.0
1100        BA    .040
1101        LG    .130    .350   4.450    .320   1.000
1102        UC    .112    .084
1103        UA       0       3       5       8      12      20      43      75      90      96
1104        UA     100
            * DDM   ***** Preserved *****

1105        KK     R58
1106        KM   ROUTE FLOW FROM SUB-BASIN 444 TO C107
1107        RS       1    FLOW      -1
1108        RC     .05    .035     .05    2370   .0516
1109        RX    1000    1010    1020    1050    1055    1085    1095    1105
1110        RY      19      18      17      10      10      17      18      19
            * DDM   ***** Updated *****

1111        KK     445
1112        KM   SUB-BASIN 445
1113        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1114        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1115        KM     L =  .82  Kb = .036  Adj. Slope =  315.0
1116        BA    .190
1117        LG    .170    .320   3.470    .590   3.000
1118        UC    .192    .130
1119        UA       0       5      16      30      65      77      84      90      94      97
1120        UA     100
            * DDM   ***** Preserved *****

1121        KK    C107
1122        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 444 & 445
1123        HC       2
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1124        KK    R107
1125        KM        ROUTE FLOW FROM C107 TO C109
1126        RS       1    FLOW      -1
1127        RC     .05    .035     .05     700   .0516
1128        RX    1000    1010    1020    1050    1055    1085    1095    1105
1129        RY      19      18      17      10      10      17      18      19
            * DDM   ***** Preserved *****

1130        KK    RTB2
1131        KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
            *      1
1132        DR   SPLIT
            * DDM   ***** Preserved *****

1133        KK  RSPLIT
1134        KM        ROUTE FLOW FROM SPLIT TO C109
1135        RS       1    FLOW      -1
1136        RC     .05    .035     .05     800     .05
1137        RX    1000    1025    1050    1070    1075    1095    1120    1145
1138        RY      30    22.9    15.7      10      10    15.7    22.9      30
            * DDM   ***** Updated *****

1139        KK     446
1140        KM   SUB-BASIN 446
1141        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1142        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1143        KM     L =  .46  Kb = .061  Adj. Slope =  303.9
1144        BA    .040
1145        LG    .270    .250   4.500    .400  19.000
1146        UC    .183    .189
1147        UA       0       5      16      30      65      77      84      90      94      97
1148        UA     100
            * DDM   ***** Preserved *****

1149        KK    C109
1150        KM        COMBINE HYDROGRAPHS FROM COMBINES C107 AND C108
1151        HC       3
            * DDM   ***** Preserved *****

1152        KK    DIV5
1153        KM        DIVERT FLOW INTO WASHES TOWARDS WEST
1154        KM        DIVERSION THROUGH 36" PIPE WITH 3 FEET OF HEAD
            *      1
1155        DT  WSH404
1156        DI       0    40.7    71.2   121.6     190     276   379.4   500.6
1157        DQ       0      35      35      35      35      35      35      35
            * DDM   ***** Preserved *****

1158        KK    R109
1159        KM        ROUTE FLOW FROM C109 TO C110
1160        RS       1    FLOW      -1
1161        RC    .019    .019    .019    3080     .05
1162        RX    1000    1005    1010    1015    1025    1030    1035    1040
1163        RY   13.75    12.5   11.25      10      10   11.25    12.5   13.75
            * DDM   ***** Updated *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1164        KK     447
1165        KM   SUB-BASIN 447
1166        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1167        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1168        KM     L =  .49  Kb = .056  Adj. Slope =  221.0
1169        BA    .090
1170        LG    .250    .270   3.350    .870  30.000
1171        UC    .208    .145
1172        UA       0       5      16      30      65      77      84      90      94      97
1173        UA     100
            * DDM   ***** Preserved *****

1174        KK   RT404
1175        KM        RETRIEVE DIVERTED FLOW FOR WASH 109
1176        DR  WSH404
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            * DDM   ***** Preserved *****

1177        KK    R404
1178        KM        ROUTE FLOW FROM C110 TO C110
1179        RS       5    FLOW      -1
1180        RC    .019    .019    .019    3540     .03
1181        RX    1000    1012    1016    1020    1025    1029    1033    1045
1182        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Preserved *****

1183        KK    C110
1184        KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 447 AND R404
1185        HC       3
            * DDM   ***** Preserved *****

1186        KK    R110
1187        KM        ROUTE FLOW FROM C110 TO C115
1188        RS       1    FLOW      -1
1189        RC    .019    .019    .019     580   .0291
1190        RX    1000    1012    1016    1020    1035    1039    1043    1055
1191        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Preserved *****

1192        KK    C115
1193        KM        COMBINE HYDROGRAPHS FROM C114 AND C110
1194        HC       2
            * DDM   ***** Preserved *****

1195        KK    R115
1196        KM        ROUTE FLOW FROM C115 TO C119
1197        RS       1    FLOW      -1
1198        RC    .019    .019    .019    2125    .029
1199        RC    .019    .019    .019     580   .0291
1200        RX    1000    1012    1016    1020    1035    1039    1043    1055
1201        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Updated *****
1                                   HEC-1 INPUT                                    PAGE 31

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


1202        KK     448
1203        KM   SUB-BASIN 448
1204        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1205        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1206        KM     L =  .36  Kb = .042  Adj. Slope =  315.0
1207        BA    .045
1208        LG    .170    .310   4.200    .390  11.000
1209        UC    .133    .102
1210        UA       0       5      16      30      65      77      84      90      94      97
1211        UA     100
            * DDM   ***** Updated *****

1212        KK     449
1213        KM   SUB-BASIN 449
1214        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1215        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1216        KM     L =  .40  Kb = .054  Adj. Slope =  315.0
1217        BA    .050
1218        LG    .260    .280   3.500    .640   6.000
1219        UC    .167    .134
1220        UA       0       5      16      30      65      77      84      90      94      97
1221        UA     100
            * DDM   ***** Preserved *****

1222        KK   C6364
1223        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 448 & 449
1224        HC       2
            * DDM   ***** Preserved *****

1225        KK   R6364
1226        KM   ROUTE FLOW FROM C116 AND SUB-BASINS 448 AND 449
1227        RS       4    FLOW      -1
1228        RC     .05    .035     .05    4375   .0333
1229        RX    1000    1027    1053    1080    1090    1117    1143    1170
1230        RY      15   13.33   11.67      10      10   11.67   13.33      15
            * DDM   ***** Updated *****

1231        KK     450
1232        KM   SUB-BASIN 450
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 =  .85  Kb = .057  Adj. Slope =  210.5
1236        BA    .070
1237        LG    .340    .350   3.630    .570   4.000
1238        UC    .296    .383
1239        UA       0       3       5       8      12      20      43      75      90      96
1240        UA     100
            * DDM   ***** Updated *****
1                                   HEC-1 INPUT                                    PAGE 32

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


1241        KK     451
1242        KM   SUB-BASIN 451
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 1.000
1245        KM     L =  .57  Kb = .063  Adj. Slope =  175.0
1246        BA    .025
1247        LG    .340    .340   3.290    .750   3.000
1248        UC    .271    .453
1249        UA       0       3       5       8      12      20      43      75      90      96
1250        UA     100
            * DDM   ***** Preserved *****

1251        KK    RT66
1252        KM        RETRIEVE DIVERTED FLOW FROM SUB-BASIN 66
1253        DR   WSH66
            * DDM   ***** Updated *****

1254        KK     452
1255        KM   SUB-BASIN 452
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1256        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1257        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1258        KM     L =  .43  Kb = .055  Adj. Slope =  315.0
1259        BA    .040
1260        LG    .260    .280   3.700    .550   9.000
1261        UC    .171    .166
1262        UA      0       5      16      30      65      77      84      90      94      97
1263        UA    100
            * DDM   ***** Preserved *****

1264        KK   C6465
1265        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 443 AND 452
1266        HC       2
            * DDM   ***** Preserved *****

1267        KK   R6566
1268        KM        ROUTE FLOW FROM DIVERSIONS 65 AND 66 TO C116
1269        RS       2    FLOW      -1
1270        RC     .05    .035     .05    2435   .0282
1271        RX    1000    1045    1090    1150    1160    1220    1265    1310
1272        RY      25      23      20      10      10      20      23      25
            * DDM   ***** Preserved *****

1273        KK    C116
1274        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 450 & 451 AND R6364 & R6465
1275        HC       4
            * DDM   ***** Preserved *****

1276        KK  BASIN5
1277        KM        RESERVOIR WITHIN PARCEL 31      2-48 INCH PIPES AT OUTFALL
1278        KM        BASIN 5 FEET DEEP
1279        RS       1    ELEV       0
1280        SV       0     4.5     9.9
1281        SQ       0      69     190
1282        SE       0     2.5       5
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 33

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


1283        KK    R116
1284        KM   ROUTE FLOW FROM C116 TO C117
1285        RS       2    FLOW      -1
1286        RC     .05    .035     .05    1300   .0333
1287        RX    1000    1100    1200    1300    1320    1420    1520    1620
1288        RY      13      12      11      10      10      11      12      13
            * DDM   ***** Updated *****

1289        KK     453
1290        KM   SUB-BASIN 453
1291        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1292        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1293        KM     L =  .58  Kb = .058  Adj. Slope =  138.0
1294        BA    .060
1295        LG    .290    .300   3.290    .820  18.000
1296        UC    .275    .284
1297        UA      0       5      16      30      65      77      84      90      94      97
1298        UA    100
            * DDM   ***** Preserved *****

1299        KK    C117
1300        KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 453 AND R116
1301        HC       2
            * DDM   ***** Preserved *****

1302        KK    C118
1303        KM   COMBINE HYDROGRAPHS FROM R115 AND C117
1304        HC       2
            * DDM   ***** Preserved *****

1305        KK    R118
1306        KM        ROUTE FLOW FROM C118 TO  DIV7
1307        RS       1    FLOW      -1
1308        RC    .019    .019    .019    1500    .024
1309        RX    1000    1012    1016    1020    1035    1039    1043    1055
1310        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Preserved *****

1311        KK    DIV7
1312        KM        OFFLINE BASIN AT NORTH MOUNTAIN RIDGE   FLOWS ENTER BASIN OVER
1313        KM        30' WEIR SET AT 5.3' ABOVE THE CHANNEL BOTTOM
            *     1
1314        DT  BASIN6
1315        DI       0     363     487     563     645     844
1316        DQ       0       3      47      83     125     244
            * DDM   ***** Preserved *****

1317        KK  RTDIV7
1318        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1319        DR  BASIN6
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 34

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


1320        KK  RFDIV7
1321        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1322        KM     3.6 ACRE-FEETx43560/36x3600=1.2cfs
1323        RS       1    STOR       0
1324        SV       0     .01     3.6
1325        SQ       0     1.2     1.2
            * DDM   ***** Preserved *****

1326        KK   CDIV7
1327        KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1328        HC       2
            * DDM   ***** Updated *****

1329        KK     454
1330        KM   SUB-BASIN 454
1331        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
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1332          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1333          KM     L = 1.23  Kb = .051  Adj. Slope =  163.0
1334          BA    .180
1335          LG    .300    .310   3.780    .560  14.000
1336          UC    .379    .395
1337          UA       0       5      16      30      65      77      84      90      94      97
1338          UA     100
              * DDM   ***** Preserved *****

1339          KK    C119
1340          KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 454 AND DIV7.
              *      1       2
1341          HC       2
              * DDM   ***** Preserved *****

1342          KK    R454
1343          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1344          KM   ROUTING OF FLOW FROM LAS SENDAS AND R413 TO SUB-BASIN 415.
1345          RS       2    FLOW      -1
1346          RC    .045    .035    .045    2500    .012
1347          RX       0      .5       1      33      42      67    67.5      68
1348          RY       5       4       4       0       0       6       6       6
              * DDM   ***** Updated *****

1349          KK     415
1350          KM   SUB-BASIN 415
1351          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1352          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1353          KM     L = 1.10  Kb = .049  Adj. Slope =  155.0
1354          BA    .281
1355          LG    .300    .260   3.630    .710  15.000
1356          UC    .358    .264
1357          UA       0       5      16      30      65      77      84      90      94      97
1358          UA     100
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 35

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


1359          KK    415C
1360          KM   HYDROGRAPH COMBINATION OF R454, SUB-BASIN 415, R410.
1361          HC       3
              * DDM   ***** Preserved *****

1362          KK    D415
1363          KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN
1364          KM   MAXIMUM STORAGE VOLUME FOR DIVERSION = 45 AC-FT @ 5' DEPTH.
              *      1
1365          DT   BS415
1366          DI       0    1100    5000
1367          DQ       0       0    3900
              * DDM   ***** Preserved *****

1368          KK   RT415
1369          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1370          DR   BS415
              * DDM   ***** Preserved *****

1371          KK   SR415
1372          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1373          KM      11 ACRE-FEETx43560/36x3600  = 4cfs
1374          RS       1    STOR       0
1375          SV       0     .01      11
1376          SQ       0       4       4
              * DDM   ***** Preserved *****

1377          KK    C415
1378          KM   HYDROGRAPH COMBINATION OF 415 DIVERSION.
1379          HC       2
              * DDM   ***** Preserved *****

1380          KK    R415
1381          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1382          KM   ROUTING OF FLOW FROM 415C TO 455C
1383          RS       4    FLOW      -1
1384          RC    .045     .03    .045    4100    .024
1385          RX       0      .5       1       8      16      23    23.5      24
1386          RY       8       8       8       0       0       8       8       8
              * DDM   ***** Updated *****

1387          KK     455
1388          KM   SUB-BASIN 455
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  .993
1391          KM     L = 1.70  Kb = .041  Adj. Slope =  146.0
1392          BA   1.111
1393          LG    .270    .280   3.700    .640  24.000
1394          UC    .421    .204
1395          UA       0       5      16      30      65      77      84      90      94      97
1396          UA     100
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 36

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


1397          KK    D455
1398          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1399          KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1400          KM   FOR BASIN #: 30      34      43      47&58
1401          KM        MAXIMUM VOLUME DIVERSION = 74.1 acre-feet
              *      1
1402          DT   BS455    74.1
1403          DI       0   10000
1404          DQ       0   10000
              * DDM   ***** Preserved *****

1405          KK   RT455
1406          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1407          DR   BS455
              * DDM   ***** Preserved *****
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1408          KK   SR455
1409          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1410          KM    74.1 ACRE-FEETx43560/36x3600=25cfs
1411          RS       1    STOR       0
1412          SV       0     .01    74.1
1413          SQ       0      25      25
              * DDM   ***** Preserved *****

1414          KK    C455
1415          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 455 AND DIVERTED BASIN STORAGE OF 455
1416          HC       2
              * DDM   ***** Preserved *****

1417          KK    455C
1418          KM  HYDROGRAPH COMBINATION OF 420C, R415 AND C455
              *      1       2
1419          HC       3
              * DDM   ***** Preserved *****

1420          KK   SR440
1421          KM   SPOOK HILL FRS PLANS DATED 6/15/77
1422          KM   OUTLET PIPE=7'x7.5'RCBC; L=70 INLET INV.=1566; OUTLET INV.=1566
1423          KM   EMERGENCY SPILLWAY ELEV.=1582; PRINCIPLE SPILLWAY ELEV.=1577.5
1424          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 200 ACRE-FEET
1425          RS       1    STOR       0
1426          SV       0      10     100     300     500     680
1427          SQ       0     640     720     780     825     860
1428          SE      66    77.5      79    80.2    81.2      82
              * DDM   ***** Preserved *****

1429          KK   RR455
1430          KM   ROUTE FLOW FROM SPOOK HILL FRS TO SUB-BASIN 462
1431          RS      10    FLOW      -1
1432          RC    .035    .025    .035    9200    .002
1433          RX       0       1       2      28      58      84      85      86
1434          RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
              * DDM   ***** Updated *****
1                                   HEC-1 INPUT                                          PAGE 37

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

1435          KK     456
1436          KM   SUB-BASIN 456
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 =  .94  Kb = .045  Adj. Slope =  315.0
1440          BA    .260
1441          LG    .300    .380   5.600    .200  12.000
1442          UC    .217    .139
1443          UA       0       5      16      30      65      77      84      90      94      97
1444          UA     100
              * DDM   ***** Preserved *****

1445          KK    DIV1
1446          KM        DIVERT FLOW INTO OFFLINE DETENTION BASIN
1447          KM        WEIR FOR BASIN SET AT 4 FEET ABOVE CHANNEL BOTTOM
              *      1
1448          DT  BASIN1
1449          DI       0    11.1   127.9   234.4   577.7   789.9  1025.5  1280.9  1555.7
1450          DQ       0       0       0    47.7     248   381.8   533.6   701.5     884
              * DDM   ***** Preserved *****

1451          KK    DIV2
1452          KM        SPLIT OUT FLOW FOR WASHES THAT FLOW TO THE SOUTH FROM
1453          KM        WASHES THAT DRAIN TO THE WES, SOUTHERN WASHES FED BY 30" & 24" PIPE
1454          DT    WA30
1455          DI       0    11.1   127.9   189.6   329.7     408   491.9   579.4   671.7
1456          DQ       0    11.1    38.4    48.2      63    69.5      76      81      86
              * DDM   ***** Preserved *****

1457          KK    R456
1458          KM        ROUTE FLOW FROM SUB-BASIN 51 TO C101
1459          RS       2    FLOW      -1
1460          RC     .05    .035     .05    3800    .044
1461          RX    1000    1010    1020    1036    1041    1057    1067    1077
1462          RY   14.88   14.44      14      10      10      14   14.44   14.88
              * DDM   ***** Updated *****

1463          KK     457
1464          KM   SUB-BASIN 457
1465          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1466          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1467          KM     L = 1.01  Kb = .045  Adj. Slope =  308.8
1468          BA    .190
1469          LG    .270    .330   3.950    .460   6.000
1470          UC    .237    .195
1471          UA       0       5      16      30      65      77      84      90      94      97
1472          UA     100
              * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 38

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

1473          KK    C101
1474          KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 50 AND 51
1475          HC       2
              * DDM   ***** Preserved *****

1476          KK    DIV3
1477          KM        RESERVOIR AT THE EDGE OF THE PROPERTY   FLOW FROM CHANNEL
1478          KM        DIVERTED  INTO OFFLINE BASIN A 25' WEIR SET AT ELEVATION 1808 FT
              *      1
1479          DT  BASIN2
1480          DI       0      36      70     110     180   313.5     402   500.9
1481          DQ       0       0       0       0       0    67.5     124   190.9
              * DDM   ***** Preserved *****

1482          KK  RTDIV3
1483          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1484          DR  BASIN2
              * DDM   ***** Preserved *****
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1485        KK  RFDIV3
1486        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1487        KM     5.0 ACRE-FEETx43560/36x3600=1.7cfs
1488        RS       1    STOR       0
1489        SV       0     .01       5
1490        SQ       0     1.7     1.7
            * DDM   ***** Preserved *****

1491        KK   CDIV3
1492        KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1493        HC       2
            * DDM   ***** Preserved *****

1494        KK    R101
1495        KM        ROUTE FLOW FROM SUBBASIN C101 TO C103
1496        RS       1    FLOW      -1
1497        RC     .05    .035     .05    1450     .05
1498        RX    1000    1010    1020    1036    1041    1057    1067    1077
1499        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Updated *****

1500        KK     458
1501        KM   SUB-BASIN 458
1502        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1503        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1504        KM     L =  .76  Kb = .048  Adj. Slope =  299.0
1505        BA    .190
1506        LG    .290    .330   5.800    .190   6.000
1507        UC    .204    .131
1508        UA       0       5      16      30      65      77      84      90      94      97
1509        UA     100
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 39

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

1510        KK    C103
1511        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 55 AND C101
1512        HC       2
            * DDM   ***** Preserved *****

1513        KK    R103
1514        KM        ROUTE FLOW FROM SUBBASIN C103 TO C106
1515        RS       1    FLOW      -1
1516        RC     .05    .035     .05     900     .03
1517        RX    1000    1010    1020    1030    1050    1060    1070    1080
1518        RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
            * DDM   ***** Preserved *****

1519        KK    RT30
1520        KM        RETRIEVE DIVERTED FLOW FOR WASH BELOW 30 INCH PIPE
1521        DR    WA30
            * DDM   ***** Preserved *****

1522        KK     R30
1523        KM        ROUTE FLOW FROM WASH DIVERSION TO COMBINE C52
1524        RS       1    FLOW      -1
1525        RC     .05    .035     .05    1630     .05
1526        RX    1000    1010    1020    1036    1041    1057    1067    1077
1527        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Preserved *****

1528        KK    RTB1
1529        KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
            *      1       2
1530        DR  BASIN1
            * DDM   ***** Preserved *****

1531        KK      B1
1532        KM        ROUTE FLOW THROUGH OFFLINE DETENTION BASIN
1533        KM        FLOW OUTLETS THROUGH A 30-INCH OUTLET PIPE
            *      1       2
1534        RS       1    ELEV       0
1535        SV              .7     1.4     2.3     2.7     3.2
1536        SQ       0       5      16      28    32.5      37
1537        SE       0       1       2       3     3.5       4
            * DDM   ***** Preserved *****

1538        KK     RB1
1539        KM        ROUTE FLOW FROM BASIN DIVERSION TO COMBINE C52
1540        RS       2    FLOW      -1
1541        RC     .05    .035     .05    1720     .05
1542        RX    1000    1010    1020    1036    1041    1057    1067    1077
1543        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 40

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

1544        KK    CDIV
1545        KM        COMBINE FLOWS FROM WA30 AND BASIN 1
1546        HC       2     .12
            * DDM   ***** Updated *****

1547        KK     459
1548        KM   SUB-BASIN 459
1549        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1550        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1551        KM     L =  .35  Kb = .052  Adj. Slope =  251.6
1552        BA    .030
1553        LG    .220    .300   3.330    .710   8.000
1554        UC    .162    .157
1555        UA       0       5      16      30      65      77      84      90      94      97
1556        UA     100
            * DDM   ***** Preserved *****

1557        KK     C52
1558        KM        COMBINE FLOWS FROM SUB-BASIN 52 WA30 AND BASIN 1
1559        HC       2
            * DDM   ***** Preserved *****
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1560          KK     R52
1561          KM        ROUTE FLOW FROM SUBBASIN 52 TO C102
1562          RS       2    FLOW      -1
1563          RC     .05    .035     .05    2000     .05
1564          RX    1000    1010    1020    1036    1041    1057    1067    1077
1565          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Updated *****

1566          KK     460
1567          KM   SUB-BASIN 460
1568          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1569          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1570          KM     L =  .62  Kb = .058  Adj. Slope =  194.0
1571          BA    .140
1572          LG    .250    .260   3.740    .690  27.000
1573          UC    .242    .160
1574          UA       0       5      16      30      65      77      84      90      94      97
1575          UA     100
              * DDM   ***** Preserved *****

1576          KK    C102
1577          KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 52 AND 53
1578          HC       2
              * DDM   ***** Preserved *****

1579          KK  BASIN3
1580          KM        RESERVOIR AT CLUBHOUSE LOCATION 1-30 INCH PIPE AT OUTFALL
1581          KM        BOTTOM OF BASIN AT 6 FEET ABOVE 1795 ELEVATION
1582          RS       1    ELEV       0
1583          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
1584          SQ       0      22      45    47.4      48      51      57      62      67      73
1                                         HEC-1 INPUT                                                    PAGE 41

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

1585          SE    1795  1797.5    1800  1800.4  1800.5    1801    1802    1803    1804  1805.5
              * DDM   ***** Preserved *****

1586          KK      R3
1587          KM        ROUTE FLOW FROM C102 to C106
1588          RS       4    FLOW      -1
1589          RC     .05     .03     .05    2750   .0375
1590          RX    1000    1010    1020    1052    1086    1118    1128    1138
1591          RY    19.2    18.4      18      10      10      18    18.4    19.2
              * DDM   ***** Updated *****

1592          KK     461
1593          KM   SUB-BASIN 461
1594          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1595          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1596          KM     L =  .83  Kb = .052  Adj. Slope =  181.0
1597          BA    .120
1598          LG    .270    .250   4.250    .450  21.000
1599          UC    .271    .250
1600          UA       0       5      16      30      65      77      84      90      94      97
1601          UA     100
              * DDM   ***** Preserved *****

1602          KK    C104
1603          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 54 AND R102
1604          HC       2
              * DDM   ***** Preserved *****

1605          KK    C106
1606          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN C103 AND C104
1607          HC       2
              * DDM   ***** Preserved *****

1608          KK    R106
1609          KM        ROUTE FLOW FROM C106 TO C49
1610          RS       2    FLOW      -1
1611          RC     .05    .035     .05    3950    .033
1612          RX    1000    1010    1020    1030    1050    1060    1070    1080
1613          RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
              * DDM   ***** Updated *****

1614          KK     462
1615          KM   SUB-BASIN 462
1616          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1617          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1618          KM     L =  .97  Kb = .045  Adj. Slope =  297.7
1619          BA    .301
1620          LG    .300    .330   5.300    .240  12.000
1621          UC    .225    .137
1622          UA       0       5      16      30      65      77      84      90      94      97
1623          UA     100
              * DDM   ***** Preserved *****
1                                         HEC-1 INPUT                                                    PAGE 42

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

1624          KK     C56
1625          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 56 AND C106
              *      1       2
1626          HC       2
              * DDM   ***** Updated *****

1627          KK     480
1628          KM   SUB-BASIN 480
1629          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1630          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
1631          KM     L = 1.21  Kb = .042  Adj. Slope =  165.0
1632          BA    .731
1633          LG    .270    .270   3.580    .730  27.000
1634          UC    .325    .148
1635          UA       0       5      16      30      65      77      84      90      94      97
1636          UA     100
              * DDM   ***** Preserved *****

1637          KK    D480
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1638          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1639          KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1640          KM   FOR BASIN #: 18 & 26
1641          KM        MAXIMUM VOLUME DIVERSION = 16.5 acre-feet
              *      1
1642          DT   BS480    16.5
1643          DI       0   10000
1644          DQ       0   10000
              * DDM   ***** Preserved *****

1645          KK   RT480
1646          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1647          DR   BS480
              * DDM   ***** Preserved *****

1648          KK   SR480
1649          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1650          KM    16.5 ACRE-FEETx43560/36x3600=5.5cfs
1651          RS       1    STOR       0
1652          SV       0     .01    16.5
1653          SQ       0     5.6     5.6
              * DDM   ***** Preserved *****

1654          KK    C480
1655          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1656          HC       2
              * DDM   ***** Preserved *****

1657          KK    480C
1658          KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1659          HC       3    2.09
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 43

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


1660          KK   RR480
1661          KM   ROUTE FLOW FROM SUB-BASIN 480 TO SUB-BASIN 500
1662          RS       1    FLOW      -1
1663          RC    .025    .025    .025    6500     .05
1664          RX       0       1       2      28      58      84      85      86
1665          RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
              * DDM   ***** Updated *****

1666          KK     500
1667          KM   SUB-BASIN 500
1668          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1669          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
1670          KM     L = 2.77  Kb = .042  Adj. Slope =  286.8
1671          BA    .930
1672          LG    .350    .400   6.000    .170   9.000
1673          UC    .421    .333
1674          UA       0       3       5       8      12      20      43      75      90      96
1675          UA     100
              * DDM   ***** Preserved *****

1676          KK    500C
1677          KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1678          HC       2    3.02
1679          ZZ
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SCHEMATIC DIAGRAM OF STREAM NETWORK

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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............
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             .
599          .------->   DIV30
596       D300
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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........................
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             .
718          .         355
             .           V
             .           V
728          .        R355
             .           .
             .           .
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
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
864         .         395
874     395C............
880         .------->   BS395
877     D395
885         .<-------   BS395
883         .       RT395
                        V
                        V
886         .       SR395
892     C395............
                V
                V
895     R395
902         .         385
912         .           .         411
922         .       411C............
928         .           .------->   SF411
925         .       D411
933         .           .           .<-------   SF411
931         .           .       RT411
                            V
                            V
934         .           .       SR411
940         .       C411............
                        V
                        V
943         .       R411
950         .           .         390
964         .           .           .------->   BS390
960         .           .       D390
969         .           .           .           .<-------   BS390
967         .           .           .       RT390
                                                V
                                                V
970         .           .           .       SR390
976     390C.....................................
                V
                V
979     RR390
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986                 410
                     .
                     .
996            410C...........
                     .
                     .
999                 440
                     V
                     V
1009                R70
                     .
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1015                 .        441
                     .          .
                     .          .
1025                C108........
                     .
                     .
1030                 .-------> SPLIT
1028                DIV4
                     V
                     V
1033                R108
                     .
                     .
1039                 .        442
                     .          .
                     .          .
1049                 C67........
                     .
                     .
1055                 .-------> BASIN4
1052                DIV6
                     .
                     .
1060                 .          .<------- BASIN4
1058                 .     RTDIV6
                     .          V
                     .          V
1061                 .     RFDIV6
                     .          .
                     .          .
1067               CDIV6........
                     .
                     .
1070                 .        443
                     .          .
                     .          .
1083                 .          .-------> WSH66
1080                 .      DIV66
                     .          V
                     .          V
1086                 .       R113
                     .          .
                     .          .
1092                C114........
                     .
                     .
1095                 .        444
                     .          V
                     .          V
1105                 .        R58
                     .          .
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1111                 .          .        445
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1121                 .       C107........
                     .          V
                     .          V
1124                 .       R107
                     .          .
                     .          .
1132                 .          .          .<------- SPLIT
1130                 .          .       RTB2
                     .          .          V
                     .          .          V
1133                 .          .     RSPLIT
                     .          .          .
                     .          .          .
1139                 .          .          .        446
                     .          .          .          .
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1149                 .       C109.......................
                     .          .
                     .          .
1155                 .          .-------> WSH404
1152                 .       DIV5
                     .          V
                     .          V
1158                 .       R109
                     .          .
                     .          .
1164                 .          .        447
                     .          .          .
                     .          .          .
1176                 .          .          .          .<------- WSH404
1174                 .          .          .      RT404
                     .          .          .          V
                     .          .          .          V
1177                 .          .          .       R404
                     .          .          .          .
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1183                 .       C110.......................
                     .          V
                     .          V
1186                 .       R110
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                     .          .
1192               C115........
                     V
                     V
1195               R115
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1202                 448
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1212                  .          449
                      .            .
1222             C6364.............
                     V
                     V
1225             R6364
                      .
1231                  .          450
                      .            .
1241                  .            .          451
                      .            .            .
1253                  .            .            .          .<-------   WSH66
1251                  .            .            .       RT66
                      .            .            .          .
1254                  .            .            .          .          452
                      .            .            .          .            .
1264                  .            .            .      C6465............
                      .            .            .          V
                      .            .            .          V
1267                  .            .            .      R6566
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1273             C116.................................
                     V
                     V
1276            BASIN5
                     V
                     V
1283             R116
                      .
1289                  .          453
                      .            .
                      .            .
1299             C117............
                      .
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1302        C118............
                 V
                 V
1305        R118
                 .
                 .
1314             .-------> BASIN6
1311        DIV7
                 .
                 .
1319             .          .<-------  BASIN6
1317            RTDIV7
                     V
                     V
1320            RFDIV7
                      .
                      .
1326       CDIV7............
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                 .
1329             .          454
                 .            .
                 .            .
1339        C119............
                 V
                 V
1342        R454
                 .
                 .
1349             .          415
                 .            .
                 .            .
1359       415C........................
                 .
                 .
1365             .-------> BS415
1362       D415
                 .
                 .
1370             .<-------  BS415
1368       RT415
                 V
                 V
1371       SR415
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1377       C415............
               V
               V
1380       R415
                 .
                 .
1387             .        455
                 .          .
                 .          .
1402             .-------> BS455
1397        D455
                 .
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1407             .          .<-------  BS455
1405            RT455
                     V
                     V
1408            SR455
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1414          .           .           .           .
              .           .        C455...........
              .           .           .
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1417       455C.......................
              V
              V
1420      SR440
              V
              V
1429      RR455
              .
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1435          .        456
              .           .
              .           .
1448          .           .-------> BASIN1
1445          .        DIV1
              .           .
              .           .
1454          .           .------->   WA30
1451          .        DIV2
              .           V
              .           V
1457          .        R456
              .           .
              .           .
1463          .           .        457
              .           .           .
              .           .           .
1473          .        C101...........
              .           .
              .           .
1479          .           .-------> BASIN2
1476          .        DIV3
              .           .
              .           .
1484          .           .           .<------- BASIN2
1482          .           .     RTDIV3
              .           .           V
              .           .           V
1485          .           .     RFDIV3
              .           .           .
              .           .           .
1491          .      CDIV3...........
              .           V
              .           V
1494          .       R101
              .           .
              .           .
1500          .           .        458
              .           .           .
              .           .           .
1510          .       C103...........
              .           V
              .           V
1513          .       R103
              .           .
              .           .
1521          .           .           .<-------   WA30
1519          .           .       RT30
              .           .           V
              .           .           V
1522          .           .        R30
              .           .           .
              .           .           .
1530          .           .           .           .<------- BASIN1
1528          .           .           .       RTB1
              .           .           .          V
              .           .           .          V
1531          .           .           .         B1
              .           .           .          V
              .           .           .          V
1538          .           .           .        RB1
              .           .           .           .
              .           .           .           .
1544          .           .       CDIV...........
              .           .           .
              .           .           .
1547          .           .           .        459
              .           .           .           .
              .           .           .           .
1557          .           .        C52...........
              .           .           V
              .           .           V
1560          .           .        R52
              .           .           .
              .           .           .
1566          .           .           .        460
              .           .           .           .
              .           .           .           .
1576          .           .       C102...........
              .           .           V
              .           .           V
1579          .           .     BASIN3
              .           .           V
              .           .           V
1586          .           .          R3
              .           .           .
              .           .           .
1592          .           .           .        461
              .           .           .           .
              .           .           .           .
1602          .           .       C104...........
              .           .           .
              .           .           .
1605          .       C106...........
              .           V
              .           V
1608          .       R106
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1614          .           .        462
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1624            .        C56...........
                .          .
                .          .
1627            .          .        480
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1642            .          .          .-------->   BS480
1637            .          .       D480
                .          .          .
                .          .          .
1647            .          .          .          .<-------   BS480
1645            .          .          .      RT480
                .          .          .          V
                .          .          .          V
1648            .          .          .      SR480
                .          .          .          .
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1654            .          .       C480...........
                .          .          .
                .          .          .
1657        480C........................
               V
               V
1660       RR480
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                .
1666            .        500
                .          .
                .          .
1676        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	572.	12.17	49.	13.	6.	.41		
+	ROUTED TO	R150	553.	12.23	49.	13.	6.	.41		
+	ROUTED TO	R152	523.	12.33	49.	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	7181.	12.30	860.	285.	168.	6.54		
+	HYDROGRAPH AT	383	650.	12.17	60.	17.	8.	.42		
+	ROUTED TO	R383	647.	12.17	60.	17.	8.	.42		
+	HYDROGRAPH AT	393	44.	12.13	4.	1.	0.	.04		
+	2 COMBINED AT	393C	687.	12.17	64.	18.	9.	.46		
	ROUTED TO	R393	681.	12.20	64.	18.	9.	.46		
+	HYDROGRAPH AT	365	380.	12.27	45.	12.	6.	.41		
+	2 COMBINED AT	365C	1028.	12.20	108.	29.	14.	.88		
+	ROUTED TO	R365	1018.	12.23	108.	29.	14.	.88		

+	ROUTED TO 365R	970.	12.33	108.	29.	14.	.88
+	HYDROGRAPH AT 353	401.	12.30	49.	12.	6.	.50
+	2 COMBINED AT 353C	1349.	12.33	155.	41.	20.	1.38
+	ROUTED TO R353	1308.	12.40	155.	41.	20.	1.38
+	ROUTED TO 353R	1291.	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	2528.	12.43	301.	79.	38.	2.87
+	ROUTED TO R310	2508.	12.47	301.	79.	38.	2.87
+	ROUTED TO R312	2458.	12.57	301.	79.	38.	2.87
+	HYDROGRAPH AT 295	364.	12.30	40.	10.	5.	.38
+	2 COMBINED AT 295C	2651.	12.57	339.	89.	43.	3.25
+	ROUTED TO 295R	2620.	12.60	339.	89.	43.	3.25
+	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
+	3 COMBINED AT 240C	3741.	12.50	565.	147.	71.	5.23
	ROUTED TO SR240	1705.	12.93	500.	130.	62.	5.23
+	HYDROGRAPH AT 220	1126.	12.17	98.	25.	12.	.73
+	2 COMBINED AT 220C	1756.	12.90	590.	154.	74.	5.95
+	ROUTED TO SR220	1675.	13.07	579.	151.	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	806.	12.17	69.	19.	9.	.54
+	3 COMBINED AT 200C	2593.	12.30	751.	198.	95.	7.41
+	ROUTED TO SR200	2471.	12.37	746.	194.	93.	7.41
+	ROUTED TO 200SR	1862.	12.67	625.	164.	79.	7.41
+	2 COMBINED AT C180	7181.	12.30	1479.	450.	247.	13.94
+	ROUTED TO SR180	142.	19.00	142.	142.	114.	13.94
+	ROUTED TO R180	142.	19.03	142.	142.	114.	13.94
+	HYDROGRAPH AT 260	418.	12.10	43.	12.	6.	.27
+	2 COMBINED AT 260C	527.	12.10	179.	153.	122.	.27
	ROUTED TO R260	515.	12.20	179.	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	218.	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	181.	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	276.	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	548.	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	2500.	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	637.	310.	207.	6.00
+	HYDROGRAPH AT 420	515.	12.20	65.	18.	9.	.57
+	DIVERSION TO BS420	370.	12.07	16.	4.	2.	.57
+	HYDROGRAPH AT D420	515.	12.20	52.	14.	7.	.57
+	HYDROGRAPH AT RT420	370.	12.07	16.	4.	2.	.57
+	ROUTED TO SR420	13.	11.63	13.	4.	2.	.57
+	3 COMBINED AT 420C	3130.	12.33	688.	323.	213.	10.87
+	HYDROGRAPH AT 370	406.	12.07	34.	10.	5.	.26
+	HYDROGRAPH AT 395	204.	12.10	21.	6.	3.	.16
	2 COMBINED AT 395C	599.	12.07	55.	15.	7.	.42
+	DIVERSION TO BS395	574.	12.07	43.	11.	5.	.42
+	HYDROGRAPH AT D395	25.	11.60	12.	5.	2.	.42
+	HYDROGRAPH AT RT395	574.	12.07	43.	11.	5.	.42
+	ROUTED TO SR395	7.	11.63	7.	7.	5.	.42
+	2 COMBINED AT C395	32.	11.63	17.	10.	7.	.42
+	ROUTED TO R395	32.	11.87	17.	10.	7.	.42
+	HYDROGRAPH AT 385	314.	12.07	24.	7.	3.	.20
+	HYDROGRAPH AT 411	304.	12.17	30.	8.	4.	.24
+	2 COMBINED AT 411C	566.	12.10	53.	15.	7.	.43
+	DIVERSION TO SF411	541.	12.10	43.	11.	5.	.43
+	HYDROGRAPH AT D411	25.	11.63	10.	4.	2.	.43
+	HYDROGRAPH AT RT411	541.	12.10	43.	11.	5.	.43
+	ROUTED TO SR411	7.	11.67	7.	7.	5.	.43
+	2 COMBINED AT C411	32.	11.67	16.	10.	7.	.43
+	ROUTED TO R411	32.	11.77	16.	10.	7.	.43
	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	520.	12.03	64.	29.	19.	1.10
	ROUTED TO	RR390	425.	12.27	64.	29.	19.	1.10
+	HYDROGRAPH AT	410	345.	12.10	33.	9.	5.	.28
+	2 COMBINED AT	410C	665.	12.23	94.	37.	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	1624.	12.20	231.	75.	43.	2.75
+	DIVERSION TO	BS415	524.	12.20	22.	6.	3.	2.75
+	HYDROGRAPH AT	D415	1100.	12.03	208.	70.	40.	2.75
	HYDROGRAPH AT	RT415	524.	12.20	22.	6.	3.	2.75
+	ROUTED TO	SR415	4.	12.03	4.	4.	3.	2.75
+	2 COMBINED AT	C415	1104.	12.03	212.	73.	43.	2.75
+	ROUTED TO	R415	1108.	12.13	212.	73.	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	4126.	12.37	909.	419.	272.	14.73
+	ROUTED TO SR440	750.	13.63	735.	419.	272.	14.73
+	ROUTED TO RR455	750.	13.97	735.	418.	269.	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	2506.	12.10	920.	497.	312.	2.09
+	ROUTED TO	RR480	2343.	12.13	918.	497.	312.	2.09
+	HYDROGRAPH AT	500	1073.	12.27	122.	33.	16.	.93
+	2 COMBINED AT	500C	3232.	12.17	1029.	526.	326.	3.02

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

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1*************************************
*                                   *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)*
*              JUN   1998           *
*           VERSION 4.1             *
*                                   *
*  RUN DATE   21JUL00  TIME  09:30:33 *
*                                   *
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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   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 SOSSAMAN & THUNDER MTN.,
 35           ID   ALONG HAWES NORTH OF OAK ST., AND ALONG SOSSAMAN BETWEEN MCDOWELL & OAK ST.
 36           ID   THIS WILL GENERATE NEW SUB-BASINS 410, 411, AND 413 FROM SUB-BASINS 415 & 420
 37           ID   DETENTION BASINS WILL BE ADDED TO SUB-BASINS 370 & 395, 385 & 411, AND 455.
 38           ID  ************************************************************************
 39           ID   ANALYSIS FOR CURRENT ALTERNATIVE PERFORMED BY: WOOD/PATEL,  MW 07/19/00
 40           ID   FILE:   S24CE44.DAT
 41           ID
 42           ID
 43           ID   DDM MCUHP1 SPOOK HILL AMDP
              *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 *****
1                                    HEC-1 INPUT                                          PAGE  5

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 =  314.6
217          BA    .408
218          LG    .350    .360   5.100    .260   7.000
219          UC    .296    .221
220          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

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 = 1.49  Kb = .047  Adj. Slope =  315.0
262          BA    .420
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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    .287    .209
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 *****
1                                    HEC-1 INPUT                                          PAGE  9

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 *****
1                                    HEC-1 INPUT                                          PAGE 10

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   5.000
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 = 1.58  Kb = .045  Adj. Slope =  305.6
509          BA    .535
510          LG    .350    .390   5.700    .200  10.000
511          UC    .300    .200
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

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   4.250    .520  25.000
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
713         DT   BS340    39.2
714         DI       0   10000
715         DQ       0   10000
            * DDM   ***** Preserved *****

716         KK   RT340
717         KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
718         DR   BS340
            * DDM   ***** Preserved *****

719         KK   SR340
720         KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
721         KM    39.2 ACRE-FEETx43560\36x3600=13.2cfs
            *      1
722         RS       1    STOR       0
723         SV       0     .01    39.2
724         SQ       0    13.2    13.2
            * DDM   ***** Preserved *****

725         KK    C340
726         KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
727         HC       3
            * DDM   ***** Updated *****

728         KK     360
729         KM   SUB-BASIN 360
730         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
731         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
732         KM     L = 1.21  Kb = .062  Adj. Slope =  104.0
733         BA    .315
734         LG    .220    .250   4.100    .640  29.000
735         UC    .504    .389
736         UA       0       5      16      30      65      77      84      90      94      97
737         UA     100
            * DDM   ***** Preserved *****

738         KK    D360
739         KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
740         KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
741         KM        MAXIMUM VOLUME DIVERSION = 15.7 acre-feet
            *      1
742         DT   BS360    15.7
743         DI       0   10000
744         DQ       0   10000
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 19

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

745         KK   RT360
746         KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
747         DR   BS360
            * DDM   ***** Preserved *****

748         KK   SR360
749         KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
750         KM    15.7 ACRE-FEETx43560/36x3600=5.3 cfs
751         RS       1    STOR       0
752         SV       0     .01    15.7
753         SQ       0     5.3     5.3
            * DDM   ***** Preserved *****

754         KK    360C
755         KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
756         HC       3
            * DDM   ***** Updated *****

757         KK     380
758         KM   SUB-BASIN 380
759         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
760         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
761         KM     L =  .67  Kb = .077  Adj. Slope =  119.0
762         BA    .268
763         LG    .180    .250   4.100    .710  19.000
764         UC    .387    .199
765         UA       0       5      16      30      65      77      84      90      94      97
766         UA     100
            * DDM   ***** Preserved *****

767         KK    D380
768         KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
769         KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
770         KM        MAXIMUM VOLUME DIVERSION  = 7.1 acre-feet
            *      1
771         DT   BS380     7.1
772         DI       0   10000
773         DQ       0   10000
            * DDM   ***** Preserved *****

774         KK   RT380
775         KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
776         DR   BS380
            * DDM   ***** Preserved *****

777         KK   SR380
778         KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
779         KM    7.1  ACRE-FEETx43560\36x3600=2.4 cfs
780         RS       1    STOR       0
781         SV       0     .01     7.1
782         SQ       0     2.4     2.4
            * DDM   ***** Preserved *****
                                    HEC-1 INPUT                                          PAGE 20

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

783         KK    380C
784         KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
785         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 =  100.0
791          BA    .051
792          LG    .200    .250   4.000    .740    .000
793          UC    .333    .227
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   ***** Preserved *****

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 = .046  Adj. Slope =  142.0
840          BA    .369
841          LG    .270    .260   4.150    .530  24.000
842          UC    .321    .189
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
              *
              * DDM   ***** Preserved *****

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

 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
              *
              * DDM   ***** Preserved *****

 901          KK  RT3422
 902          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
 903          DR  BS3422
              *
              * DDM   ***** Preserved *****

 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
              *
              * DDM   ***** Preserved *****

 910          KK   CC342
 911          KM   HYDROGRAPH COMBINATION AT McKELLIPS RD CHANNEL
 912          HC       2
              *
              * DDM   ***** Preserved *****

 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
              *
              * DDM   ***** Updated *****

 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 *****
```



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

 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
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 935          DI        0   10000
 936          DQ        0   10000
              * DDM    ***** Preserved *****

 937          KK   RT341
 938          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
 939          DR   BS341
              * 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
              *
              * DDM    ***** Preserved *****

 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
              *
              * DDM    ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 25

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

 966          KK  RT3612
 967          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
 968          DR  BS3612
              *
              * DDM    ***** Preserved *****

 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
              *
              * DDM    ***** Preserved *****

 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      11    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 *****
1                                    HEC-1 INPUT                                          PAGE 26

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

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.
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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 *****

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 =  117.0
1024        BA    .605
1025        LG    .280    .250   4.150    .570  12.000
1026        UC    .550    .390
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 *****
1                                    HEC-1 INPUT                                          PAGE 27

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

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 *****

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  .997
1052        KM     L = 1.69  Kb = .045  Adj. Slope =  107.0
1053        BA    .570
1054        LG    .320    .280   4.350    .440  10.000
1055        UC    .500    .359
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 *****
1                                    HEC-1 INPUT                                          PAGE 28

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

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
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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 *****

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     100    5000
1092        DQ       0       0    4900
            * 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      22 ACRE-FEETx43560/36x3600 = 8 cfs
1099        RS       1    STOR       0
1100        SV       0     .01      22
1101        SQ       0       8       8
            * DDM   ***** Preserved *****

1102        KK    370C
1103        KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1104        HC       2
            * DDM   ***** Updated *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

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      35    5000
1120        DQ       0       0    4965
            * DDM   ***** Preserved *****

1121        KK   RT395
1122        KM   RETRIEVE FLOW FROM DIVERSION
1123        DR   BS395
            * DDM   ***** Preserved *****

1124        KK   SR395
1125        KM   RETRIEVE FLOW INTO OFFLINE BASIN AND BLEED OFF WITHIN 36 HOURS.
1126        KM       6 ACRE-FEETx43560/36x3600 = 2 cfs
1127        RS       1    STOR       0
1128        SV       0     .01       6
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       5    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     390
1141        KM   SUB-BASIN 390
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 =  .70  Kb = .050  Adj. Slope =  299.4
1145        BA    .244
```



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

1146        LG    .300    .250   4.700    .380  18.000
1147        UC    .204    .107
1148        UA       0       5      16      30      65      77      84      90      94      97
1149        UA     100
            * DDM   ***** Preserved *****

1150        KK    D390
1151        KM       DIVERT FLOW INTO ONLINE  DETENTION BASIN
1152        KM   DETENTION/RETENTION BASINS LOCATED WITHIN THUNDER MOUNTAIN ESTATES
1153        KM       MAXIMUM VOLUME DIVERSION  = 3.5 acre-feet
            *      1
1154        DT   BS390     3.5
1155        DI       0    5000
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1156        DQ       0    5000
            * DDM   ***** Preserved *****

1157        KK   RT390
1158        KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1159        DR   BS390
            * DDM   ***** Preserved *****

1160        KK   SR390
1161        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1162        KM     3.5 ACRE-FEETx43560/36x3600=1.2cfs
1163        RS       1    STOR       0
1164        SV       0     .01     3.5
1165        SQ       0     1.2     1.2
            * DDM   ***** Preserved *****

1166        KK    390C
1167        KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1168        HC       3
            * DDM   ***** Preserved *****

1169        KK   RR390
1170        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1171        KM   FROM SUB-BASIN 390 TO SUB-BASIN 410.
1172        RS       7    FLOW      -1
1173        RC    .045    .035    .045    5500    .020
1174        RX       0       1      40      46      56      62     102     103
1175        RY       3       2       2       0       0       2       2       3
            * DDM   ***** Updated *****

1176        KK     410
1177        KM   SUB-BASIN 410
1178        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1179        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1180        KM     L = 1.00  Kb = .049  Adj. Slope =  150.0
1181        BA    .278
1182        LG    .300    .250   3.950    .580  15.000
1183        UC    .329    .224
1184        UA       0       5      16      30      65      77      84      90      94      97
1185        UA     100
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1186        KK    410C
1187        KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1188        HC       2
            * DDM   ***** Updated *****

1189        KK     385
1190        KM   SUB-BASIN 385
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  .999
1193        KM     L =  .90  Kb = .051  Adj. Slope =  309.5
1194        BA    .197
1195        LG    .330    .320   4.800    .310   9.000
1196        UC    .233    .171
1197        UA       0       5      16      30      65      77      84      90      94      97
1198        UA     100
            * DDM   ***** Preserved *****

1199        KK    D385
1200        KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN LOCATED WITHIN SUB-BASINS
1201        KM   385 AND 411.
1202        DT   SF385
1203        DI       0     150    5000
1204        DQ       0       0    4850
            * DDM   ***** Preserved *****

1205        KK   RT385
1206        KM   RETRIEVE FLOW FROM DIVERSION OF SUB-BASIN 385
1207        DR   SF385
            * DDM   ***** Preserved *****

1208        KK   SR385
1209        KM   RETRIEVE FLOW INTO OFFLINE BASIN AND BLEED OFF WITHIN 36 HOURS.
1210        KM      22 ACRE-FEETx43560/36x3600 = 8 cfs
1211        RS       1    STOR       0
1212        SV       0     .01      22
1213        SQ       0       8       8
            * DDM   ***** Preserved *****

1214        KK    385C
1215        KM   HYDROGRAPH COMBINATION OF SUB-BASIN 385 AND DIVERTED 385 FLOW
1216        HC       2
            * DDM   ***** Updated *****

1217        KK     411
1218        KM   SUB-BASIN 411
1219        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1220        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1221        KM     L =  .90  Kb = .050  Adj. Slope =  315.0
1222        BA    .237
1223        LG    .340    .350   5.000    .270  10.000
1224        UC    .229    .151
1225        UA       0       3       5       8      12      20      43      75      90      96
1226        UA     100
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1227        KK    D411
1228        KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN LOCATED WITHIN SUB-BASINS
1229        KM   385 AND 411.
1230        DT   SF411
1231        DI       0      50    5000
1232        DQ       0       0    4950
            * DDM   ***** Preserved *****
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1233        KK   RT411
1234        KM   RETRIEVE FLOW FROM DIVERSION OF SUB-BASIN 411.
1235        DR   SF411
            * DDM   ***** Preserved *****

1236        KK   SR411
1237        KM   RETRIEVE FLOW INTO OFFLINE BASIN AND BLEED OFF WITHIN 36 HOURS.
1238        KM       8 ACRE-FEETx43560/36x3600 = 3 cfs
1239        RS       1    STOR       0
1240        SV       0     .01       8
1241        SQ       0       3       3
            * DDM   ***** Preserved *****

1242        KK    411C
1243        KM   HYDROGRAPH COMBINATION OF SUB-BASIN 411
1244        HC       3
            * DDM   ***** Preserved *****

1245        KK    R411
1246        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1247        KM   ROUTING OF SPLIT FLOW FROM SUB-BASIN 385 AND SUB-BASIN 411 TO SUB-BASIN 413
1248        RS       8    FLOW      -1
1249        RC    .045    .035    .045    5309    .024
1250        RX       0       1      40      46      56      62     102     103
1251        RY       3       2       2       0       0       2       2       3
            * DDM   ***** Updated *****

1252        KK     413
1253        KM   SUB-BASIN 413
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 = .058  Adj. Slope =  221.9
1257        BA    .063
1258        LG    .300    .250   4.150    .530  15.000
1259        UC    .188    .134
1260        UA       0       5      16      30      65      77      84      90      94      97
1261        UA     100
            * DDM   ***** Preserved *****

1262        KK    413C
1263        KM   HYDROGRAPH COMBINATION OF SUB-BASINS 385, 411, AND 413.
1264        HC       2
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1265        KK    R413
1266        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1267        KM   ROUTING OF FLOW FROM SUB-BASIN 413 TO RR413
1268        RS       5    FLOW      -1
1269        RC    .045    .035    .045    2900    .021
1270        RX       0       1      40      46      56      62     102     103
1271        RY       3       2       2       0       0       2       2       3
            * DDM   ***** Updated *****

1272        KK     440
1273        KM   SUB-BASIN 440
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 1.000
1276        KM     L =  .40  Kb = .039  Adj. Slope =  315.0
1277        BA    .080
1278        LG    .190    .380   6.400    .140  13.000
1279        UC    .129    .077
1280        UA       0       3       5       8      12      20      43      75      90      96
1281        UA     100
            * DDM   ***** Preserved *****

1282        KK     R70
1283        KM   ROUTE FLOW FROM SUB-BASIN 440 TO C108
1284        RS       1    FLOW      -1
1285        RC     .05    .035     .05    2250     .08
1286        RX    1000    1025    1050    1070    1075    1095    1120    1145
1287        RY      30    22.9    15.7      10      10    15.7    22.9      30
            * DDM   ***** Updated *****

1288        KK     441
1289        KM   SUB-BASIN 441
1290        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1291        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1292        KM     L =  .28  Kb = .069  Adj. Slope =  315.0
1293        BA    .010
1294        LG    .300    .250   5.600    .220   5.000
1295        UC    .150    .225
1296        UA       0       5      16      30      65      77      84      90      94      97
1297        UA     100
            * DDM   ***** Preserved *****

1298        KK    C108
1299        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 440 & 441
1300        HC       2
            * DDM   ***** Preserved *****

1301        KK    DIV4
1302        KM        SPLIT FLOW WITH TWO 42 INCH PIPES TO WEST AND SOUTH
            *      1
1303        DT   SPLIT
1304        DI       0      14      40      82     120     154     180
1305        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

1306        KK    R108
1307        KM        ROUTE FLOW FROM SUB-BASIN C108 TO C67
1308        RS       2    FLOW      -1
1309        RC     .05    .035     .05    3200      .1
1310        RX    1000    1025    1050    1070    1075    1095    1120    1145
1311        RY      30    22.9    15.7      10      10    15.7    22.9      30
            * DDM   ***** Updated *****
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1312        KK     442
1313        KM   SUB-BASIN 442
1314        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1315        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1316        KM     L =  .83  Kb = .055  Adj. Slope =  274.2
1317        BA    .100
1318        LG    .300    .270   3.290    .770   5.000
1319        UC    .258    .264
1320        UA       0       5      16      30      65      77      84      90      94      97
1321        UA     100
            * DDM   ***** Preserved *****

1322        KK     C67
1323        KM   COMBINE FLOW FROM SUB-BASIN 442 & DIV4
1324        HC       2
            * DDM   ***** Preserved *****

1325        KK    DIV6
1326        KM        OFFLINE BASIN WITH 25 FOOT WEIR SET AT 2.5 FEET ABOVE BOTTOM OF CHANNEL
1327        KM        FLOW CONTINUES BEYOND BASIN THROUGH 2-30" PIPES
            *      1
1328        DT  BASIN4
1329        DI       0      10      32      44    79.9   132.5     198   272.9   356.8
1330        DQ       0       0       0       0    23.9    67.5     124   190.9   266.8
            * DDM   ***** Preserved *****

1331        KK  RTDIV6
1332        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN.
1333        DR  BASIN4
            * DDM   ***** Preserved *****

1334        KK  RFDIV6
1335        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1336        KM     3.3 ACRE-FEETx43560/36x3600=1.1cfs
            *      1
1337        RS       1    STOR       0
1338        SV       0     .01     3.3
1339        SQ       0     1.1     1.1
            * DDM   ***** Preserved *****

1340        KK   CDIV6
1341        KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1342        HC       2
            * DDM   ***** Updated *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1343        KK     443
1344        KM   SUB-BASIN 443
1345        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1346        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1347        KM     L =  .71  Kb = .050  Adj. Slope =  315.0
1348        BA    .080
1349        LG    .250    .190   8.000    .080  10.000
1350        UC    .196    .194
1351        UA       0       5      16      30      65      77      84      90      94      97
1352        UA     100
            * DDM   ***** Preserved *****

1353        KK   DIV66
1354        KM        DIVERT FLOW INTO 3 NATURAL WASHES WITH ONE 24" PIPE IN EACH WASH.
1355        KM        EACH PIPE CAPACITY BASED ON 4 FEET OF HEAD
1356        DT   WSH66
1357        DI       0      78     100     200
1358        DQ       0      78      78      78
            * DDM   ***** Preserved *****

1359        KK    R113
1360        KM        ROUTE FLOW FROM C113 TO C114
1361        RS       1    FLOW      -1
1362        RC    .019    .019    .019    1300    .029
1363        RX    1000    1004    1008    1012    1018    1022    1026    1030
1364        RY      17   15.33   12.67      10      10   12.67   15.33      17
            * DDM   ***** Preserved *****

1365        KK    C114
1366        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 67 AND C113
1367        HC       2
            * DDM   ***** Updated *****

1368        KK     444
1369        KM   SUB-BASIN 444
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 =  .33  Kb = .034  Adj. Slope =  315.0
1373        BA    .040
1374        LG    .130    .350   4.450    .320   1.000
1375        UC    .112    .084
1376        UA       0       3       5       8      12      20      43      75      90      96
1377        UA     100
            * DDM   ***** Preserved *****

1378        KK     R58
1379        KM   ROUTE FLOW FROM SUB-BASIN 444 TO C107
1380        RS       1    FLOW      -1
1381        RC     .05    .035     .05    2370   .0516
1382        RX    1000    1010    1020    1050    1055    1085    1095    1105
1383        RY      19      18      17      10      10      17      18      19
            * DDM   ***** Updated *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1384        KK     445
1385        KM   SUB-BASIN 445
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 =  .82  Kb = .036  Adj. Slope =  315.0
1389        BA    .190
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1390          LG    .170    .320   3.470    .590   3.000
1391          UC    .192    .130
1392          UA       0       5      16      30      65      77      84      90      94      97
1393          UA     100
              * DDM   ***** Preserved *****

1394          KK    C107
1395          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 444 & 445
1396          HC       2
              * DDM   ***** Preserved *****

1397          KK    R107
1398          KM        ROUTE FLOW FROM C107 TO C109
1399          RS       1    FLOW      -1
1400          RC     .05    .035     .05     700   .0516
1401          RX    1000    1010    1020    1050    1055    1085    1095    1105
1402          RY      19      18      17      10      10      17      18      19
              * DDM   ***** Preserved *****

1403          KK    RTB2
1404          KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
              *      1
1405          DR   SPLIT
              * DDM   ***** Preserved *****

1406          KK  RSPLIT
1407          KM        ROUTE FLOW FROM SPLIT TO C109
1408          RS       1    FLOW      -1
1409          RC     .05    .035     .05     800     .05
1410          RX    1000    1025    1050    1070    1075    1095    1120    1145
1411          RY      30    22.9    15.7      10      10    15.7    22.9      30
              * DDM   ***** Updated *****

1412          KK     446
1413          KM   SUB-BASIN 446
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 1.000
1416          KM     L =  .46  Kb = .061  Adj. Slope =  303.9
1417          BA    .040
1418          LG    .270    .250   4.500    .400  19.000
1419          UC    .183    .189
1420          UA       0       5      16      30      65      77      84      90      94      97
1421          UA     100
              * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 37

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


1422          KK    C109
1423          KM        COMBINE HYDROGRAPHS FROM COMBINES C107 AND C108
1424          HC       3
              * DDM   ***** Preserved *****

1425          KK    DIV5
1426          KM        DIVERT FLOW INTO WASHES TOWARDS WEST
1427          KM        DIVERSION THROUGH 36" PIPE WITH 3 FEET OF HEAD
              *      1
1428          DT  WSH404
1429          DI       0    40.7    71.2   121.6     190     276   379.4   500.6
1430          DQ       0      35      35      35      35      35      35      35
              * DDM   ***** Preserved *****

1431          KK    R109
1432          KM        ROUTE FLOW FROM C109 TO C110
1433          RS       1    FLOW      -1
1434          RC    .019    .019    .019    3080     .05
1435          RX    1000    1005    1010    1015    1025    1030    1035    1040
1436          RY   13.75    12.5   11.25      10      10   11.25    12.5   13.75
              * DDM   ***** Updated *****

1437          KK     447
1438          KM   SUB-BASIN 447
1439          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1440          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1441          KM     L =  .49  Kb = .056  Adj. Slope =  221.0
1442          BA    .090
1443          LG    .250    .270   3.350    .870  30.000
1444          UC    .208    .145
1445          UA       0       5      16      30      65      77      84      90      94      97
1446          UA     100
              * DDM   ***** Preserved *****

1447          KK   RT404
1448          KM        RETRIEVE DIVERTED FLOW FOR WASH 109
1449          DR  WSH404
              * DDM   ***** Preserved *****

1450          KK    R404
1451          KM        ROUTE FLOW FROM C110 TO C110
1452          RS       5    FLOW      -1
1453          RC    .019    .019    .019    3540     .03
1454          RX    1000    1012    1016    1020    1025    1029    1033    1045
1455          RY      15      12      11      10      10      11      12      15
              * DDM   ***** Preserved *****

1456          KK    C110
1457          KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 447 AND R404
1458          HC       3
              * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 38

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


1459          KK    R110
1460          KM        ROUTE FLOW FROM C110 TO C115
1461          RS       1    FLOW      -1
1462          RC    .019    .019    .019     580   .0291
1463          RX    1000    1012    1016    1020    1035    1039    1043    1055
1464          RY      15      12      11      10      10      11      12      15
              * DDM   ***** Preserved *****
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1465        KK    C115
1466        KM        COMBINE HYDROGRAPHS FROM C114 AND C110
1467        HC       2
            * DDM   ***** Preserved *****

1468        KK    R115
1469        KM        ROUTE FLOW FROM C115 TO C119
1470        RS       1    FLOW      -1
1471        RC    .019    .019    .019    2125    .029
1472        RC    .019    .019    .019     580   .0291
1473        RX    1000    1012    1016    1020    1035    1039    1043    1055
1474        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Updated *****

1475        KK     448
1476        KM   SUB-BASIN 448
1477        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1478        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1479        KM     L =  .36  Kb = .042  Adj. Slope =  315.0
1480        BA    .045
1481        LG    .170    .310   4.200    .390  11.000
1482        UC    .133    .102
1483        UA       0       5      16      30      65      77      84      90      94      97
1484        UA     100
            * DDM   ***** Updated *****

1485        KK     449
1486        KM   SUB-BASIN 449
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 1.000
1489        KM     L =  .40  Kb = .054  Adj. Slope =  315.0
1490        BA    .050
1491        LG    .260    .280   3.500    .640   6.000
1492        UC    .167    .134
1493        UA       0       5      16      30      65      77      84      90      94      97
1494        UA     100
            * DDM   ***** Preserved *****

1495        KK   C6364
1496        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 448 & 449
1497        HC       2
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1498        KK   R6364
1499        KM   ROUTE FLOW FROM C116 AND SUB-BASINS 448 AND 449
1500        RS       4    FLOW      -1
1501        RC     .05    .035     .05    4375   .0333
1502        RX    1000    1027    1053    1080    1090    1117    1143    1170
1503        RY      15   13.33   11.67      10      10   11.67   13.33      15
            * DDM   ***** Updated *****

1504        KK     450
1505        KM   SUB-BASIN 450
1506        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1507        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1508        KM     L =  .85  Kb = .057  Adj. Slope =  210.5
1509        BA    .070
1510        LG    .340    .350   3.630    .570   4.000
1511        UC    .296    .383
1512        UA       0       3       5       8      12      20      43      75      90      96
1513        UA     100
            * DDM   ***** Updated *****

1514        KK     451
1515        KM   SUB-BASIN 451
1516        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1517        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1518        KM     L =  .57  Kb = .063  Adj. Slope =  175.0
1519        BA    .025
1520        LG    .340    .340   3.290    .750   3.000
1521        UC    .271    .453
1522        UA       0       3       5       8      12      20      43      75      90      96
1523        UA     100
            * DDM   ***** Preserved *****

1524        KK    RT66
1525        KM        RETRIEVE DIVERTED FLOW FROM SUB-BASIN 66
1526        DR   WSH66
            * DDM   ***** Updated *****

1527        KK     452
1528        KM   SUB-BASIN 452
1529        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1530        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1531        KM     L =  .43  Kb = .055  Adj. Slope =  315.0
1532        BA    .040
1533        LG    .260    .280   3.700    .550   9.000
1534        UC    .171    .166
1535        UA       0       5      16      30      65      77      84      90      94      97
1536        UA     100
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1537        KK   C6465
1538        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 443 AND 452
1539        HC       2
            * DDM   ***** Preserved *****

1540        KK   R6566
1541        KM        ROUTE FLOW FROM DIVERSIONS 65 AND 66 TO C116
1542        RS       2    FLOW      -1
1543        RC     .05    .035     .05    2435   .0282
1544        RX    1000    1045    1090    1150    1160    1220    1265    1310
1545        RY      25      23      20      10      10      20      23      25
            * DDM   ***** Preserved *****
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1546        KK    C116
1547        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 450 & 451 AND R6364 & R6465
1548        HC       4
            * DDM   ***** Preserved *****

1549        KK  BASIN5
1550        KM        RESERVOIR WITHIN PARCEL 31      2-48 INCH PIPES AT OUTFALL
1551        KM        BASIN 5 FEET DEEP
1552        RS       1    ELEV       0
1553        SV       0     4.5     9.9
1554        SQ       0      69     190
1555        SE       0     2.5       5
            * DDM   ***** Preserved *****

1556        KK    R116
1557        KM   ROUTE FLOW FROM C116 TO C117
1558        RS       2    FLOW      -1
1559        RC     .05    .035     .05    1300   .0333
1560        RX    1000    1100    1200    1300    1320    1420    1520    1620
1561        RY      13      12      11      10      10      11      12      13
            * DDM   ***** Updated *****

1562        KK     453
1563        KM   SUB-BASIN 453
1564        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1565        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1566        KM     L =  .58  Kb = .058  Adj. Slope =  138.0
1567        BA    .060
1568        LG    .290    .300   3.290    .820  18.000
1569        UC    .275    .284
1570        UA       0       5      16      30      65      77      84      90      94      97
1571        UA     100
            * DDM   ***** Preserved *****

1572        KK    C117
1573        KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 453 AND R116
1574        HC       2
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1575        KK    C118
1576        KM   COMBINE HYDROGRAPHS FROM R115 AND C117
1577        HC       2
            * DDM   ***** Preserved *****

1578        KK    R118
1579        KM        ROUTE FLOW FROM C118 TO  DIV7
1580        RS       1    FLOW      -1
1581        RC    .019    .019    .019    1500    .024
1582        RX    1000    1012    1016    1020    1035    1039    1043    1055
1583        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Preserved *****

1584        KK    DIV7
1585        KM        OFFLINE BASIN AT NORTH MOUNTAIN RIDGE   FLOWS ENTER BASIN OVER
1586        KM        30' WEIR SET AT 5.3' ABOVE THE CHANNEL BOTTOM
            *      1
1587        DT  BASIN6
1588        DI       0     363     487     563     645     844
1589        DQ       0       3      47      83     125     244
            * DDM   ***** Preserved *****

1590        KK  RTDIV7
1591        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1592        DR  BASIN6
            * DDM   ***** Preserved *****

1593        KK  RFDIV7
1594        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1595        KM     3.6 ACRE-FEETx43560/36x3600=1.2cfs
1596        RS       1    STOR       0
1597        SV       0     .01     3.6
1598        SQ       0     1.2     1.2
            * DDM   ***** Preserved *****

1599        KK   CDIV7
1600        KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1601        HC       2
            * DDM   ***** Updated *****

1602        KK     454
1603        KM   SUB-BASIN 454
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  .999
1606        KM     L = 1.23  Kb = .051  Adj. Slope =  163.0
1607        BA    .180
1608        LG    .300    .310   3.780    .560  14.000
1609        UC    .379    .395
1610        UA       0       5      16      30      65      77      84      90      94      97
1611        UA     100
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1612        KK    C119
1613        KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 454 AND DIV7.
            *      1       2
1614        HC       2
            * DDM   ***** Preserved *****

1615        KK    R454
1616        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1617        KM   ROUTING OF FLOW FROM LAS SENDAS AND R413 TO SUB-BASIN 415.
1618        RS       2    FLOW      -1
1619        RC    .045    .035    .045    2500    .012
1620        RX       0      .5       1      33      42      67    67.5      68
1621        RY       5       4       4       0       0       6       6       6
            * DDM   ***** Updated *****
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1622        KK     415
1623        KM   SUB-BASIN 415
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 =  .80  Kb = .051  Adj. Slope =  188.0
1627        BA    .218
1628        LG    .300    .260   3.530    .770  15.000
1629        UC    .275    .176
1630        UA       0       5      16      30      65      77      84      90      94      97
1631        UA     100
            * DDM   ***** Preserved *****

1632        KK    415C
1633        KM   HYDROGRAPH COMBINATION OF R454, SUB-BASIN 415, R410.
1634        HC       4
            * DDM   ***** Preserved *****

1635        KK    D415
1636        KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN
1637        KM   MAXIMUM STORAGE VOLUME FOR DIVERSION = 45 AC-FT @ 5' DEPTH.
            *      1
1638        DT   BS415
1639        DI       0    1100    5000
1640        DQ       0       0    3900
            * DDM   ***** Preserved *****

1641        KK   RT415
1642        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1643        DR   BS415
            * DDM   ***** Preserved *****

1644        KK   SR415
1645        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1646        KM      15 ACRE-FEETx43560/36x3600 = 5 cfs
1647        RS       1    STOR       0
1648        SV       0     .01      15
1649        SQ       0       5       5
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1650        KK    C415
1651        KM   HYDROGRAPH COMBINATION OF 415 DIVERSION.
1652        HC       2
            * DDM   ***** Preserved *****

1653        KK    R415
1654        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1655        KM   ROUTING OF FLOW FROM 415C TO 455C
1656        RS       4    FLOW      -1
1657        RC    .045     .03    .045    4100    .024
1658        RX       0      .5       1       8      16      23    23.5      24
1659        RY       8       8       8       0       0       8       8       8
            * DDM   ***** Updated *****

1660        KK     455
1661        KM   SUB-BASIN 455
1662        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1663        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
1664        KM     L = 1.70  Kb = .041  Adj. Slope =  146.0
1665        BA   1.111
1666        LG    .270    .280   3.700    .640  24.000
1667        UC    .421    .204
1668        UA       0       5      16      30      65      77      84      90      94      97
1669        UA     100
            * DDM   ***** Preserved *****

1670        KK    D455
1671        KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1672        KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1673        KM   FOR BASIN #: 30      34      43      47&58
1674        KM        MAXIMUM VOLUME DIVERSION = 74.1 acre-feet
            *      1
1675        DT   BS455    74.1
1676        DI       0   10000
1677        DQ       0   10000
            * DDM   ***** Preserved *****

1678        KK   RT455
1679        KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1680        DR   BS455
            * DDM   ***** Preserved *****

1681        KK   SR455
1682        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1683        KM    74.1 ACRE-FEETx43560/36x3600=25cfs
1684        RS       1    STOR       0
1685        SV       0     .01    74.1
1686        SQ       0      25      25
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1687        KK    C455
1688        KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 455 AND DIVERTED BASIN STORAGE OF 455
1689        HC       2
            * DDM   ***** Preserved *****

1690        KK    455C
1691        KM  HYDROGRAPH COMBINATION OF 420C, R415 AND C455
            *      1       2
1692        HC       3
            * DDM   ***** Preserved *****

1693        KK   SR440
1694        KM   SPOOK HILL FRS PLANS DATED 6/15/77
1695        KM   OUTLET PIPE=7'x7.5'RCBC; L=70 INLET INV.=1566; OUTLET INV.=1566
1696        KM   EMERGENCY SPILLWAY ELEV.=1582; PRINCIPLE SPILLWAY ELEV.=1577.5
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1697        KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 200 ACRE-FEET
1698        RS       1    STOR       0
1699        SV       0      10     100     300     500     680
1700        SQ       0     640     720     780     825     860
1701        SE      66    77.5      79    80.2    81.2      82
            * DDM   ***** Preserved *****

1702        KK   RR455
1703        KM   ROUTE FLOW FROM SPOOK HILL FRS TO SUB-BASIN 462
1704        RS      10    FLOW      -1
1705        RC    .035    .025    .035    9200    .002
1706        RX       0       1       2      28      58      84      85      86
1707        RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
            * DDM   ***** Updated *****

1708        KK     456
1709        KM   SUB-BASIN 456
1710        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1711        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1712        KM     L =  .94  Kb = .045  Adj. Slope =  315.0
1713        BA    .260
1714        LG    .300    .380   5.600    .200  12.000
1715        UC    .217    .139
1716        UA       0       5      16      30      65      77      84      90      94      97
1717        UA     100
            * DDM   ***** Preserved *****

1718        KK    DIV1
1719        KM        DIVERT FLOW INTO OFFLINE DETENTION BASIN
1720        KM        WEIR FOR BASIN SET AT 4 FEET ABOVE CHANNEL BOTTOM
            *      1
1721        DT  BASIN1
1722        DI       0    11.1   127.9   234.4   577.7   789.9  1025.5  1280.9  1555.7
1723        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

1724        KK    DIV2
1725        KM        SPLIT OUT FLOW FOR WASHES THAT FLOW TO THE SOUTH FROM
1726        KM        WASHES THAT DRAIN TO THE WES, SOUTHERN WASHES FED BY 30" & 24" PIPE
1727        DT    WA30
1728        DI       0    11.1   127.9   189.6   329.7     408   491.9   579.4   671.7
1729        DQ       0    11.1    38.4    48.2      63    69.5      76      81      86
            * DDM   ***** Preserved *****

1730        KK    R456
1731        KM        ROUTE FLOW FROM SUB-BASIN 51 TO C101
1732        RS       2    FLOW      -1
1733        RC     .05    .035     .05    3800    .044
1734        RX    1000    1010    1020    1036    1041    1057    1067    1077
1735        RY   14.88   14.44      14      10      10      14   14.44   14.88
            * DDM   ***** Updated *****

1736        KK     457
1737        KM   SUB-BASIN 457
1738        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1739        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1740        KM     L = 1.01  Kb = .045  Adj. Slope =  308.8
1741        BA    .190
1742        LG    .270    .330   3.950    .460   6.000
1743        UC    .237    .195
1744        UA       0       5      16      30      65      77      84      90      94      97
1745        UA     100
            * DDM   ***** Preserved *****

1746        KK    C101
1747        KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 50 AND 51
1748        HC       2
            * DDM   ***** Preserved *****

1749        KK    DIV3
1750        KM        RESERVOIR AT THE EDGE OF THE PROPERTY   FLOW FROM CHANNEL
1751        KM        DIVERTED  INTO OFFLINE BASIN A 25' WEIR SET AT ELEVATION 1808 FT
            *      1
1752        DT  BASIN2
1753        DI       0      36      70     110     180   313.5     402   500.9
1754        DQ       0       0       0       0       0    67.5     124   190.9
            * DDM   ***** Preserved *****

1755        KK  RTDIV3
1756        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1757        DR  BASIN2
            * DDM   ***** Preserved *****

1758        KK  RFDIV3
1759        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1760        KM     5.0 ACRE-FEETx43560/36x3600=1.7cfs
1761        RS       1    STOR       0
1762        SV       0     .01       5
1763        SQ       0     1.7     1.7
            * DDM   ***** Preserved *****
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            LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1764        KK   CDIV3
1765        KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1766        HC       2
            * DDM   ***** Preserved *****

1767        KK    R101
1768        KM        ROUTE FLOW FROM SUBBASIN C101 TO C103
1769        RS       1    FLOW      -1
1770        RC     .05    .035     .05    1450     .05
1771        RX    1000    1010    1020    1036    1041    1057    1067    1077
1772        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Updated *****

1773        KK     458
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1774          KM   SUB-BASIN 458
1775          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1776          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1777          KM     L =  .76  Kb = .048  Adj. Slope =  299.0
1778          BA    .190
1779          LG    .290    .330   5.800    .190   6.000
1780          UC    .204    .131
1781          UA       0       5      16      30      65      77      84      90      94      97
1782          UA     100
              * DDM   ***** Preserved *****

1783          KK    C103
1784          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 55 AND C101
1785          HC       2
              * DDM   ***** Preserved *****

1786          KK    R103
1787          KM        ROUTE FLOW FROM SUBBASIN C103 TO C106
1788          RS       1    FLOW      -1
1789          RC     .05    .035     .05     900     .03
1790          RX    1000    1010    1020    1030    1050    1060    1070    1080
1791          RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
              * DDM   ***** Preserved *****

1792          KK    RT30
1793          KM        RETRIEVE DIVERTED FLOW FOR WASH BELOW 30 INCH PIPE
1794          DR    WA30
              * DDM   ***** Preserved *****

1795          KK     R30
1796          KM        ROUTE FLOW FROM WASH DIVERSION TO COMBINE C52
1797          RS       1    FLOW      -1
1798          RC     .05    .035     .05    1630     .05
1799          RX    1000    1010    1020    1036    1041    1057    1067    1077
1800          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Preserved *****
1                                     HEC-1 INPUT                                          PAGE 47

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

1801          KK    RTB1
1802          KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
              *      1        2
1803          DR  BASIN1
              * DDM   ***** Preserved *****

1804          KK      B1
1805          KM        ROUTE FLOW THROUGH OFFLINE DETENTION BASIN
1806          KM        FLOW OUTLETS THROUGH A 30 INCH OUTLET PIPE
              *      1        2
1807          RS       1    ELEV       0
1808          SV              .7     1.4     2.3     2.7     3.2
1809          SQ       0       5      16      28    32.5      37
1810          SE       0       1       2       3     3.5       4
              * DDM   ***** Preserved *****

1811          KK     RB1
1812          KM        ROUTE FLOW FROM BASIN DIVERSION TO COMBINE C52
1813          RS       2    FLOW      -1
1814          RC     .05    .035     .05    1720     .05
1815          RX    1000    1010    1020    1036    1041    1057    1067    1077
1816          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Preserved *****

1817          KK    CDIV
1818          KM        COMBINE FLOWS FROM WA30 AND BASIN 1
1819          HC       2     .12
              * DDM   ***** Updated *****

1820          KK     459
1821          KM   SUB-BASIN 459
1822          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1823          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1824          KM     L =  .35  Kb = .052  Adj. Slope =  251.6
1825          BA    .030
1826          LG    .220    .300   3.330    .710   8.000
1827          UC    .162    .157
1828          UA       0       5      16      30      65      77      84      90      94      97
1829          UA     100
              * DDM   ***** Preserved *****

1830          KK     C52
1831          KM        COMBINE FLOWS FROM SUB-BASIN 52 WA30 AND BASIN 1
1832          HC       2
              * DDM   ***** Preserved *****

1833          KK     R52
1834          KM        ROUTE FLOW FROM SUBBASIN 52 TO C102
1835          RS       2    FLOW      -1
1836          RC     .05    .035     .05    2000     .05
1837          RX    1000    1010    1020    1036    1041    1057    1067    1077
1838          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Updated *****
1                                     HEC-1 INPUT                                          PAGE 48

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

1839          KK     460
1840          KM   SUB-BASIN 460
1841          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1842          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1843          KM     L =  .62  Kb = .058  Adj. Slope =  194.0
1844          BA    .140
1845          LG    .250    .260   3.740    .690  27.000
1846          UC    .242    .160
1847          UA       0       5      16      30      65      77      84      90      94      97
1848          UA     100
              * DDM   ***** Preserved *****

1849          KK    C102
1850          KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 52 AND 53
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1851          HC       2
              * DDM   ***** Preserved *****

1852          KK  BASIN3
1853          KM        RESERVOIR AT CLUBHOUSE LOCATION 1-30 INCH PIPE AT OUTFALL
1854          KM        BOTTOM OF BASIN AT 6 FEET ABOVE 1795 ELEVATION
1855          RS       1    ELEV       0
1856          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
1857          SQ       0      22      45    47.4      48      51      57      62      67      73
1858          SE    1795  1797.5    1800  1800.4  1800.5    1801    1802    1803    1804  1805.5
              * DDM   ***** Preserved *****

1859          KK      R3
1860          KM        ROUTE FLOW FROM C102 to C106
1861          RS       4    FLOW      -1
1862          RC     .05     .03     .05    2750   .0375
1863          RX    1000    1010    1020    1052    1086    1118    1128    1138
1864          RY    19.2    18.4      18      10      10      18    18.4    19.2
              * DDM   ***** Updated *****

1865          KK     461
1866          KM   SUB-BASIN 461
1867          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1868          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1869          KM     L =  .83  Kb = .052  Adj. Slope =  181.0
1870          BA    .120
1871          LG    .270    .250   4.250    .450  21.000
1872          UC    .271    .250
1873          UA       0       5      16      30      65      77      84      90      94      97
1874          UA     100
              * DDM   ***** Preserved *****

1875          KK    C104
1876          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 54 AND R102
1877          HC       2
              * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 49

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

1878          KK    C106
1879          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN C103 AND C104
1880          HC       2
              * DDM   ***** Preserved *****

1881          KK    R106
1882          KM        ROUTE FLOW FROM C106 TO C49
1883          RS       2    FLOW      -1
1884          RC     .05    .035     .05    3950    .033
1885          RX    1000    1010    1020    1030    1050    1060    1070    1080
1886          RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
              * DDM   ***** Updated *****

1887          KK     462
1888          KM   SUB-BASIN 462
1889          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1890          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1891          KM     L =  .97  Kb = .045  Adj. Slope =  297.7
1892          BA    .301
1893          LG    .300    .330   5.300    .240  12.000
1894          UC    .225    .137
1895          UA       0       5      16      30      65      77      84      90      94      97
1896          UA     100
              * DDM   ***** Preserved *****

1897          KK     C56
1898          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 56 AND C106
              *      1       2
1899          HC       2
              * DDM   ***** Updated *****

1900          KK     480
1901          KM   SUB-BASIN 480
1902          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1903          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
1904          KM     L = 1.21  Kb = .042  Adj. Slope =  165.0
1905          BA    .731
1906          LG    .270    .270   3.580    .730  27.000
1907          UC    .325    .148
1908          UA       0       5      16      30      65      77      84      90      94      97
1909          UA     100
              * DDM   ***** Preserved *****

1910          KK    D480
1911          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1912          KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1913          KM   FOR BASIN #: 18 & 26
1914          KM        MAXIMUM VOLUME DIVERSION = 16.5 acre-feet
              *      1
1915          DT   BS480    16.5
1916          DI       0   10000
1917          DQ       0   10000
              * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 50

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

1918          KK   RT480
1919          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1920          DR   BS480
              * DDM   ***** Preserved *****

1921          KK   SR480
1922          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1923          KM    16.5 ACRE-FEETx43560/36x3600=5.5cfs
1924          RS       1    STOR       0
1925          SV       0     .01    16.5
1926          SQ       0     5.6     5.6
              * DDM   ***** Preserved *****
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KK    C480
KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
HC       2
* DDM   ***** Preserved *****

KK    480C
KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
HC       3    2.09
* 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
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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
```

```
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
             .           .
```

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800          .          .
             .          .-------> BS400
796          .       D400
             .          .
             .          .
805          .          .          .<-------  BS400
803          .          .      RT400
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             .          .          V
806          .          .      SR400
             .          .          .
             .          .          .
812          .       C400............
             .          .
             .          .
815       400C............
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818          .        355
             .          V
             .          V
828          .       R355
             .          .
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835          .          .        361
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             .          .          .
849          .          .          .-------> BS361
845          .          .      D361
             .          .          .
             .          .          .
854          .          .          .          .<-------  BS361
852          .          .          .      RT361
             .          .          .          V
             .          .          .          V
855          .          .          .      SR361
             .          .          .          .
             .          .          .          .
861          .       361C........................
             .          .
             .          .
864          .          .        342
             .          .          .
             .          .          .
879          .          .          .-------> BS3421
874          .          .      D3421
             .          .          .
             .          .          .
884          .          .          .          .<-------  BS3421
882          .          .          .     RT3421
             .          .          .          V
             .          .          .          V
885          .          .          .     SR3421
             .          .          .          .
             .          .          .          .
891          .          .      C342............
             .          .          .
             .          .          .
898          .          .          .-------> BS3422
894          .          .      D3422
             .          .          .
             .          .          .
903          .          .          .          .<-------  BS3422
901          .          .          .     RT3422
             .          .          .          V
             .          .          .          V
904          .          .          .     SR3422
             .          .          .          .
             .          .          .          .
910          .          .      CC342............
             .          .          V
             .          .          V
913          .          .      R342
             .          .          .
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919          .          .          .        341
             .          .          .          .
             .          .          .          .
934          .          .          .          .-------> BS341
929          .          .          .       D341
             .          .          .          .
             .          .          .          .
939          .          .          .          .          .<-------  BS341
937          .          .          .          .      RT341
             .          .          .          .          V
             .          .          .          .          V
940          .          .          .          .      SR341
             .          .          .          .          .
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946          .          .      C341........................
             .          .          V
             .          .          V
949          .          .      RR341
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956          .       361CC............
             .          .
             .          .
963          .          .-------> BS3612
959          .       D3612
             .          .
             .          .
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
                .          .          .          V
1039            .          .          .      SR401
                .          .          .          .
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1045        C401...................................
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1048            .       420
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                .          .
1062            .          .-------->   BS420
1058            .      D420
                .          .
                .          .
1067            .          .          .<--------   BS420
1065            .          .      RT420
                .          .          V
                .          .          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            .          .        390
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1154            .          .          .-------->   BS390
1150            .          .       D390
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1159            .          .          .          .<--------   BS390
1157            .          .          .      RT390
                .          .          .          V
                .          .          .          V
1160            .          .          .      SR390
                .          .          .          .
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1166            .      390C........................
                .         V
                .         V
1169            .     RR390
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1176                410
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1186        410C............
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1189                385
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1202                 .-------> SF385
1199               D385
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1207                 .<------- SF385
1205                 .      RT385
                     .         V
                     .         V
1208                 .      SR385
                     .         .
                     .         .
1214               385C............
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1217                 .        411
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1230                 .          .-------> SF411
1227                 .       D411
                     .          .
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1235                 .          .          .<------- SF411
1233                 .          .      RT411
                     .          .          V
                     .          .          V
1236                 .          .      SR411
                     .          .          .
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1242               411C......................
                     V
                     V
1245               R411
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1252                 .        413
                     .          .
                     .          .
1262               413C............
                     V
                     V
1265               R413
                     .
                     .
1272                 .        440
                     .          V
                     .          V
1282                 .        R70
                     .          .
                     .          .
1288                 .          .         441
                     .          .          .
                     .          .          .
1298                 .       C108............
                     .          .
                     .          .
1303                 .          .-------> SPLIT
1301                 .       DIV4
                     .          V
                     .          V
1306                 .       R108
                     .          .
                     .          .
1312                 .          .         442
                     .          .          .
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1322                 .        C67............
                     .          .
                     .          .
1328                 .          .-------> BASIN4
1325                 .       DIV6
                     .          .
                     .          .
1333                 .          .          .<------- BASIN4
1331                 .          .      RTDIV6
                     .          .          V
                     .          .          V
1334                 .          .      RFDIV6
                     .          .          .
                     .          .          .
1340                 .      CDIV6............
                     .          .
                     .          .
1343                 .          .         443
                     .          .          .
                     .          .          .
1356                 .          .          .-------> WSH66
1353                 .          .      DIV66
                     .          .          V
                     .          .          V
1359                 .          .      R113
                     .          .          .
                     .          .          .
1365                 .       C114............
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                     .          .
1368                 .          .         444
                     .          .          V
                     .          .          V
1378                 .          .         R50
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1384                 .          .          .         445
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1394                                C107............
                                       V
                                       V
1397                                R107
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1405                                   .<-------   SPLIT
1403                                   .       RTB2
                                       .          V
                                       .          V
1406                                   .     RSPLIT
                                       .          .
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1412                                   .          .        446
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1422                                C109.......................
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                                       .
1428                                   .-------> WSH404
1425                                C107
                                       V
                                       V
1431                                R109
                                       .
                                       .
1437                                   .        447
                                       .          .
                                       .          .
1449                                   .          .          .<-------  WSH404
1447                                   .          .      RT404
                                       .          .          V
                                       .          .          V
1450                                   .          .       R404
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1456                                C110.......................
                                       V
                                       V
1459                                R110
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1465                             C115...........
                                    V
                                    V
1468                             R115
                                    .
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1475                                   .         448
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1485                                   .        449
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1495                                C6364...........
                                       V
                                       V
1498                                R6364
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1504                                   .        450
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1514                                   .          .        451
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1526                                   .          .          .          .<-------   WSH66
1524                                   .          .          .       RT66
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1527                                   .          .          .          .        452
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1537                                   .          .          .       C6465...........
                                       .          .          .          V
                                       .          .          .          V
1540                                   .          .          .       R6566
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1546                                C116...................................
                                       V
                                       V
1549                               BASIN5
                                       V
                                       V
1556                                R116
                                       .
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1562                                   .        453
                                       .          .
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1572                                C117............
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1575                             C118...........
                                    V
                                    V
1578                             R118
                                    .
                                    .
1587                             .-------> BASIN6
1584                             DIV7
                                    .
                                    .
1592                                   .<-------  BASIN6
1590                               RTDIV7
                                       V
                                       V
1593                               RFDIV7
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1599                             CDIV7...........
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1602          .           .           .           .
              .           .           .           .         454
              .           .           .           .           .
1612          .           .           .       C119............
              .           .           .           V
              .           .           .           V
1615          .           .           .       R454
              .           .           .           .
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1622          .           .           .           .         415
              .           .           .           .           .
              .           .           .           .           .
1632          .       415C...............................
              .           .
              .           .
1638          .           .-------->  BS415
1635          .       D415
              .           .
              .           .
1643          .           .           .<-------   BS415
1641          .           .       RT415
              .           .           V
              .           .           V
1644          .           .       SR415
              .           .           .
              .           .           .
1650          .       C415............
              .           V
              .           V
1653          .       R415
              .           .
              .           .
1660          .           .        455
              .           .           .
              .           .           .
1675          .           .           .-------->  BS455
1670          .           .       D455
              .           .           .
              .           .           .
1680          .           .           .           .<-------   BS455
1678          .           .           .       RT455
              .           .           .           V
              .           .           .           V
1681          .           .           .       SR455
              .           .           .           .
              .           .           .           .
1687          .           .       C455............
              .           .           .
              .           .           .
1690        455C......................
              V
              V
1693       SR440
              V
              V
1702       RR455
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1708          .        456
              .           .
              .           .
1721          .           .-------> BASIN1
1718          .       DIV1
              .           .
              .           .
1727          .           .-------->   WA30
1724          .       DIV2
              .           V
              .           V
1730          .       R456
              .           .
              .           .
1736          .           .        457
              .           .           .
              .           .           .
1746          .       C101............
              .           .
              .           .
1752          .           .-------> BASIN2
1749          .       DIV3
              .           .
              .           .
1757          .           .           .<-------  BASIN2
1755          .           .     RTDIV3
              .           .           V
              .           .           V
1758          .           .     RFDIV3
              .           .           .
              .           .           .
1764          .      CDIV3............
              .           V
              .           V
1767          .       R101
              .           .
              .           .
1773          .           .        458
              .           .           .
              .           .           .
1783          .       C103............
              .           V
              .           V
1786          .       R103
              .           .
              .           .
1794          .           .           .<-------   WA30
1792          .           .       RT30
              .           .           V
              .           .           V
1795          .           .        R30
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1803          .           .           .           .<-------  BASIN1
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1801          .          .          .        RTB1
              .          .          .          V
              .          .          .          V
1804          .          .          .         B1
              .          .          .          V
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1811          .          .          .        RB1
              .          .          .          .
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1817          .          .      CDIV............
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1820          .          .          .        459
              .          .          .          .
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1830          .          .        C52............
              .          .          V
              .          .          V
1833          .          .        R52
              .          .          .
              .          .          .
1839          .          .          .        460
              .          .          .          .
              .          .          .          .
1849          .          .      C102............
              .          .          V
              .          .          V
1852          .          .    BASIN3
              .          .          V
              .          .          V
1859          .          .         R3
              .          .          .
              .          .          .
1865          .          .          .        461
              .          .          .          .
              .          .          .          .
1875          .          .      C104............
              .          .          .
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1878          .       C106............
              .          V
              .          V
1881          .       R106
              .          .
              .          .
1887          .          .        462
              .          .          .
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1897          .        C56............
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              .          .
1900          .          .        480
              .          .          .
              .          .          .
1915          .          .          .-------->   BS480
1910          .          .      D480
              .          .          .
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1920          .          .          .          .<--------   BS480
1918          .          .          .      RT480
              .          .          .          V
              .          .          .          V
1921          .          .          .      SR480
              .          .          .          .
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1927          .          .      C480............
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1930       480C........................
             V
             V
1933      RR480
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1939          .        500
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1949       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	572.	12.17	49.	13.	6.	.41		
+	ROUTED TO	R150	553.	12.23	49.	13.	6.	.41		
+	ROUTED TO	R152	523.	12.33	49.	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	7181.	12.30	860.	285.	168.	6.54		
+	HYDROGRAPH AT	383	650.	12.17	60.	17.	8.	.42		
+	ROUTED TO	R383	647.	12.17	60.	17.	8.	.42		
+	HYDROGRAPH AT	393	44.	12.13	4.	1.	0.	.04		
+	2 COMBINED AT	393C	687.	12.17	64.	18.	9.	.46		
+	ROUTED TO	R393	681.	12.20	64.	18.	9.	.46		
+	HYDROGRAPH AT	365	380.	12.27	45.	12.	6.	.41		
+	2 COMBINED AT	365C	1028.	12.20	108.	29.	14.	.88		
+	ROUTED TO	R365	1018.	12.23	108.	29.	14.	.88		

+	ROUTED TO	365R	970.	12.33	108.	29.	14.	.88
+	HYDROGRAPH AT	353	401.	12.30	49.	12.	6.	.50
	2 COMBINED AT	353C	1349.	12.33	155.	41.	20.	1.38
+	ROUTED TO	R353	1308.	12.40	155.	41.	20.	1.38
+	ROUTED TO	353R	1291.	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	2528.	12.43	301.	79.	38.	2.87
+	ROUTED TO	R310	2508.	12.47	301.	79.	38.	2.87
+	ROUTED TO	R312	2458.	12.57	301.	79.	38.	2.87
+	HYDROGRAPH AT	295	364.	12.30	40.	10.	5.	.38
+	2 COMBINED AT	295C	2651.	12.57	339.	89.	43.	3.25
+	ROUTED TO	295R	2620.	12.60	339.	89.	43.	3.25
+	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
+	3 COMBINED AT	240C	3741.	12.50	565.	147.	71.	5.23
	ROUTED TO	SR240	1705.	12.93	500.	130.	62.	5.23
+	HYDROGRAPH AT	220	1126.	12.17	98.	25.	12.	.73
+	2 COMBINED AT	220C	1756.	12.90	590.	154.	74.	5.95
+	ROUTED TO	SR220	1675.	13.07	579.	151.	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	806.	12.17	69.	19.	9.	.54
+	3 COMBINED AT	200C	2593.	12.30	751.	198.	95.	7.41
+	ROUTED TO	SR200	2471.	12.37	746.	194.	93.	7.41
+	ROUTED TO	200SR	1862.	12.67	625.	164.	79.	7.41
+	2 COMBINED AT	C180	7181.	12.30	1479.	450.	247.	13.94
+	ROUTED TO	SR180	142.	19.00	142.	142.	114.	13.94
+	ROUTED TO	R180	142.	19.03	142.	142.	114.	13.94
+	HYDROGRAPH AT	260	418.	12.10	43.	12.	6.	.27
+	2 COMBINED AT	260C	527.	12.10	179.	153.	122.	.27
	ROUTED TO	R260	515.	12.20	179.	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	218.	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	181.	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	276.	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	1060.	12.20	142.	43.	21.	1.02
+	DIVERSION TO	BS340	1060.	12.20	71.	20.	9.	1.02
+	HYDROGRAPH AT	D340	948.	12.30	84.	23.	11.	1.02
+	HYDROGRAPH AT	RT340	1060.	12.20	71.	20.	9.	1.02
+	ROUTED TO	SR340	13.	8.47	13.	13.	9.	1.02
+	3 COMBINED AT	C340	2106.	12.30	465.	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	2109.	12.30	489.	255.	175.	3.45
+	HYDROGRAPH AT	380	323.	12.13	32.	9.	4.	.27
	DIVERSION TO	BS380	271.	12.03	13.	4.	2.	.27
+	HYDROGRAPH AT	D380	323.	12.13	21.	6.	3.	.27
+	HYDROGRAPH AT	RT380	271.	12.03	13.	4.	2.	.27
+	ROUTED TO	SR380	2.	8.20	2.	2.	2.	.27

+	3 COMBINED AT	380C	2311.	12.30	511.	263.	179.	3.72
+	HYDROGRAPH AT	400	53.	12.10	4.	1.	0.	.05
	DIVERSION TO	BS400	53.	12.10	3.	1.	0.	.05
+	HYDROGRAPH AT	D400	19.	12.37	1.	0.	0.	.05
+	HYDROGRAPH AT	RT400	53.	12.10	3.	1.	0.	.05
+	ROUTED TO	SR400	1.	11.87	1.	1.	0.	.05
+	2 COMBINED AT	C400	19.	12.37	1.	1.	0.	.05
+	2 COMBINED AT	400C	2311.	12.30	512.	264.	180.	3.77
+	HYDROGRAPH AT	355	235.	12.10	22.	6.	3.	.17
+	ROUTED TO	R355	212.	12.27	22.	6.	3.	.17
+	HYDROGRAPH AT	361	523.	12.10	51.	15.	7.	.37
+	DIVERSION TO	BS361	474.	12.03	23.	7.	3.	.37
+	HYDROGRAPH AT	D361	505.	12.13	32.	9.	4.	.37
+	HYDROGRAPH AT	RT361	474.	12.03	23.	7.	3.	.37
+	ROUTED TO	SR361	4.	8.23	4.	4.	3.	.37
+	3 COMBINED AT	361C	653.	12.13	57.	19.	10.	.54
+	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	653.	12.13	88.	35.	20.	1.07
+	DIVERSION TO	BS3612	652.	12.13	84.	25.	12.	1.07
+	HYDROGRAPH AT	D3612	22.	17.90	21.	16.	8.	1.07

+	HYDROGRAPH AT RT3612	652.	12.13	84.	25.	12.	1.07
+	ROUTED TO SR3612	17.	11.90	17.	17.	12.	1.07
	2 COMBINED AT C3612	39.	17.90	37.	32.	20.	1.07
+	ROUTED TO RR361	39.	18.23	37.	32.	20.	1.07
+	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	75.	50.	31.	1.80
+	ROUTED TO RR381	588.	12.40	74.	50.	31.	1.80
+	HYDROGRAPH AT 401	487.	12.20	67.	19.	9.	.61
+	DIVERSION TO BS401	40.	11.77	6.	2.	1.	.61
+	HYDROGRAPH AT D401	487.	12.20	65.	17.	8.	.61
+	HYDROGRAPH AT RT401	40.	11.77	6.	2.	1.	.61
+	ROUTED TO SR401	1.	.87	1.	1.	1.	.61
+	4 COMBINED AT C401	2997.	12.33	641.	329.	219.	6.17
+	HYDROGRAPH AT 420	515.	12.20	65.	18.	9.	.57
	DIVERSION TO BS420	370.	12.07	16.	4.	2.	.57
+	HYDROGRAPH AT D420	515.	12.20	52.	14.	7.	.57
+	HYDROGRAPH AT RT420	370.	12.07	16.	4.	2.	.57
+	ROUTED TO SR420	13.	11.63	13.	4.	2.	.57
+	3 COMBINED AT 420C	3366.	12.33	693.	342.	225.	10.87
+	HYDROGRAPH AT 370	406.	12.07	34.	10.	5.	.26
+	DIVERSION TO BS370	306.	12.07	15.	4.	2.	.26
+	HYDROGRAPH AT D370	100.	11.83	19.	6.	3.	.26
+	HYDROGRAPH AT RT370	306.	12.07	15.	4.	2.	.26
+	ROUTED TO SR370	8.	11.83	8.	4.	2.	.26
+	2 COMBINED AT 370C	108.	11.83	26.	10.	5.	.26
+	HYDROGRAPH AT 395	204.	12.10	21.	6.	3.	.16
+	DIVERSION TO BS395	169.	12.10	12.	3.	1.	.16
+	HYDROGRAPH AT D395	35.	11.80	9.	3.	1.	.16
+	HYDROGRAPH AT RT395	169.	12.10	12.	3.	1.	.16
+	ROUTED TO SR395	2.	11.83	2.	2.	1.	.16
	3 COMBINED AT 395C	145.	11.83	36.	14.	7.	.42
+	ROUTED TO R395	145.	11.97	36.	14.	7.	.42
+	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	603.	12.03	67.	23.	12.	.66
+	ROUTED TO RR390	515.	12.27	67.	23.	12.	.66
+	HYDROGRAPH AT 410	345.	12.10	33.	9.	5.	.28
+	2 COMBINED AT 410C	766.	12.23	98.	32.	16.	.94
+	HYDROGRAPH AT 385	314.	12.07	24.	7.	3.	.20
+	DIVERSION TO SF385	164.	12.07	6.	1.	1.	.20
+	HYDROGRAPH AT D385	150.	11.90	18.	5.	2.	.20
+	HYDROGRAPH AT RT385	164.	12.07	6.	1.	1.	.20
+	ROUTED TO SR385	8.	11.93	6.	1.	1.	.20
+	2 COMBINED AT 385C	158.	11.93	24.	7.	3.	.20
+	HYDROGRAPH AT 411	398.	12.10	30.	8.	4.	.24
+	DIVERSION TO SF411	348.	12.10	19.	5.	2.	.24
+	HYDROGRAPH AT D411	50.	11.77	11.	3.	2.	.24
+	HYDROGRAPH AT RT411	348.	12.10	19.	5.	2.	.24
+	ROUTED TO SR411	3.	11.77	3.	3.	2.	.24
	3 COMBINED AT 411C	211.	11.93	37.	12.	7.	.43
+	ROUTED TO R411	211.	12.20	37.	12.	7.	.43
+	HYDROGRAPH AT 413	107.	12.03	8.	2.	1.	.06
+	2 COMBINED AT 413C	305.	12.07	44.	14.	8.	.50
+	ROUTED TO R413	282.	12.23	44.	14.	8.	.50
+	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

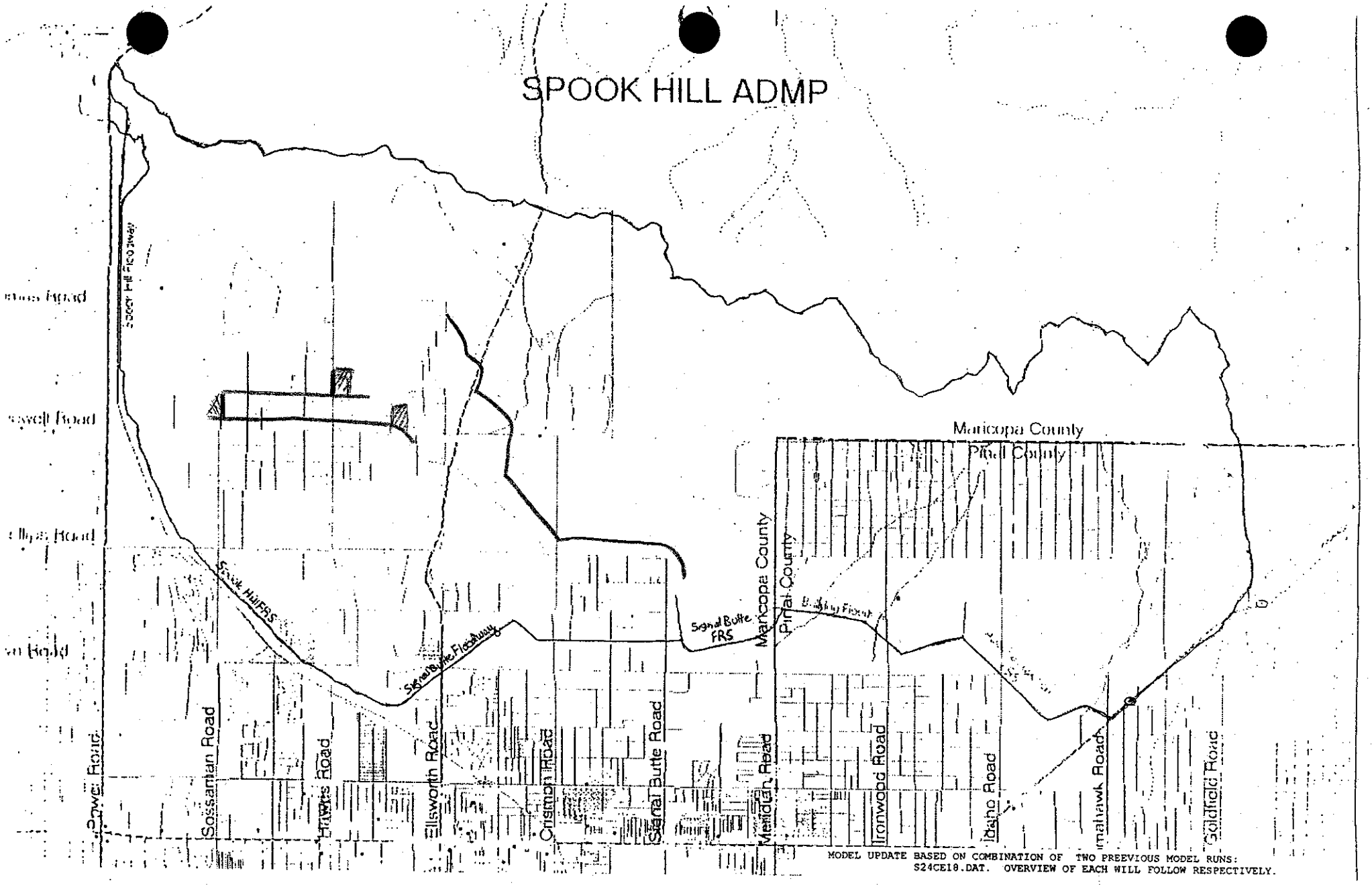
+	DIVERSION TO	WSH66	78.	11.90	12.	3.	2.	.08
+	HYDROGRAPH AT	DIV66	70.	12.07	3.	1.	0.	.08
	ROUTED TO	R113	69.	12.07	3.	1.	0.	.08
+	2 COMBINED AT	C114	140.	12.07	13.	4.	2.	.27
+	HYDROGRAPH AT	444	82.	12.03	5.	1.	1.	.04
+	ROUTED TO	R58	75.	12.07	5.	1.	1.	.04
+	HYDROGRAPH AT	445	296.	12.03	18.	5.	2.	.19
+	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	280.	12.07	23.	7.	3.	.22
4 COMBINED AT	415C	1933.	12.20	270.	82.	43.	2.75
DIVERSION TO	BS415	833.	12.20	42.	11.	5.	2.75
HYDROGRAPH AT	D415	1100.	12.00	227.	72.	38.	2.75
HYDROGRAPH AT	RT415	833.	12.20	42.	11.	5.	2.75
ROUTED TO	SR415	5.	12.00	5.	5.	4.	2.75
2 COMBINED AT	C415	1105.	12.00	231.	75.	42.	2.75
ROUTED TO	R415	1112.	12.10	231.	75.	42.	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	4379.	12.33	935.	437.	283.	14.73
ROUTED TO	SR440	754.	13.53	739.	437.	283.	14.73
ROUTED TO	RR455	754.	13.87	739.	437.	280.	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	2507.	12.10	924.	517.	323.	2.09
	ROUTED TO						
+		RR480	2345.	12.17	922.	516.	323.	2.09
	HYDROGRAPH AT						
+		500	1073.	12.27	122.	33.	16.	.93
	2 COMBINED AT						
		500C	3237.	12.20	1033.	545.	337.	3.02

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

SPOOK HILL ADMP



MODEL UPDATE BASED ON COMBINATION OF TWO PREEVIOUS MODEL RUNS:
S24CE10.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 SOSSAMAN & THUNDER MTN., ALONG HAWES NORTH OF OAK ST., AND ALONG SOSSAMAN BETWEEN MCDOWELL & OAK ST. THIS WILL GENERATE NEW SUB-BASINS 410, 411, AND 413 FROM SUB-BASINS 415 & 420 DETENTION BASINS WILL BE ADDED OFFLING TO SUB-BASINS 370 & 395, 385 & 411, AND 455

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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   26JUL00  TIME  10:24:15   *                                    *           (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   MODEL UPDATE BASED ON COMBINATION OF  TWO PREEVIOUS MODEL RUNS:
 13           ID                S24CE18.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 SOSSAMAN & THUNDER MTN.,
 25           ID   ALONG HAWES NORTH OF OAK ST., AND ALONG SOSSAMAN BETWEEN MCDOWELL & OAK ST.
 26           ID   THIS WILL GENERATE NEW SUB-BASINS 410, 411, AND 413 FROM SUB-BASINS 415 & 420
 27           ID   DETENTION BASINS WILL BE ADDED OFFLING TO SUB-BASINS 370 & 395,
 28           ID   385 & 411, AND 455
 29           ID  ********************************************************************
 30           ID   ANALYSIS FOR CURRENT ALTERNATIVE PERFORMED BY: WOOD/PATEL,  MW 07/19/00
 31           ID   FILE:   S24CE45.DAT
 32           ID
 33           ID
 34           ID   DDM MCUHP1 SPOOK HILL AMDP
              *DIAGRAM
 35           IT       2                    1500
 36           IO       3
 37           IN      15
 38           JD    3.81    0.01
 39           PC    .000    .002    .005    .008    .011    .014    .017    .020    .023    .026
 40           PC    .029    .032    .035    .038    .041    .044    .048    .052    .056    .060
 41           PC    .064    .068    .072    .076    .080    .085    .090    .095    .100    .105
 42           PC    .110    .115    .120    .126    .133    .140    .147    .155    .163    .172
 43           PC    .181    .191    .203    .218    .236    .257    .283    .387    .663    .707
 44           PC    .735    .758    .776    .791    .804    .815    .825    .834    .842    .849
 45           PC    .856    .863    .869    .875    .881    .887    .893    .898    .903    .908
 46           PC    .913    .918    .922    .926    .930    .934    .938    .942    .946    .950
 47           PC    .953    .956    .959    .962    .965    .968    .971    .974    .977    .980
 48           PC    .983    .986    .989    .992    .995    .998   1.000
 49           JD    3.58   10.00
 50           JD    3.43   30.00
 51           JD    3.28   60.00
 52           JD    3.22   90.00
 53           JD    3.18  120.00
 54           JD    3.14  150.00
1                                                HEC-1 INPUT                                                    PAGE  2

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

 55           JD    3.05  300.00
 56           JD    2.97  500.00
              * DDM   ***** Updated *****

 57           KK      10
 58           KM   SUB-BASIN 10
 59           KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 60           KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
 61           KM     L = 2.00  Kb = .044  Adj. Slope =  165.0
 62           BA    .702
 63           LG    .350    .320   7.600    .090  15.000
 64           UC    .421    .302
 65           UA       0       3       5       8      12      20      43      75      90      96
 66           UA     100
              * DDM   ***** Preserved *****
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 67          KK     R10
 68          KM   ROUTING OF FLOW FROM SUB-BASIN 10 TO R12
 69          RS       4    FLOW      -1
 70          RC    .045     .03    .045    8700    .021
 71          RX       0       1       2      17      27      42      43      44
 72          RY       5       5       5       0       0       5       5       5
             * DDM   ***** Preserved *****

 73          KK     R12
 74          KM   ROUTING OF FLOW FROM R12 TO SUB-BASIN 20
 75          RS       6    FLOW      -1
 76          RC    .045     .03    .045    4500     .01
 77          RX       0       1      30    37.5    57.5      65      94      95
 78          RY       3     2.5     2.5       0       0     2.5     2.5       3
             * DDM   ***** Updated *****

 79          KK      20
 80          KM   SUB-BASIN 20
 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  .993
 83          KM     L = 2.50  Kb = .041  Adj. Slope =   88.0
 84          BA   1.120
 85          LG    .350    .390   5.800    .190   1.000
 86          UC    .658    .454
 87          UA       0       3       5       8      12      20      43      75      90      96
 88          UA     100
             * DDM   ***** Preserved *****

 89          KK     C20
 90          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 10 AND 20
 91          HC       2
             * DDM   ***** Updated *****

 92          KK      40
 93          KM   SUB-BASIN 40
 94          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 95          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
 96          KM     L = 3.08  Kb = .036  Adj. Slope =  189.0
 97          BA   2.233
1                                        HEC-1 INPUT                                          PAGE  3

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

 98          LG    .340    .340   4.900    .280   5.000
 99          UC    .496    .264
100          UA       0       3       5       8      12      20      43      75      90      96
101          UA     100
             * DDM   ***** Updated *****

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

112          KK     60C
113          KM   HYDROGRAPH COMBINATION FOR APACHE JUNCTION FRS
             *      1       2
114          HC       3
             * DDM   ***** Preserved *****

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

124          KK     R60
125          KM        ROUTE FLOW THROUGH BULLDOG FLOODWAY FROM APACHE JUNCTION FRS
126          RS       1    FLOW      -1
127          RC    .016    .016    .016    2850    .012
128          RX       0       1       2     2.1     5.6     5.7       6       7
129          RY     3.5     3.5     3.5       0       0     3.5     3.5     3.5
             * DDM   ***** Preserved *****

130          KK    RR60
131          KM   ROUTE FLOW FROM BULLDOG FLOODWAY TO SUB-BASIN 80
132          RS       4    FLOW      -1
133          RC    .016    .016    .016    3500    .005
134          RX       0       1       2     2.1     7.1     7.2       8       9
135          RY     3.5     3.5     3.5       0       0     3.5     3.5     3.5
             * DDM   ***** Updated *****
1                                        HEC-1 INPUT                                          PAGE  4

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

136          KK      80
137          KM   SUB-BASIN 80
138          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
139          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .991
140          KM     L = 2.69  Kb = .039  Adj. Slope =  229.8
141          BA   1.475
142          LG    .330    .330   5.600    .210   4.000
143          UC    .433    .259
144          UA       0       3       5       8      12      20      43      75      90      96
145          UA     100
             * DDM   ***** Preserved *****

146          KK     80C
147          KM   HYDROGRAPH COMBINATION FOR FLOW FROM APACHE JUNCTION FRS & SUB-BASIN 80
148          HC       2   1.475
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          * DDM   ***** Preserved *****

149       KK     R80
150       KM   ROUTE FLOW FROM SUB-BASIN 80 TO SUB-BASIN 100
151       RS       1    FLOW      -1
152       RC    .025    .016    .025    1200    .003
153       RX       0       2       6     6.1    41.1    41.2    56.2    58.2
154       RY     5.5     4.5     4.5       0       0     4.5     4.5     5.5
          * DDM   ***** Updated *****

155       KK     100
156       KM   SUB-BASIN 100
157       KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
158       KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
159       KM     L = 1.94  Kb = .046  Adj. Slope =  108.0
160       BA    .484
161       LG    .320    .290   5.100    .260   3.000
162       UC    .533    .473
163       UA       0       5      16      30      65      77      84      90      94      97
164       UA     100
          * DDM   ***** Preserved *****

165       KK    100C
166       KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 80 & 100
167       HC       2
          * DDM   ***** Preserved *****

168       KK    R100
169       KM   ROUTE FLOW FROM SUB-BASIN 100 TO SUB-BASIN 120
170       RS       1    FLOW      -1
171       RC    .016    .016    .016     940    .005
172       RX       0       1       2     2.1    52.1    52.2      53      54
173       RY     4.5     4.5     4.5       0       0     4.5     4.5     4.5
          * DDM   ***** Updated *****
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

174       KK     120
175       KM   SUB-BASIN 120
176       KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
177       KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
178       KM     L = 3.07  Kb = .037  Adj. Slope =  239.0
179       BA   2.202
180       LG    .330    .280   6.800    .130  11.000
181       UC    .429    .226
182       UA       0       3       5       8      12      20      43      75      90      96
183       UA     100
          * DDM   ***** Preserved *****

184       KK    120C
185       KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 100 & 120
186       HC       2
          * DDM   ***** Preserved *****

187       KK    R120
188       KM   ROUTE FLOW FROM SUB-BASIN 120 TO SIGNAL BUTTE FRS
189       RS       1    FLOW      -1
190       RC    .025    .016    .025    2100    .005
191       RX       0       6      10    10.1    60.1    60.2    74.2    80.2
192       RY       8       5       5       0       0       5       5       8
          * DDM   ***** Updated *****

193       KK     140
194       KM   SUB-BASIN 140
195       KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
196       KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
197       KM     L = 1.61  Kb = .044  Adj. Slope =  149.0
198       BA    .598
199       LG    .310    .280   4.200    .440   5.000
200       UC    .421    .278
201       UA       0       5      16      30      65      77      84      90      94      97
202       UA     100
          * DDM   ***** Updated *****

203       KK     150
204       KM   SUB-BASIN 150
205       KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
206       KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
207       KM     L = 1.50  Kb = .047  Adj. Slope =  314.6
208       BA    .408
209       LG    .350    .360   5.100    .260   7.000
210       UC    .296    .221
211       UA       0       3       5       8      12      20      43      75      90      96
212       UA     100
          * DDM   ***** Preserved *****
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

213       KK    R150
214       KM   ROUTING OF FLOW FROM SUB-BASIN 150 TO R152
215       RS       3    FLOW      -1
216       RC    .045     .04    .045    3100    .032
217       RX       0       1       2      23      33      54      55      56
218       RY       7       7       7       0       0       7       7       7
          * DDM   ***** Preserved *****

219       KK    R152
220       KM   ROUTING OF FLOW FROM R152 TO SUB-BASIN 160
221       RS       6    FLOW      -1
222       RC    .045     .03    .045    5900    .019
223       RX       0       1       2       8      33      39      40      41
224       RY       2       2       2       0       0       2       2       2
          * DDM   ***** Updated *****

225       KK     160
226       KM   SUB-BASIN 160
227       KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
228       KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
229       KM     L = 2.10  Kb = .047  Adj. Slope =  129.0
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230          BA    .369
231          LG    .340    .330   4.150    .440   1.000
232          UC    .587    .655
233          UA       0       3       5       8      12      20      43      75      90      96
234          UA     100
             * DDM   ***** Updated *****

235          KK     180
236          KM   SUB-BASIN 180
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  .994
239          KM     L = 2.42  Kb = .041  Adj. Slope =  140.0
240          BA   1.000
241          LG    .350    .350   4.150    .430    .000
242          UC    .571    .403
243          UA       0       3       5       8      12      20      43      75      90      96
244          UA     100
             * DDM   ***** Preserved *****

245          KK    180C
246          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
             *      1       2
247          HC       5
             * DDM   ***** Updated *****

248          KK     383
249          KM   SUB-BASIN 383
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  .997
252          KM     L = 1.49  Kb = .047  Adj. Slope =  315.0
253          BA    .420
254          LG    .350    .400   6.000    .170  16.000
255          UC    .287    .209
1                                        HEC-1 INPUT                                                    PAGE  7

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

256          UA       0       3       5       8      12      20      43      75      90      96
257          UA     100
             * DDM   ***** Preserved *****

258          KK    R383
259          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
260          KM   ROUTING OF FLOW FROM SUB-BASIN 383 TO SUB-BASIN 393
261          KM   OVERBANK MANNINGS INCREASED TO ACCOUNT FOR SKEWED FLOW TO NATURAL
262          KM   WATERCOURSE FLOW PATH
263          RS       2    FLOW      -1
264          RC     .07     .03     .07    1115    .045
265          RX       0       1       3       9      39      45      46      47
266          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

267          KK     393
268          KM   SUB-BASIN 393
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 1.000
271          KM     L =  .61  Kb = .061  Adj. Slope =  246.2
272          BA    .040
273          LG    .350    .350   4.200    .420    .000
274          UC    .233    .310
275          UA       0       3       5       8      12      20      43      75      90      96
276          UA     100
             * DDM   ***** Preserved *****

277          KK    393C
278          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 383 & 393
279          HC       2
             * DDM   ***** Preserved *****

280          KK    R393
281          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
282          KM   ROUTING OF FLOW FROM SUB-BASIN 393 TO SUB-BASIN 365
283          RS       1    FLOW      -1
284          RC    .055     .03    .055    1115    .045
285          RX       0       1       3       9      39      45      46      47
286          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

287          KK     365
288          KM   SUB-BASIN 365
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  .998
291          KM     L = 2.20  Kb = .047  Adj. Slope =  299.5
292          BA    .415
293          LG    .350    .350   4.600    .330   4.000
294          UC    .400    .415
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    365C
298          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 393 & 365
299          HC       2
             * DDM   ***** Preserved *****

300          KK    R365
301          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
302          KM   ROUTING OF FLOW FROM SUB-BASIN 365 TO ROUTING 365R
303          RS       2    FLOW      -1
304          RC    .045     .03    .045    1000    .025
305          RX       0       1      50      56      76      82     131     132
306          RY     2.5       2       2       0       0       2       2     2.5
             * DDM   ***** Preserved *****

307          KK    365R
308          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
309          KM   ROUTING OF FLOW FROM 365R TO SUB-BASIN 353
310          KM   OVERBANK MANNINGS INCREASED TO ACCOUNT FOR SKEWED FLOW TO NATURAL
311          KM   WATERCOURSE FLOW PATH
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312          RS       3    FLOW      -1
313          RC     .07     .03     .07    1300     .008
314          RX       0       3       5      11       41      47     147     247
315          RY       3     2.5       2       0        0       2     2.5       3
             * DDM   ***** Updated *****

316          KK     353
317          KM   SUB-BASIN 353
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 = 2.50  Kb = .046  Adj. Slope =  297.9
321          BA    .502
322          LG    .350    .350   4.350    .380   1.000
323          UC    .442    .460
324          UA       0       3       5       8      12      20      43      75      90      96
325          UA     100
             * DDM   ***** Preserved *****

326          KK    353C
327          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 365 & 353
328          HC       2
             * DDM   ***** Preserved *****

329          KK    R353
330          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
331          KM   ROUTING OF FLOW FROM SUB-BASIN 353 TO ROUTING 353R
332          KM   OVERBANK MANNINGS INCREASED TO ACCOUNT FOR SKEWED FLOW TO NATURAL
333          KM   WATERCOURSE FLOW PATH
334          RS       2    FLOW      -1
335          RC     .07     .03     .07    1100     .009
336          RX       0       3       5      11       41      47     172     302
337          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

338          KK    353R
339          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
340          KM   ROUTING OF FLOW FROM 353R TO SUB-BASIN 310
341          RS       1    FLOW      -1
342          RC    .045     .03    .045    1692     .03
343          RX       0       1      25      31       51      57      81      82
344          RY       3       2       2       0        0       2       2       3
             * DDM   ***** Updated *****

345          KK     350
346          KM   SUB-BASIN 350
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  .994
349          KM     L = 2.22  Kb = .042  Adj. Slope =  311.0
350          BA    .935
351          LG    .350    .350   4.600    .330   5.000
352          UC    .367    .239
353          UA       0       3       5       8      12      20      43      75      90      96
354          UA     100
             * DDM   ***** Preserved *****

355          KK    350R
356          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
357          KM   ROUTING OF MAIN FLOW FROM DIVERSION OF SUB-BASIN 350 TO SUB-BASIN 310
358          RS       6    FLOW      -1
359          RC    .045    .035    .045    7650    .025
360          RX       0       1      50      56      86      92     141     142
361          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

362          KK     310
363          KM   SUB-BASIN 310
364          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
365          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
366          KM     L = 2.70  Kb = .045  Adj. Slope =  283.5
367          BA    .555
368          LG    .350    .350   3.910    .480    .000
369          UC    .483    .511
370          UA       0       3       5       8      12      20      43      75      90      96
371          UA     100
             * DDM   ***** Preserved *****

372          KK    C310
373          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 350 & 310
374          HC       3
             * DDM   ***** Preserved *****

375          KK    R310
376          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
377          KM   ROUTING OF FLOW FROM SUB-BASIN 310 TO R312
378          RS       2    FLOW      -1
379          RC    .045     .03    .045    1500     .021
380          RX       0       1     100     106     126     132     231     232
381          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

382          KK    R312
383          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
384          KM   ROUTING OF FLOW FROM R312 TO SUB-BASIN 295
385          KM   OVERBANK MANNINGS INCREASED TO ACCOUNT FOR SKEWED FLOW TO NATURAL
386          KM   WATERCOURSE FLOW PATH
387          RS       4    FLOW      -1
388          RC     .07     .03     .07    2100   .0124
389          RX       0       3       5      11      61      67     200     395
390          RY       4     2.5       2       0       0       2     2.5       4
             * DDM   ***** Updated *****

391          KK     295
392          KM   SUB-BASIN 295
393          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
394          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
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395          KM     L = 1.60  Kb = .047  Adj. Slope =  131.0
396          BA    .380
397          LG    .350    .350   4.900    .280    .000
398          UC    .450    .386
399          UA       0       3       5       8      12      20      43      75      90      96
400          UA     100
             * DDM   ***** Preserved *****

401          KK    295C
402          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 310 & 295
403          HC       2
             * DDM   ***** Preserved *****

404          KK    295R
405          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
406          KM   ROUTING OF FLOW FROM SUB-BASIN 295 TO BEGINNING OF PASS MTN. DIVERSION.
407          KM   OVERBANK MANNINGS INCREASED TO ACCOUNT FOR SKEWED FLOW TO NATURAL
408          KM   WATERCOURSE FLOW PATH
409          RS       2    FLOW      -1
410          RC     .07     .03     .07    1100    .013
411          RX       0       3       5      11      51      57     200     400
412          RY       4     2.5       2       0       0       2     2.5       4
             * DDM   ***** Updated *****

413          KK     210
414          KM   SUB-BASIN 210
415          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
416          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
417          KM     L = 1.84  Kb = .045  Adj. Slope =  315.0
418          BA    .583
419          LG    .350    .350   7.000    .120   5.000
420          UC    .321    .232
421          UA       0       3       5       8      12      20      43      75      90      96
422          UA     100
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 11

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

423          KK    R210
424          KM   ROUTING OF FLOW FROM SUB-BASIN 210 TO SUB-BASIN 220
425          RS       2    FLOW      -1
426          RC    .045     .03    .045    5100    .022
427          RX       0       1       2      14      34      46      47      48
428          RY       4       4       4       0       0       4       4       4
             * DDM   ***** Updated *****

429          KK     240
430          KM   SUB-BASIN 240
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  .992
433          KM     L = 3.50  Kb = .039  Adj. Slope =  298.6
434          BA   1.398
435          LG    .350    .370   5.200    .240   2.000
436          UC    .471    .361
437          UA       0       3       5       8      12      20      43      75      90      96
438          UA     100
             * DDM   ***** Preserved *****

439          KK    240C
440          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
441          HC       3
             * DDM   ***** Preserved *****

442          KK   SR240
443          KM   DIGITAL MAPPING SHOWS SEDIMENTATION.  FOR SIMPLICITY NO ADDITIONAL
444          KM   SEDIMENTATION WILL BE CONSIDERED FOR STORAGE ROUTING ANALYSIS. 5/11/00
445          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
446          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
447          RS       1    STOR       0
448          SA    1.38    14.2    36.5
449          SE       0       5      11
450          SS       5      42       3     1.5
             * DDM   ***** Updated *****

451          KK     220
452          KM   SUB-BASIN 220
453          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
454          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
455          KM     L = 1.92  Kb = .043  Adj. Slope =  315.0
456          BA    .725
457          LG    .350    .350   7.000    .120   4.000
458          UC    .317    .209
459          UA       0       3       5       8      12      20      43      75      90      96
460          UA     100
             * DDM   ***** Preserved *****

461          KK    220C
462          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
463          HC       2
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 12

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

464          KK   SR220
465          KM   DIGITAL MAPPING SHOWS SEDIMENTATION.  FOR SIMPLICITY NO ADDITIONAL
466          KM   SEDIMENTATION WILL BE CONSIDERED FOR STORAGE ROUTING ANALYSIS. 5/11/00
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     .78     4.1    13.7
471          SE       0       3      10
472          SS       3      65       3     1.5
             * DDM   ***** Updated *****

473          KK     190
474          KM   SUB-BASIN 190
475          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
476          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
477          KM     L = 1.91  Kb = .042  Adj. Slope =  315.0
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478          BA    .918
479          LG    .350    .390   5.800    .190   8.000
480          UC    .321    .185
481          UA       0       3       5       8      12      20      43      75      90      96
482          UA     100
             * DDM   ***** Preserved *****

483          KK    R190
484          KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
485          RS       2    FLOW      -1
486          RC    .045     .03    .045    4740     .03
487          RX       0       1       2      17      37      52      53      54
488          RY       5       5       5       0       0       5       5       5
             * DDM   ***** Preserved *****

489          KK    R192
490          KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
491          RS       2    FLOW      -1
492          RC    .045    .035    .045    2200    .018
493          RX       0       1      50      59      79      88     137     138
494          RY     3.5       3       3       0       0       3       3     3.5
             * DDM   ***** Updated *****

495          KK     200
496          KM   SUB-BASIN 200
497          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
498          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
499          KM     L = 1.58  Kb = .045  Adj. Slope =  305.6
500          BA    .535
501          LG    .350    .390   5.700    .200  10.000
502          UC    .300    .200
503          UA       0       3       5       8      12      20      43      75      90      96
504          UA     100
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

505          KK    200C
506          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 220 & 200
507          HC       3
             * DDM   ***** Preserved *****

508          KK   SR200
509          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
510          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
511          RS       1    STOR       0
512          SA    2.56     3.1     9.4
513          SE       0       3      10
514          SS       3     112       3     1.5
             * DDM   ***** Preserved *****

515          KK   200SR
516          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
517          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
             *      1       2
518          RS       1    STOR       0
519          SA       8     9.2     9.2
520          SE       0       7      10
521          SS       7     251       3     1.5
522          KM   ******************************************************************
523          KM   ************* END OF PASS MOUNTAIN ALTERNATIVE UPDATE. **************
524          KM
             * DDM   ***** Preserved *****

525          KK    C180
526          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
             *      1       2
527          HC       2
             * DDM   ***** Preserved *****

528          KK   SR180
529          KM   SIGNAL BUTTE FRS DATED 1/28/85
530          KM   OUTLET PIPE=36"RCP; L= 147';  INLET INV.=1690; OUTLET INV.=1687
531          KM   EMERGENCY SPILLWAY ELEV.=1712.4; PRINCIPLE SPILLWAY ELEV.=1701
532          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 250 ACRE-FEET
533          RS       1    STOR       0
534          SV       0       1     250     500     750    1060
535          SQ       0   106.5   125.5   137.5     146     160
536          SE      90     101   104.5     107     109   112.4
             * DDM   ***** Preserved *****

537          KK    R180
538          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
539          KM   ROUTE FLOW FROM SIGNAL BUTTE FRS TO SUB-BASIN 260
540          RS       2    FLOW      -1
541          RC    .035    .025    .035    1500    .003
542          RX       0       1       2    22.6    38.6    59.2      60      61
543          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

544          KK     260
545          KM   SUB-BASIN 260
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 =  .81  Kb = .049  Adj. Slope =   68.0
549          BA    .267
550          LG    .300    .170   6.800    .160  15.000
551          UC    .363    .215
552          UA       0       5      16      30      65      77      84      90      94      97
553          UA     100
             * DDM   ***** Preserved *****

554          KK    260C
555          KM   HYDROGRAPH COMBINATION FOR OUTFLOW OF SIGNAL BUTTE FRS & SUB-BASIN 260
556          HC       2    .267
             * DDM   ***** Preserved *****
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557          KK    R260
558          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
559          KM   ROUTE FLOW FROM SUB-BASIN 260 TO SUB-BASIN 280
560          RS       3    FLOW      -1
561          RC    .035    .025    .035    2300    .003
562          RX       0       1       2    23.4    43.4    64.8      65      66
563          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Updated *****

564          KK     280
565          KM   SUB-BASIN 280
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 =  .77  Kb = .049  Adj. Slope =   84.0
569          BA    .304
570          LG    .300    .250   5.300    .290  15.000
571          UC    .333    .175
572          UA       0       5      16      30      65      77      84      90      94      97
573          UA     100
             * DDM   ***** Preserved *****

574          KK    280C
575          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 260 & SUB-BASIN 280
576          HC       2
             * DDM   ***** Preserved *****

577          KK    R280
578          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
579          KM   ROUTE FLOW FROM SUB-BASIN 280 TO SUB-BASIN 300
580          RS       2    FLOW      -1
581          RC    .035    .025    .035    2500    .003
582          RX       0       1       2    23.4    43.4    64.8      65      66
583          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

584          KK     300
585          KM   SUB-BASIN 300
586          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
587          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
588          KM     L =  .80  Kb = .049  Adj. Slope =  100.0
589          BA    .297
590          LG    .320    .280   4.200    .480  11.000
591          UC    .333    .183
592          UA       0       5      16      30      65      77      84      90      94      97
593          UA     100
             * DDM   ***** Preserved *****

594          KK    C300
595          KM   HYDROGRAPH COMBINATION OF DIVERTED FLOW
596          HC       2
             * DDM   ***** Preserved *****

597          KK    D300
598          KM   DIVERT FLOW INTO OFFLINE BASIN AT SIGNAL BUTTE FLOODWAY TO BE COMBINED
599          KM   LATER WITH BASIN 305 AT END OF SIGNAL BUTTE FLOODWAY
600          DT   DIV300
601          DI       0     300    5000
602          DQ       0       0    4700
             * DDM   ***** Preserved *****

603          KK   RTDIV300
604          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
605          DR   DIV300
             * DDM   ***** Preserved *****

606          KK   SRDIV300
607          KM   RETRIEVE FLOW INTO BASIN AND BLEED OFF WITHIN 36 HOURS
608          KM
609          RS       1    STOR       0
610          SV       0      60
611          SE       0      12
612          SQ       0     300
             * DDM   ***** Preserved *****

613          KK    300C
614          KM   HYDROGRAPH COMBINATION OF DIVERTED FLOW
615          HC       2
             * DDM   ***** Updated *****

616          KK     305
617          KM   SUB-BASIN 305
618          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
619          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
620          KM     L = 1.20  Kb = .047  Adj. Slope =   92.0
621          BA    .377
622          LG    .340    .330   4.450    .380   8.000
623          UC    .438    .298
624          UA       0       3       5       8      12      20      43      75      90      96
625          UA     100
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 16

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

626          KK    D305
627          KM   DIVERT FLOW INTO OFFLINE BASIN TO BE COMBINED LATER WITH PASS MOUNTAIN
628          KM   DIVERSION FLOW AT END OF SIGNAL BUTTE FLOODWAY
629          DT    305D
630          DI       0    1000
631          DQ       0    1000
             * DDM   ***** Preserved *****

632          KK   RT305D
633          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
634          DR    305D
             * DDM   ***** Preserved *****

635          KK   SR305D
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636          KM   RETRIEVE FLOW INTO BASIN AND BLEED OFF WITHIN 36 HOURS
637          KM
638          RS       1    STOR       0
639          SV       0      25
640          SE       0       6
641          SQ       0     100
             * DDM   ***** Preserved *****

642          KK    305C
643          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 280 & 300
644          HC       3
             * DDM   ***** Preserved *****

645          KK    R305
646          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
647          KM   ROUTE FLOW FROM SUB-BASIN 300 TO START OF FLOODWAY CONCRETE CHANNEL
648          RS       2    FLOW      -1
649          RC    .035    .025    .035    2200    .003
650          RX       0       1       2    23.4    55.4    76.8      77      78
651          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Preserved *****

652          KK   RR305
653          KM   CHANNEL GEOMETRY FOR SPOOK HILL FRS OBTAINED FROM AS-BUILTS PLANS.
654          KM   CONTINUE TO ROUTE FLOW WITHIN CONCRETE CHANNEL TO SPOOK HILL FRS
655          RS       1    FLOW      -1
656          RC    .016    .016    .016    6050   .0146
657          RX       0       1       2     2.1    16.1    16.2      17      18
658          RY     7.5     7.5     7.5       0       0     7.5     7.5     7.5
             *      1       2
             * DDM   ***** Updated *****

659          KK     320
660          KM   SUB-BASIN 320
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  .995
663          KM     L = 1.60  Kb = .042  Adj. Slope =  106.0
664          BA    .870
665          LG    .310    .290   4.500    .380  15.000
666          UC    .450    .240
1                                        HEC-1 INPUT                                          PAGE 17

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

667          UA       0       5      16      30      65      77      84      90      94      97
668          UA     100
             * DDM   ***** Preserved *****

669          KK    D320
670          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
671          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
672          KM   SIERRA HEIGHTS       FALCON RIDGE    & MARBLE CREEK
673          KM        MAXIMUM VOLUME DIVERSION = 12.27acre-feet
             *      1
674          DT   BS320   12.27
675          DI       0   10000
676          DQ       0   10000
             * DDM   ***** Preserved *****

677          KK   RT320
678          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
679          DR   BS320
             * DDM   ***** Preserved *****

680          KK   SR320
681          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
682          KM   12.27 ACRE-FEETx43560/36x3600=4.1cfs
             *      1
683          RS       1    STOR       0
684          SV       0     .01    12.3
685          SQ       0     4.2     4.2
             * DDM   ***** Preserved *****

686          KK    C320
687          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
688          HC       3
             * DDM   ***** Updated *****

689          KK     340
690          KM   SUB-BASIN 340
691          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
692          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .991
693          KM     L = 2.40  Kb = .042  Adj. Slope =  160.0
694          BA   1.449
695          LG    .280    .280   4.150    .520  21.000
696          UC    .512    .287
697          UA       0       5      16      30      65      77      84      90      94      97
698          UA     100
             * DDM   ***** Preserved *****

699          KK    D340
700          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
701          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
702          KM   GRANDVIEW ESTATES    BOULDER MOUNTAIN & 33% OF MESA HIGHLANDS
703          KM        MAXIMUM VOLUME DIVERSION = 56.0 acre-feet
             *      1
704          DT   BS340      56
705          DI       0   10000
706          DQ       0   10000
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 18

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

707          KK   RT340
708          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
709          DR   BS340
             * DDM   ***** Preserved *****

710          KK   SR340
711          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
712          KM    56.0 ACRE-FEETx43560/36x3600=18.8cfs
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          *      1
713       RS       1    STOR       0
714       SV       0     .01      56
715       SQ       0    18.9    18.9
          * DDM   ***** Preserved *****

716       KK    C340
717       KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
718       HC       3
          * DDM   ***** Updated *****

719       KK     355
720       KM   SUB-BASIN 355
721       KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
722       KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
723       KM     L =  .80  Kb = .052  Adj. Slope =  125.0
724       BA    .174
725       LG    .320    .300   4.550    .360  12.000
726       UC    .308    .227
727       UA       0       5      16      30      65      77      84      90      94      97
728       UA     100
          * DDM   ***** Preserved *****

729       KK    R355
730       KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
731       KM   ROUTING OF FLOW FROM SUB-BASIN 355 TO SUB-BASIN 360
732       RS       9    FLOW      -1
733       RC    .045    .035    .045   10100    .026
734       RX       0       1      40      46      56      62     102     103
735       RY       3       2       2       0       0       2       2       3
          * DDM   ***** Updated *****

736       KK     360
737       KM   SUB-BASIN 360
738       KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
739       KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
740       KM     L = 2.10  Kb = .048  Adj. Slope =  124.0
741       BA    .670
742       LG    .260    .270   4.100    .560  20.000
743       UC    .587    .466
744       UA       0       5      16      30      65      77      84      90      94      97
745       UA     100
          * DDM   ***** Preserved *****
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

746       KK    D360
747       KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
748       KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
749       KM        MAXIMUM VOLUME DIVERSION = 28.6 acre-feet
          *      1
750       DT   BS360    28.6
751       DI       0   10000
752       DQ       0   10000
          * DDM   ***** Preserved *****

753       KK   RT360
754       KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
755       DR   BS360
          * DDM   ***** Preserved *****

756       KK   SR360
757       KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
758       KM    28.6 ACRE-FEETx43560/36x3600=9.6cfs
759       RS       1    STOR       0
760       SV       0     .01    28.6
761       SQ       0     9.6     9.6
          * DDM   ***** Preserved *****

762       KK    360C
763       KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
764       HC       4
          * DDM   ***** Updated *****

765       KK     380
766       KM   SUB-BASIN 380
767       KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
768       KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
769       KM     L = 2.20  Kb = .048  Adj. Slope =  114.0
770       BA    .972
771       LG    .300    .310   4.150    .500   7.000
772       UC    .658    .444
773       UA       0       5      16      30      65      77      84      90      94      97
774       UA     100
          * DDM   ***** Preserved *****

775       KK    D380
776       KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
777       KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
778       KM        MAXIMUM VOLUME DIVERSION = 28.6 acre-feet
          *      1
779       DT   BS380    28.6
780       DI       0   10000
781       DQ       0   10000
          * DDM   ***** Preserved *****
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

782       KK   RT380
783       KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
784       DR   BS380
          * DDM   ***** Preserved *****

785       KK   SR380
786       KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
787       KM    28.6 ACRE-FEETx43560/36x3600=9.6cfs
788       RS       1    STOR       0
789       SV       0     .01    28.6
790       SQ       0     9.6     9.6
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            * DDM   ***** Preserved *****

791         KK    380C
792         KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
793         HC       3
            * DDM   ***** Updated *****

794         KK     400
795         KM   SUB-BASIN 400
796         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
797         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
798         KM     L = 1.64  Kb = .046  Adj. Slope =  110.0
799         BA    .616
800         LG    .320    .320   3.130    .930   6.000
801         UC    .592    .405
802         UA       0       5      16      30      65      77      84      90      94      97
803         UA     100
            * DDM   ***** Preserved *****

804         KK    D400
805         KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
806         KM   DETENTION/RETENTION BASIN LOCATED WITHIN SAGUARO VISTA SUBDIVISION
807         KM        MAXIMUM VOLUME DIVERSION = 5.6 ACRE-FEET
            *      1
808         DT   BS400     5.6
809         DI       0   10000
810         DQ       0   10000
            * DDM   ***** Preserved *****

811         KK   RT400
812         KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
813         DR   BS400
            * DDM   ***** Preserved *****

814         KK   SR400
815         KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
816         KM     5.6 ACRE-FEETx43560/36x3600 = 2 cfs
817         RS       1    STOR       0
818         SV       0     .01     5.6
819         SQ       0       2       2
            * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 21

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

820         KK    C400
821         KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
822         HC       2
            * DDM   ***** Preserved *****

823         KK    400C
824         KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
825         HC       2
            * DDM   ***** Updated *****

826         KK     420
827         KM   SUB-BASIN 420
828         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
829         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
830         KM     L = 1.69  Kb = .045  Adj. Slope =  107.0
831         BA    .570
832         LG    .320    .280   4.350    .440  10.000
833         UC    .500    .359
834         UA       0       5      16      30      65      77      84      90      94      97
835         UA     100
            * DDM   ***** Preserved *****

836         KK    D420
837         KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
838         KM   DETENTION/RETENTION BASINS LOCATED WITHIN GRAY FOX SUBDIVISION
839         KM        MAXIMUM VOLUME DIVERSION = 8.65 acre-feet
            *      1
840         DT   BS420    8.65
841         DI       0   10000
842         DQ       0   10000
            * DDM   ***** Preserved *****

843         KK   RT420
844         KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
845         DR   BS420
            * DDM   ***** Preserved *****

846         KK   SR420
847         KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
848         KM   38.55 ACRE-FEETx43560/36x3600=13cfs
849         RS       1    STOR       0
850         SV       0     .01   38.55
851         SQ       0      13      13
            * DDM   ***** Preserved *****

852         KK    420C
853         KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
854         HC       3   10.87
            * DDM   ***** Updated *****
1                                    HEC-1 INPUT                                          PAGE 22

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

855         KK     370
856         KM   SUB-BASIN 370
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  .998
859         KM     L =  .90  Kb = .050  Adj. Slope =  189.0
860         BA    .257
861         LG    .310    .280   4.800    .340  16.000
862         UC    .271    .173
863         UA       0       5      16      30      65      77      84      90      94      97
864         UA     100
            * DDM   ***** Updated *****

865         KK     395
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866          KM   SUB-BASIN 395
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  .999
869          KM     L = 1.00  Kb = .052  Adj. Slope =  188.0
870          BA    .160
871          LG    .330    .320   5.100    .280  12.000
872          UC    .300    .276
873          UA       0       5      16      30      65      77      84      90      94      97
874          UA     100
             * DDM   ***** Preserved *****

875          KK    395C
876          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
877          HC       2
             * DDM   ***** Preserved *****

878          KK    D395
879          KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN LOCATED WITHIN SUB-BASINS
880          KM   370 AND 395.
             *      1
881          DT   BS395
882          DI       0      25    5000
883          DQ       0       0    4975
             * DDM   ***** Preserved *****

884          KK   RT395
885          KM   RETRIEVE FLOW FROM DIVERSION
886          DR   BS395
             * DDM   ***** Preserved *****

887          KK   SR395
888          KM   RETRIEVE FLOW INTO OFFLINE BASIN AND BLEED OFF WITHIN 36 HOURS.
889          KM      21 ACRE-FEETx43560/36x3600  = 7cfs
890          RS       1    STOR       0
891          SV       0     .01      21
892          SQ       0       7       7
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

893          KK    C395
894          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
895          HC       2
             * DDM   ***** Preserved *****

896          KK    R395
897          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
898          KM   ROUTING OF FLOW FROM SUB-BASINS 370 AND 395 TO SUB-BASIN 390
899          RS       8    FLOW      -1
900          RC    .045    .035    .045    2600    .023
901          RX       0       1      40      46      56      62     102     103
902          RY       3       2       2.      0       0       2       2       3
             * DDM   ***** Updated *****

903          KK     390
904          KM   SUB-BASIN 390
905          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
906          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
907          KM     L =  .70  Kb = .050  Adj. Slope =  299.4
908          BA    .244
909          LG    .300    .250   4.700    .380  18.000
910          UC    .204    .107
911          UA       0       5      16      30      65      77      84      90      94      97
912          UA     100
             * DDM   ***** Preserved *****

913          KK    D390
914          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
915          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THUNDER MOUNTAIN ESTATES
916          KM        MAXIMUM VOLUME DIVERSION  = 3.5 acre-feet
             *      1
917          DT   BS390     3.5
918          DI       0    5000
919          DQ       0    5000
             * DDM   ***** Preserved *****

920          KK   RT390
921          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
922          DR   BS390
             * DDM   ***** Preserved *****

923          KK   SR390
924          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
925          KM     3.5 ACRE-FEETx43560/36x3600=1.2cfs
926          RS       1    STOR       0
927          SV       0     .01     3.5
928          SQ       0     1.2     1.2
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

929          KK    390C
930          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
931          HC       3
             * DDM   ***** Preserved *****

932          KK   RR390
933          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
934          KM   FROM SUB-BASIN 390 TO SUB-BASIN 410.
935          RS       8    FLOW      -1
936          RC    .045    .035    .045    5500    .020
937          RX       0       1      40      46      56      62     102     103
938          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

939          KK     410
940          KM   SUB-BASIN 410
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  .998
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 943          KM     L = 1.00  Kb = .049  Adj. Slope =  150.0
 944          BA    .278
 945          LG    .300    .250   3.950    .580  15.000
 946          UC    .329    .224
 947          UA       0       5      16      30      65      77      84      90      94      97
 948          UA     100
              * DDM   ***** Preserved *****

 949          KK    410C
 950          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
 951          HC       2
              * DDM   ***** Updated *****

 952          KK     385
 953          KM   SUB-BASIN 385
 954          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 955          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
 956          KM     L =  .90  Kb = .051  Adj. Slope =  309.5
 957          BA    .197
 958          LG    .330    .320   4.800    .310   9.000
 959          UC    .233    .171
 960          UA       0       5      16      30      65      77      84      90      94      97
 961          UA     100
              * DDM   ***** Updated *****

 962          KK     411
 963          KM   SUB-BASIN 411
 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  .999
 966          KM     L =  .90  Kb = .050  Adj. Slope =  315.0
 967          BA    .237
 968          LG    .340    .350   5.000    .270  10.000
 969          UC    .229    .151
 970          UA       0       3       5       8      12      20      43      75      90      96
 971          UA     100
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 25

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

 972          KK    411C
 973          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 411
 974          HC       2
              * DDM   ***** Preserved *****

 975          KK    D411
 976          KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN LOCATED WITHIN SUB-BASINS
 977          KM   385 AND 411.
 978          DT   SF411
 979          DI       0      25    5000
 980          DQ       0       0    4975
              * DDM   ***** Preserved *****

 981          KK   RT411
 982          KM   RETRIEVE FLOW FROM DIVERSION OF SUB-BASIN 411.
 983          DR   SF411
              * DDM   ***** Preserved *****

 984          KK   SR411
 985          KM   RETRIEVE FLOW INTO OFFLINE BASIN AND BLEED OFF WITHIN 36 HOURS.
 986          KM      22 ACRE-FEETx43560/36x3600  = 8cfs
 987          RS       1    STOR       0
 988          SV       0     .01      22
 989          SQ       0       8       8
              * DDM   ***** Preserved *****

 990          KK    C411
 991          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 411
 992          HC       2
              * DDM   ***** Preserved *****

 993          KK    R411
 994          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
 995          KM   ROUTING OF SPLIT FLOW FROM SUB-BASIN 385 AND SUB-BASIN 411 TO SUB-BASIN 413
 996          RS      14    FLOW      -1
 997          RC    .045    .035    .045    5309    .024
 998          RX       0       1      40      46      56      62     102     103
 999          RY       3       2       2       0       0       2       2       3
              * DDM   ***** Updated *****

1000          KK     413
1001          KM   SUB-BASIN 413
1002          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1003          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1004          KM     L =  .40  Kb = .058  Adj. Slope =  221.9
1005          BA    .063
1006          LG    .300    .250   4.150    .530  15.000
1007          UC    .188    .134
1008          UA       0       5      16      30      65      77      84      90      94      97
1009          UA     100
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 26

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

1010          KK    413C
1011          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 385, 411, AND 413.
1012          HC       2
              * DDM   ***** Preserved *****

1013          KK    R413
1014          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1015          KM   ROUTING OF FLOW FROM SUB-BASIN 413 TO RR413
1016          RS       3    FLOW      -1
1017          RC    .045    .035    .045    2900    .021
1018          RX       0       1      40      46      56      62     102     103
1019          RY       3       2       2       0       0       2       2       3
              * DDM   ***** Updated *****

1020          KK     440
1021          KM   SUB-BASIN 440
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1022        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1023        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1024        KM     L =  .40  Kb = .039  Adj. Slope =  315.0
1025        BA    .080
1026        LG    .190    .380   6.400    .140  13.000
1027        UC    .129    .077
1028        UA       0       3       5       8      12      20      43      75      90      96
1029        UA     100
            * DDM   ***** Preserved *****

1030        KK     R70
1031        KM   ROUTE FLOW FROM SUB-BASIN 440 TO C108
1032        RS       1    FLOW      -1
1033        RC     .05    .035     .05    2250     .08
1034        RX    1000    1025    1050    1070    1075    1095    1120    1145
1035        RY      30    22.9    15.7      10      10    15.7    22.9      30
            * DDM   ***** Updated *****

1036        KK     441
1037        KM   SUB-BASIN 441
1038        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1039        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1040        KM     L =  .28  Kb = .069  Adj. Slope =  315.0
1041        BA    .010
1042        LG    .300    .250   5.600    .220   5.000
1043        UC    .150    .225
1044        UA       0       5      16      30      65      77      84      90      94      97
1045        UA     100
            * DDM   ***** Preserved *****

1046        KK    C108
1047        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 440 & 441
1048        HC       2
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1049        KK    DIV4
1050        KM        SPLIT FLOW WITH TWO 42 INCH PIPES TO WEST AND SOUTH
            *      1
1051        DT   SPLIT
1052        DI       0      14      40      82     120     154     180
1053        DQ       0       7      20      41      60      77      90
            * DDM   ***** Preserved *****

1054        KK    R108
1055        KM        ROUTE FLOW FROM SUB-BASIN C108 TO C67
1056        RS       2    FLOW      -1
1057        RC     .05    .035     .05    3200      .1
1058        RX    1000    1025    1050    1070    1075    1095    1120    1145
1059        RY      30    22.9    15.7      10      10    15.7    22.9      30
            * DDM   ***** Updated *****

1060        KK     442
1061        KM   SUB-BASIN 442
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  .999
1064        KM     L =  .83  Kb = .055  Adj. Slope =  274.2
1065        BA    .100
1066        LG    .300    .270   3.290    .770   5.000
1067        UC    .258    .264
1068        UA       0       5      16      30      65      77      84      90      94      97
1069        UA     100
            * DDM   ***** Preserved *****

1070        KK     C67
1071        KM   COMBINE FLOW FROM SUB-BASIN 442 & DIV4
1072        HC       2
            * DDM   ***** Preserved *****

1073        KK    DIV6
1074        KM        OFFLINE BASIN WITH 25 FOOT WEIR SET AT 2.5 FEET ABOVE BOTTOM OF CHANNEL
1075        KM        FLOW CONTINUES BEYOND BASIN THROUGH 2-30" PIPES
            *      1
1076        DT  BASIN4
1077        DI       0      10      32      44    79.9   132.5     198   272.9   356.8
1078        DQ       0       0       0       0    23.9    67.5     124   190.9   266.8
            * DDM   ***** Preserved *****

1079        KK  RTDIV6
1080        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1081        DR  BASIN4
            * DDM   ***** Preserved *****

1082        KK  RFDIV6
1083        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1084        KM     3.3 ACRE-FEETx43560/36x3600=1.1cfs
            *      1
1085        RS       1    STOR       0
1086        SV       0     .01     3.3
1087        SQ       0     1.1     1.1
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1088        KK   CDIV6
1089        KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1090        HC       2
            * DDM   ***** Updated *****

1091        KK     443
1092        KM   SUB-BASIN 443
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 =  .71  Kb = .050  Adj. Slope =  315.0
1096        BA    .080
1097        LG    .250    .190   8.000    .080  10.000
1098        UC    .196    .194
1099        UA       0       5      16      30      65      77      84      90      94      97
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1100        UA     100
            * DDM   ***** Preserved *****

1101        KK   DIV66
1102        KM        DIVERT FLOW INTO 3 NATURAL WASHES WITH ONE 24" PIPE IN EACH WASH.
1103        KM        EACH PIPE CAPACITY BASED ON 4 FEET OF HEAD
1104        DT   WSH66
1105        DI       0      78     100     200
1106        DQ       0      78      78      78
            * DDM   ***** Preserved *****

1107        KK    R113
1108        KM        ROUTE FLOW FROM C113 TO C114
1109        RS       1    FLOW      -1
1110        RC    .019    .019    .019    1300    .029
1111        RX    1000    1004    1008    1012    1018    1022    1026    1030
1112        RY      17   15.33   12.67      10      10   12.67   15.33      17
            * DDM   ***** Preserved *****

1113        KK    C114
1114        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 67 AND C113
1115        HC       2
            * DDM   ***** Updated *****

1116        KK     444
1117        KM   SUB-BASIN 444
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 =  .33  Kb = .034  Adj. Slope =  315.0
1121        BA    .040
1122        LG    .130    .350   4.450    .320   1.000
1123        UC    .112    .084
1124        UA       0       3       5       8      12      20      43      75      90      96
1125        UA     100
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 29

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


1126        KK     R58
1127        KM   ROUTE FLOW FROM SUB-BASIN 444 TO C107
1128        RS       1    FLOW      -1
1129        RC     .05    .035     .05    2370   .0516
1130        RX    1000    1010    1020    1050    1055    1085    1095    1105
1131        RY      19      18      17      10      10      17      18      19
            * DDM   ***** Updated *****

1132        KK     445
1133        KM   SUB-BASIN 445
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  .999
1136        KM     L =  .82  Kb = .036  Adj. Slope =  315.0
1137        BA    .190
1138        LG    .170    .320   3.470    .590   3.000
1139        UC    .192    .130
1140        UA       0       5      16      30      65      77      84      90      94      97
1141        UA     100
            * DDM   ***** Preserved *****

1142        KK    C107
1143        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 444 & 445
1144        HC       2
            * DDM   ***** Preserved *****

1145        KK    R107
1146        KM        ROUTE FLOW FROM C107 TO C109
1147        RS       1    FLOW      -1
1148        RC     .05    .035     .05     700   .0516
1149        RX    1000    1010    1020    1050    1055    1085    1095    1105
1150        RY      19      18      17      10      10      17      18      19
            * DDM   ***** Preserved *****

1151        KK    RTB2
1152        KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
            *      1
1153        DR   SPLIT
            * DDM   ***** Preserved *****

1154        KK  RSPLIT
1155        KM        ROUTE FLOW FROM SPLIT TO C109
1156        RS       1    FLOW      -1
1157        RC     .05    .035     .05     800     .05
1158        RX    1000    1025    1050    1070    1075    1095    1120    1145
1159        RY      30    22.9    15.7      10      10    15.7    22.9      30
            * DDM   ***** Updated *****

1160        KK     446
1161        KM   SUB-BASIN 446
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 1.000
1164        KM     L =  .46  Kb = .061  Adj. Slope =  303.9
1165        BA    .040
1166        LG    .270    .250   4.500    .400  19.000
1                                   HEC-1 INPUT                                          PAGE 30

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

1167        UC    .183    .189
1168        UA       0       5      16      30      65      77      84      90      94      97
1169        UA     100
            * DDM   ***** Preserved *****

1170        KK    C109
1171        KM        COMBINE HYDROGRAPHS FROM COMBINES C107 AND C108
1172        HC       3
            * DDM   ***** Preserved *****

1173        KK    DIV5
1174        KM        DIVERT FLOW INTO WASHES TOWARDS WEST
1175        KM        DIVERSION THROUGH 36" PIPE WITH 3 FEET OF HEAD
            *      1
1176        DT  WSH404
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1177          DI       0    40.7    71.2   121.6     190     276   379.4   500.6
1178          DQ       0      35      35      35      35      35      35      35
              * DDM   ***** Preserved *****

1179          KK    R109
1180          KM        ROUTE FLOW FROM C109 TO C110
1181          RS       1    FLOW      -1
1182          RC    .019    .019    .019    3080     .05
1183          RX    1000    1005    1010    1015    1025    1030    1035    1040
1184          RY   13.75    12.5   11.25      10      10   11.25    12.5   13.75
              * DDM   ***** Updated *****

1185          KK     447
1186          KM   SUB-BASIN 447
1187          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1188          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1189          KM     L =  .49  Kb = .056  Adj. Slope =  221.0
1190          BA    .090
1191          LG    .250    .270   3.350    .870  30.000
1192          UC    .208    .145
1193          UA       0       5      16      30      65      77      84      90      94      97
1194          UA     100
              * DDM   ***** Preserved *****

1195          KK   RT404
1196          KM        RETRIEVE DIVERTED FLOW FOR WASH 109
1197          DR  WSH404
              * DDM   ***** Preserved *****

1198          KK    R404
1199          KM        ROUTE FLOW FROM C110 TO C110
1200          RS       5    FLOW      -1
1201          RC    .019    .019    .019    3540     .03
1202          RX    1000    1012    1016    1020    1025    1029    1033    1045
1203          RY      15      12      11      10      10      11      12      15
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 31

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


1204          KK    C110
1205          KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 447 AND R404
1206          HC       3
              * DDM   ***** Preserved *****

1207          KK    R110
1208          KM        ROUTE FLOW FROM C110 TO C115
1209          RS       1    FLOW      -1
1210          RC    .019    .019    .019     580   .0291
1211          RX    1000    1012    1016    1020    1035    1039    1043    1055
1212          RY      15      12      11      10      10      11      12      15
              * DDM   ***** Preserved *****

1213          KK    C115
1214          KM        COMBINE HYDROGRAPHS FROM C114 AND C110
1215          HC       2
              * DDM   ***** Preserved *****

1216          KK    R115
1217          KM        ROUTE FLOW FROM C115 TO C119
1218          RS       1    FLOW      -1
1219          RC    .019    .019    .019    2125    .029
1220          RC    .019    .019    .019     580   .0291
1221          RX    1000    1012    1016    1020    1035    1039    1043    1055
1222          RY      15      12      11      10      10      11      12      15
              * DDM   ***** Updated *****

1223          KK     448
1224          KM   SUB-BASIN 448
1225          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1226          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1227          KM     L =  .36  Kb = .042  Adj. Slope =  315.0
1228          BA    .045
1229          LG    .170    .310   4.200    .390  11.000
1230          UC    .133    .102
1231          UA       0       5      16      30      65      77      84      90      94      97
1232          UA     100
              * DDM   ***** Updated *****

1233          KK     449
1234          KM   SUB-BASIN 449
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 1.000
1237          KM     L =  .40  Kb = .054  Adj. Slope =  315.0
1238          BA    .050
1239          LG    .260    .280   3.500    .640   6.000
1240          UC    .167    .134
1241          UA       0       5      16      30      65      77      84      90      94      97
1242          UA     100
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 32

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


1243          KK   C6364
1244          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 448 & 449
1245          HC       2
              * DDM   ***** Preserved *****

1246          KK   R6364
1247          KM   ROUTE FLOW FROM C116 AND SUB-BASINS 448 AND 449
1248          RS       4    FLOW      -1
1249          RC     .05    .035     .05    4375   .0333
1250          RX    1000    1027    1053    1080    1090    1117    1143    1170
1251          RY      15   13.33   11.67      10      10   11.67   13.33      15
              * DDM   ***** Updated *****

1252          KK     450
1253          KM   SUB-BASIN 450
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
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1256          KM     L =  .85  Kb = .057  Adj. Slope =  210.5
1257          BA    .070
1258          LG    .340    .350   3.630    .570   4.000
1259          UC    .296    .383
1260          UA       0       3       5       8      12      20      43      75      90      96
1261          UA     100
              * DDM   ***** Updated *****

1262          KK     451
1263          KM   SUB-BASIN 451
1264          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1265          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1266          KM     L =  .57  Kb = .063  Adj. Slope =  175.0
1267          BA    .025
1268          LG    .340    .340   3.290    .750   3.000
1269          UC    .271    .453
1270          UA       0       3       5       8      12      20      43      75      90      96
1271          UA     100
              * DDM   ***** Preserved *****

1272          KK    RT66
1273          KM        RETRIEVE DIVERTED FLOW FROM SUB-BASIN 66
1274          DR   WSH66
              * DDM   ***** Updated *****

1275          KK     452
1276          KM   SUB-BASIN 452
1277          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1278          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1279          KM     L =  .43  Kb = .055  Adj. Slope =  315.0
1280          BA    .040
1281          LG    .260    .280   3.700    .550   9.000
1282          UC    .171    .166
1283          UA       0       5      16      30      65      77      84      90      94      97
1284          UA     100
              * DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1285          KK   C6465
1286          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 443 AND 452
1287          HC       2
              * DDM   ***** Preserved *****

1288          KK   R6566
1289          KM        ROUTE FLOW FROM DIVERSIONS 65 AND 66 TO C116
1290          RS       2    FLOW      -1
1291          RC     .05    .035     .05    2435   .0282
1292          RX    1000    1045    1090    1150    1160    1220    1265    1310
1293          RY      25      23      20      10      10      20      23      25
              * DDM   ***** Preserved *****

1294          KK    C116
1295          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 450 & 451 AND R6364 & R6465
1296          HC       4
              * DDM   ***** Preserved *****

1297          KK  BASIN5
1298          KM        RESERVOIR WITHIN PARCEL 31      2-48 INCH PIPES AT OUTFALL
1299          KM        BASIN 5 FEET DEEP
1300          RS       1    ELEV       0
1301          SV       0     4.5     9.9
1302          SQ       0      69     190
1303          SE       0     2.5       5
              * DDM   ***** Preserved *****

1304          KK    R116
1305          KM   ROUTE FLOW FROM C116 TO C117
1306          RS       2    FLOW      -1
1307          RC     .05    .035     .05    1300   .0333
1308          RX    1000    1100    1200    1300    1320    1420    1520    1620
1309          RY      13      12      11      10      10      11      12      13
              * DDM   ***** Updated *****

1310          KK     453
1311          KM   SUB-BASIN 453
1312          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1313          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1314          KM     L =  .58  Kb = .058  Adj. Slope =  138.0
1315          BA    .060
1316          LG    .290    .300   3.290    .820  18.000
1317          UC    .275    .284
1318          UA       0       5      16      30      65      77      84      90      94      97
1319          UA     100
              * DDM   ***** Preserved *****

1320          KK    C117
1321          KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 453 AND R116
1322          HC       2
              * DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1323          KK    C118
1324          KM   COMBINE HYDROGRAPHS FROM R115 AND C117
1325          HC       2
              * DDM   ***** Preserved *****

1326          KK    R118
1327          KM        ROUTE FLOW FROM C118 TO  DIV7
1328          RS       1    FLOW      -1
1329          RC    .019    .019    .019    1500    .024
1330          RX    1000    1012    1016    1020    1035    1039    1043    1055
1331          RY      15      12      11      10      10      11      12      15
              * DDM   ***** Preserved *****

1332          KK    DIV7
1333          KM        OFFLINE BASIN AT NORTH MOUNTAIN RIDGE   FLOWS ENTER BASIN OVER
1334          KM        30' WEIR SET AT 5.3' ABOVE THE CHANNEL BOTTOM
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            *      1
1335        DT  BASIN6
1336        DI       0     363     487     563     645     844
1337        DQ       0       3      47      83     125     244
            * DDM   ***** Preserved *****

1338        KK  RTDIV7
1339        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1340        DR  BASIN6
            * DDM   ***** Preserved *****

1341        KK  RFDIV7
1342        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1343        KM     3.6 ACRE-FEETx43560/36x3600=1.2cfs
1344        RS       1    STOR       0
1345        SV       0     .01     3.6
1346        SQ       0     1.2     1.2
            * DDM   ***** Preserved *****

1347        KK   CDIV7
1348        KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1349        HC       2
            * DDM   ***** Updated *****

1350        KK     454
1351        KM   SUB-BASIN 454
1352        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1353        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1354        KM     L = 1.23  Kb = .051  Adj. Slope =  163.0
1355        BA    .180
1356        LG    .300    .310   3.780    .560  14.000
1357        UC    .379    .395
1358        UA       0       5      16      30      65      77      84      90      94      97
1359        UA     100
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 35

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


1360        KK    C119
1361        KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 454 AND DIV7.
            *      1       2
1362        HC       3
            * DDM   ***** Preserved *****

1363        KK    R454
1364        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1365        KM   ROUTING OF FLOW FROM LAS SENDAS AND R413 TO SUB-BASIN 415.
1366        RS       2    FLOW      -1
1367        RC    .045    .035    .045    2500    .012
1368        RX       0      .5       1      33      42      67    67.5      68
1369        RY       5       4       4       0       0       6       6       6
            * DDM   ***** Updated *****

1370        KK     415
1371        KM   SUB-BASIN 415
1372        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1373        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1374        KM     L =  .80  Kb = .051  Adj. Slope =  188.0
1375        BA    .218
1376        LG    .300    .260   3.530    .770  15.000
1377        UC    .275    .176
1378        UA       0       5      16      30      65      77      84      90      94      97
1379        UA     100
            * DDM   ***** Preserved *****

1380        KK    415C
1381        KM   HYDROGRAPH COMBINATION OF R454, SUB-BASIN 415, R410.
1382        HC       3
            * DDM   ***** Preserved *****

1383        KK    D415
1384        KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN
1385        KM   MAXIMUM STORAGE VOLUME FOR DIVERSION = 45 AC-FT @ 5' DEPTH.
            *      1
1386        DT   BS415
1387        DI       0    1100    5000
1388        DQ       0       0    3900
            * DDM   ***** Preserved *****

1389        KK   RT415
1390        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1391        DR   BS415
            * DDM   ***** Preserved *****

1392        KK   SR415
1393        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1394        KM      12 ACRE-FEETx43560/36x3600  = 4cfs
1395        RS       1    STOR       0
1396        SV       0     .01      12
1397        SQ       0       4       4
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 36

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


1398        KK    C415
1399        KM   HYDROGRAPH COMBINATION OF 415 DIVERSION.
1400        HC       2
            * DDM   ***** Preserved *****

1401        KK    R415
1402        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1403        KM   ROUTING OF FLOW FROM 415C TO 455C
1404        RS       4    FLOW      -1
1405        RC    .045     .03    .045    4100    .024
1406        RX       0      .5       1       8      16      23    23.5      24
1407        RY       8       8       8       0       0       8       8       8
            * DDM   ***** Updated *****

1408        KK     455
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1409        KM   SUB-BASIN 455
1410        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1411        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
1412        KM     L = 1.70  Kb = .041  Adj. Slope =  146.0
1413        BA   1.111
1414        LG    .270    .280   3.700    .640  24.000
1415        UC    .421    .204
1416        UA       0       5      16      30      65      77      84      90      94      97
1417        UA     100
            * DDM   ***** Preserved *****

1418        KK    D455
1419        KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1420        KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1421        KM   FOR BASIN #: 30      34      43      47&58
1422        KM        MAXIMUM VOLUME DIVERSION = 74.1 acre-feet
            *      1
1423        DT   BS455    74.1
1424        DI       0   10000
1425        DQ       0   10000
            * DDM   ***** Preserved *****

1426        KK   RT455
1427        KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1428        DR   BS455
            * DDM   ***** Preserved *****

1429        KK   SR455
1430        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1431        KM    74.1 ACRE-FEETx43560/36x3600=25cfs
1432        RS       1    STOR       0
1433        SV       0     .01    74.1
1434        SQ       0      25      25
            * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 37

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

1435        KK    C455
1436        KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 455 AND DIVERTED BASIN STORAGE OF 455
1437        HC       2
            * DDM   ***** Preserved *****

1438        KK    455C
1439        KM  HYDROGRAPH COMBINATION OF 420C, R415 AND C455
            *      1       2
1440        HC       3
            * DDM   ***** Preserved *****

1441        KK   SR440
1442        KM   SPOOK HILL FRS PLANS DATED 6/15/77
1443        KM   OUTLET PIPE=7'x7.5'RCBC; L=70 INLET INV.=1566; OUTLET INV.=1566
1444        KM   EMERGENCY SPILLWAY ELEV.=1582; PRINCIPLE SPILLWAY ELEV.=1577.5
1445        KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 200 ACRE-FEET
1446        RS       1    STOR       0
1447        SV       0      10     100     300     500     680
1448        SQ       0     640     720     780     825     860
1449        SE      66    77.5      79    80.2    81.2      82
            * DDM   ***** Preserved *****

1450        KK   RR455
1451        KM   ROUTE FLOW FROM SPOOK HILL FRS TO SUB-BASIN 462
1452        RS      10    FLOW      -1
1453        RC    .035    .025    .035    9200    .002
1454        RX       0       1       2      28      58      84      85      86
1455        RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
            * DDM   ***** Updated *****

1456        KK     456
1457        KM   SUB-BASIN 456
1458        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1459        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1460        KM     L =  .94  Kb = .045  Adj. Slope =  315.0
1461        BA    .260
1462        LG    .300    .380   5.600    .200  12.000
1463        UC    .217    .139
1464        UA       0       5      16      30      65      77      84      90      94      97
1465        UA     100
            * DDM   ***** Preserved *****

1466        KK    DIV1
1467        KM        DIVERT FLOW INTO OFFLINE DETENTION BASIN
1468        KM        WEIR FOR BASIN SET AT 4 FEET ABOVE CHANNEL BOTTOM
            *      1
1469        DT  BASIN1
1470        DI       0    11.1   127.9   234.4   577.7   789.9  1025.5  1280.9  1555.7
1471        DQ       0       0       0    47.7     248   381.8   533.6   701.5     884
            * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 38

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

1472        KK    DIV2
1473        KM        SPLIT OUT FLOW FOR WASHES THAT FLOW TO THE SOUTH FROM
1474        KM        WASHES THAT DRAIN TO THE WES, SOUTHERN WASHES FED BY 30" & 24" PIPE
1475        DT    WA30
1476        DI       0    11.1   127.9   189.6   329.7     408   491.9   579.4   671.7
1477        DQ       0    11.1    38.4    48.2      63    69.5      76      81      86
            * DDM   ***** Preserved *****

1478        KK    R456
1479        KM        ROUTE FLOW FROM SUB-BASIN 51 TO C101
1480        RS       2    FLOW      -1
1481        RC     .05    .035     .05    3800    .044
1482        RX    1000    1010    1020    1036    1041    1057    1067    1077
1483        RY   14.88   14.44      14      10      10      14   14.44   14.88
            * DDM   ***** Updated *****

1484        KK     457
1485        KM   SUB-BASIN 457
1486        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
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1487        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1488        KM     L = 1.01  Kb = .045  Adj. Slope =  308.8
1489        BA    .190
1490        LG    .270    .330   3.950    .460   6.000
1491        UC    .237    .195
1492        UA       0       5      16      30      65      77      84      90      94      97
1493        UA     100
            * DDM   ***** Preserved *****

1494        KK    C101
1495        KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 50 AND 51
1496        HC       2
            * DDM   ***** Preserved *****

1497        KK    DIV3
1498        KM        RESERVOIR AT THE EDGE OF THE PROPERTY   FLOW FROM CHANNEL
1499        KM        DIVERTED  INTO OFFLINE BASIN A 25' WEIR SET AT ELEVATION 1808 FT
            *      1
1500        DT  BASIN2
1501        DI       0      36      70     110     180   313.5     402   500.9
1502        DQ       0       0       0       0       0    67.5     124   190.9
            * DDM   ***** Preserved *****

1503        KK  RTDIV3
1504        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1505        DR  BASIN2
            * DDM   ***** Preserved *****

1506        KK  RFDIV3
1507        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1508        KM     5.0 ACRE-FEETx43560/36x3600=1.7cfs
1509        RS       1    STOR       0
1510        SV       0     .01       5
1511        SQ       0     1.7     1.7
            * DDM   ***** Preserved *****
```



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

1512        KK   CDIV3
1513        KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1514        HC       2
            * DDM   ***** Preserved *****

1515        KK    R101
1516        KM        ROUTE FLOW FROM SUBBASIN C101 TO C103
1517        RS       1    FLOW      -1
1518        RC     .05    .035     .05    1450     .05
1519        RX    1000    1010    1020    1036    1041    1057    1067    1077
1520        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Updated *****

1521        KK     458
1522        KM   SUB-BASIN 458
1523        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1524        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1525        KM     L =  .76  Kb = .048  Adj. Slope =  299.0
1526        BA    .190
1527        LG    .290    .330   5.800    .190   6.000
1528        UC    .204    .131
1529        UA       0       5      16      30      65      77      84      90      94      97
1530        UA     100
            * DDM   ***** Preserved *****

1531        KK    C103
1532        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 55 AND C101
1533        HC       2
            * DDM   ***** Preserved *****

1534        KK    R103
1535        KM        ROUTE FLOW FROM SUBBASIN C103 TO C106
1536        RS       1    FLOW      -1
1537        RC     .05    .035     .05     900     .03
1538        RX    1000    1010    1020    1030    1050    1060    1070    1080
1539        RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
            * DDM   ***** Preserved *****

1540        KK    RT30
1541        KM        RETRIEVE DIVERTED FLOW FOR WASH BELOW 30 INCH PIPE
1542        DR    WA30
            * DDM   ***** Preserved *****

1543        KK     R30
1544        KM        ROUTE FLOW FROM WASH DIVERSION TO COMBINE C52
1545        RS       1    FLOW      -1
1546        RC     .05    .035     .05    1630     .05
1547        RX    1000    1010    1020    1036    1041    1057    1067    1077
1548        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

1549        KK    RTB1
1550        KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
            *      1       2
1551        DR  BASIN1
            * DDM   ***** Preserved *****

1552        KK      B1
1553        KM        ROUTE FLOW THROUGH OFFLINE DETENTION BASIN
1554        KM        FLOW OUTLETS THROUGH A 30 INCH OUTLET PIPE
            *      1       2
1555        RS       1    ELEV       0
1556        SV              .7     1.4     2.3     2.7     3.2
1557        SQ       0       5      16      28    32.5      37
1558        SE       0       1       2       3     3.5       4
            * DDM   ***** Preserved *****

1559        KK     RB1
1560        KM        ROUTE FLOW FROM BASIN DIVERSION TO COMBINE C52
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1561          RS       2    FLOW      -1
1562          RC     .05    .035     .05    1720     .05
1563          RX    1000    1010    1020    1036    1041    1057    1067    1077
1564          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Preserved *****

1565          KK    CDIV
1566          KM        COMBINE FLOWS FROM WA30 AND BASIN 1
1567          HC       2     .12
              * DDM   ***** Updated *****

1568          KK     459
1569          KM   SUB-BASIN 459
1570          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1571          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1572          KM     L =  .35  Kb = .052  Adj. Slope =  251.6
1573          BA    .030
1574          LG    .220    .300   3.330    .710   8.000
1575          UC    .162    .157
1576          UA       0       5      16      30      65      77      84      90      94      97
1577          UA     100
              * DDM   ***** Preserved *****

1578          KK     C52
1579          KM        COMBINE FLOWS FROM SUB-BASIN 52 WA30 AND BASIN 1
1580          HC       2
              * DDM   ***** Preserved *****

1581          KK     R52
1582          KM        ROUTE FLOW FROM SUBBASIN 52 TO C102
1583          RS       2    FLOW      -1
1584          RC     .05    .035     .05    2000     .05
1585          RX    1000    1010    1020    1036    1041    1057    1067    1077
1586          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Updated *****
1                                        HEC-1 INPUT                                                    PAGE 41

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


1587          KK     460
1588          KM   SUB-BASIN 460
1589          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1590          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1591          KM     L =  .62  Kb = .058  Adj. Slope =  194.0
1592          BA    .140
1593          LG    .250    .260   3.740    .690  27.000
1594          UC    .242    .160
1595          UA       0       5      16      30      65      77      84      90      94      97
1596          UA     100
              * DDM   ***** Preserved *****

1597          KK    C102
1598          KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 52 AND 53
1599          HC       2
              * DDM   ***** Preserved *****

1600          KK  BASIN3
1601          KM        RESERVOIR AT CLUBHOUSE LOCATION 1-30 INCH PIPE AT OUTFALL
1602          KM        BOTTOM OF BASIN AT 6 FEET ABOVE 1795 ELEVATION
1603          RS       1    ELEV       0
1604          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
1605          SQ       0      22      45    47.4      48      51      57      62      67      73
1606          SE    1795  1797.5    1800  1800.4  1800.5    1801    1802    1803    1804  1805.5
              * DDM   ***** Preserved *****

1607          KK      R3
1608          KM        ROUTE FLOW FROM C102 to C106
1609          RS       4    FLOW      -1
1610          RC     .05     .03     .05    2750   .0375
1611          RX    1000    1010    1020    1052    1086    1118    1128    1138
1612          RY    19.2    18.4      18      10      10      18    18.4    19.2
              * DDM   ***** Updated *****

1613          KK     461
1614          KM   SUB-BASIN 461
1615          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1616          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1617          KM     L =  .83  Kb = .052  Adj. Slope =  181.0
1618          BA    .120
1619          LG    .270    .250   4.250    .450  21.000
1620          UC    .271    .250
1621          UA       0       5      16      30      65      77      84      90      94      97
1622          UA     100
              * DDM   ***** Preserved *****

1623          KK    C104
1624          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 54 AND R102
1625          HC       2
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                                    PAGE 42

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


1626          KK    C106
1627          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN C103 AND C104
1628          HC       2
              * DDM   ***** Preserved *****

1629          KK    R106
1630          KM        ROUTE FLOW FROM C106 TO C49
1631          RS       2    FLOW      -1
1632          RC     .05    .035     .05    3950    .033
1633          RX    1000    1010    1020    1030    1050    1060    1070    1080
1634          RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
              * DDM   ***** Updated *****

1635          KK     462
1636          KM   SUB-BASIN 462
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  .998
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1639          KM     L =  .97  Kb = .045  Adj. Slope =  297.7
1640          BA    .301
1641          LG    .300    .330   5.300    .240  12.000
1642          UC    .225    .137
1643          UA       0       5      16      30      65      77      84      90      94      97
1644          UA     100
              * DDM   ***** Preserved *****

1645          KK     C56
1646          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 56 AND C106
              *      1       2
1647          HC       2
              * DDM   ***** Updated *****

1648          KK     480
1649          KM   SUB-BASIN 480
1650          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1651          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
1652          KM     L = 1.21  Kb = .042  Adj. Slope =  165.0
1653          BA    .731
1654          LG    .270    .270   3.580    .730  27.000
1655          UC    .325    .148
1656          UA       0       5      16      30      65      77      84      90      94      97
1657          UA     100
              * DDM   ***** Preserved *****

1658          KK    D480
1659          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1660          KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1661          KM   FOR BASIN #: 18 & 26
1662          KM        MAXIMUM VOLUME DIVERSION = 16.5 acre-feet
              *      1
1663          DT   BS480    16.5
1664          DI       0   10000
1665          DQ       0   10000
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 43

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

1666          KK   RT480
1667          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1668          DR   BS480
              * DDM   ***** Preserved *****

1669          KK   SR480
1670          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1671          KM    16.5 ACRE-FEETx43560/36x3600=5.5cfs
1672          RS       1    STOR       0
1673          SV       0     .01    16.5
1674          SQ       0     5.6     5.6
              * DDM   ***** Preserved *****

1675          KK    C480
1676          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1677          HC       2
              * DDM   ***** Preserved *****

1678          KK    480C
1679          KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1680          HC       3    2.09
              * DDM   ***** Preserved *****

1681          KK   RR480
1682          KM   ROUTE FLOW FROM SUB-BASIN 480 TO SUB-BASIN 500
1683          RS       1    FLOW      -1
1684          RC    .025    .025    .025    6500     .05
1685          RX       0       1       2      28      58      84      85      86
1686          RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
              * DDM   ***** Updated *****

1687          KK     500
1688          KM   SUB-BASIN 500
1689          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1690          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
1691          KM     L = 2.77  Kb = .042  Adj. Slope =  286.8
1692          BA    .930
1693          LG    .350    .400   6.000    .170   9.000
1694          UC    .421    .333
1695          UA       0       3       5       8      12      20      43      75      90     .96
1696          UA     100
              * DDM   ***** Preserved *****

1697          KK    500C
1698          KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1699          HC       2    3.02
1700          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

  57          10
               V
               V
  67         R10
               V
               V
  73         R12
               .
               .
  79           .          20
               .           .
               .           .
  89         C20............
               .
               .
  92           .          40
               .           .
               .           .
 102           .           .          60
               .           .           .
               .           .           .
 112         60C........................
               V
               V
 115        SR60
               V
               V
 124         R60
               V
               V
 130        RR60
               .
               .
 136           .          80
               .           .
               .           .
 146         80C............
               V
               V
 149         R80
               .
               .
 155           .         100
               .           .
               .           .
 165        100C............
               V
               V
 168        R100
               .
               .
 174           .         120
               .           .
               .           .
 184        120C............
               V
               V
 187        R120
               .
               .
 193           .         140
               .           .
               .           .
 203           .           .         150
               .           .           V
               .           .           V
 213           .           .        R150
               .           .           V
               .           .           V
 219           .           .        R152
               .           .           .
               .           .           .
 225           .           .           .        160
               .           .           .          .
               .           .           .          .
 235           .           .           .          .         180
               .           .           .          .           .
               .           .           .          .           .
 245        180C..............................................
               .
               .
 248           .         383
               .           V
               .           V
 258           .        R383
               .           .
               .           .
 267           .           .         393
               .           .           .
               .           .           .
 277           .        393C............
               .           V
               .           V
 280           .        R393
               .           .
               .           .
 287           .           .         365
               .           .           .
               .           .           .
 297           .        365C............
               .           V
               .           V
 300           .        R365
               .           V
               .           V
 307           .        365R
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316                 353
                      .
326            353C.........
                  V
                  V
329            R353
                  V
                  V
338            353R
                  .
                  .
345                 350
                      V
                      V
355                350R
                      .
                      .
362                      310
                         .
                         .
372            C310.......................
                  V
                  V
375            R310
                  V
                  V
382            R312
                  .
                  .
391                 295
                      .
                      .
401            295C.........
                  V
                  V
404            295R
                  .
                  .
413                 210
                      V
                      V
423                R210
                      .
                      .
429                      240
                         .
                         .
439            240C.......................
                  V
                  V
442           SR240
                  .
                  .
451                 220
                      .
                      .
461            220C.........
                  V
                  V
464           SR220
                  .
                  .
473                 190
                      V
                      V
483                R190
                      V
                      V
489                R192
                      .
                      .
495                      200
                         .
                         .
505            200C.......................
                  V
                  V
508           SR200
                  V
                  V
515           200SR
                  .
                  .
525        C180.........
              V
              V
528       SR180
              V
              V
537        R180
              .
              .
544            260
                  .
                  .
554        260C.........
              V
              V
557        R260
              .
              .
564            280
                  .
                  .
574        280C.........
              V
              V
577        R280
              .
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584          .         300
             .           .
             .           .
594       C300............
             .
             .
600          .-------->   DIV30
597       D300
             .
             .
605          .           .<-------   DIV30
603          .       RTDIV
             .           V
             .           V
606          .       SRDIV
             .           .
             .           .
613       300C............
             .
             .
616          .         305
             .           .
             .           .
629          .           .-------->    305D
626          .        D305
             .           .
             .           .
634          .           .           .<-------    305D
632          .           .       RT305
             .           .           V
             .           .           V
635          .           .       SR305
             .           .           .
             .           .           .
642       305C........................
             V
             V
645       R305
             V
             V
652      RR305
             .
             .
659          .         320
             .           .
             .           .
674          .           .-------->   BS320
669          .        D320
             .           .
             .           .
679          .           .           .<-------   BS320
677          .           .       RT320
             .           .           V
             .           .           V
680          .           .       SR320
             .           .           .
             .           .           .
686       C320........................
             .
             .
689          .         340
             .           .
             .           .
704          .           .-------->   BS340
699          .        D340
             .           .
             .           .
709          .           .           .<-------   BS340
707          .           .       RT340
             .           .           V
             .           .           V
710          .           .       SR340
             .           .           .
             .           .           .
716       C340........................
             .
             .
719          .         355
             .           V
             .           V
729          .        R355
             .           .
             .           .
736          .           .         360
             .           .           .
             .           .           .
750          .           .           .-------->   BS360
746          .           .        D360
             .           .           .
             .           .           .
755          .           .           .           .<-------   BS360
753          .           .           .       RT360
             .           .           .           V
             .           .           .           V
756          .           .           .       SR360
             .           .           .           .
             .           .           .           .
762       360C.....................................
             .
             .
765          .         380
             .           .
             .           .
779          .           .-------->   BS380
775          .        D380
             .           .
             .           .
784          .           .           .<-------   BS380
782          .           .       RT380
             .           .           V
             .           .           V
785          .           .       SR380
             .           .           .
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791        380C.......................
              .
              .
794           .         400
              .           .
              .           .
808           .           .-------->   BS400
804           .        D400
              .           .
              .           .
813           .           .           .<-------   BS400
811           .           .       RT400
              .           .           V
              .           .           V
814           .           .       SR400
              .           .           .
              .           .           .
820           .        C400............
              .           .
              .           .
823        400C............
              .
              .
826           .         420
              .           .
              .           .
840           .           .-------->   BS420
836           .        D420
              .           .
              .           .
845           .           .           .<-------   BS420
843           .           .       RT420
              .           .           V
              .           .           V
846           .           .       SR420
              .           .           .
              .           .           .
852        420C.......................
              .
              .
855           .         370
              .           .
              .           .
865           .           .         395
              .           .           .
              .           .           .
875           .        395C............
              .           .
              .           .
881           .           .-------->   BS395
878           .        D395
              .           .
              .           .
886           .           .           .<-------   BS395
884           .           .      RT395
              .           .           V
              .           .           V
887           .           .       SR395
              .           .           .
              .           .           .
893           .        C395............
              .           V
              .           V
896           .        R395
              .           .
              .           .
903           .           .         390
              .           .           .
              .           .           .
917           .           .           .-------->   BS390
913           .           .        D390
              .           .           .
              .           .           .
922           .           .           .           .<-------   BS390
920           .           .           .       RT390
              .           .           .           V
              .           .           .           V
923           .           .           .       SR390
              .           .           .           .
              .           .           .           .
929           .        390C........................
              .           V
              .           V
932           .       RR390
              .           .
              .           .
939           .           .         410
              .           .           .
              .           .           .
949           .        410C............
              .           .
              .           .
952           .           .         385
              .           .           .
              .           .           .
962           .           .           .         411
              .           .           .           .
              .           .           .           .
972           .           .        411C............
              .           .           .
              .           .           .
978           .           .           .-------->   SF411
975           .           .        D411
              .           .           .
              .           .           .
983           .           .           .           .<-------   SF411
981           .           .           .       RT411
              .           .           .           V
              .           .           .           V
984           .           .           .       SR411
              .           .           .           .
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 990          .          .        C411...........
              .          .           V
              .          .           V
 993          .          .        R411
              .          .           .
              .          .           .
1000          .          .           .        413
              .          .           .          .
              .          .           .          .
1010          .          .        413C...........
              .          .           V
              .          .           V
1013          .          .        R413
              .          .           .
              .          .           .
1020          .          .           .        440
              .          .           .          V
              .          .           .          V
1030          .          .           .        R70
              .          .           .          .
              .          .           .          .
1036          .          .           .          .         441
              .          .           .          .           .
              .          .           .          .           .
1046          .          .           .       C108...........
              .          .           .          .
              .          .           .          .
1051          .          .           .          .-------->   SPLIT
1049          .          .           .       DIV4
              .          .           .          V
              .          .           .          V
1054          .          .           .       R108
              .          .           .          .
              .          .           .          .
1060          .          .           .          .         442
              .          .           .          .           .
              .          .           .          .           .
1070          .          .           .        C67...........
              .          .           .          .
              .          .           .          .
1076          .          .           .          .-------->  BASIN4
1073          .          .           .       DIV6
              .          .           .          .
              .          .           .          .
1081          .          .           .          .           .<-------  BASIN4
1079          .          .           .          .      RTDIV6
              .          .           .          .          V
              .          .           .          .          V
1082          .          .           .          .      RFDIV6
              .          .           .          .           .
              .          .           .          .           .
1088          .          .           .      CDIV6...........
              .          .           .          .
              .          .           .          .
1091          .          .           .          .         443
              .          .           .          .           .
              .          .           .          .           .
1104          .          .           .          .           .-------->   WSH66
1101          .          .           .          .       DIV66
              .          .           .          .          V
              .          .           .          .          V
1107          .          .           .          .       R113
              .          .           .          .           .
              .          .           .          .           .
1113          .          .           .       C114...........
              .          .           .          .
              .          .           .          .
1116          .          .           .          .         444
              .          .           .          .           V
              .          .           .          .           V
1126          .          .           .          .         R58
              .          .           .          .           .
              .          .           .          .           .
1132          .          .           .          .           .         445
              .          .           .          .           .           .
              .          .           .          .           .           .
1142          .          .           .          .       C107...........
              .          .           .          .           V
              .          .           .          .           V
1145          .          .           .          .       R107
              .          .           .          .           .
              .          .           .          .           .
1153          .          .           .          .           .           .<-------   SPLIT
1151          .          .           .          .           .        RTB2
              .          .           .          .           .           V
              .          .           .          .           .           V
1154          .          .           .          .           .      RSPLIT
              .          .           .          .           .           .
              .          .           .          .           .           .
1160          .          .           .          .           .           .         446
              .          .           .          .           .           .           .
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1170          .          .           .          .       C109.......................
              .          .           .          .           .
              .          .           .          .           .
1176          .          .           .          .           .-------->  WSH404
1173          .          .           .          .       DIV5
              .          .           .          .           V
              .          .           .          .           V
1179          .          .           .          .       R109
              .          .           .          .           .
              .          .           .          .           .
1185          .          .           .          .           .         447
              .          .           .          .           .           .
              .          .           .          .           .           .
1197          .          .           .          .           .           .           .<-------  WSH404
1195          .          .           .          .           .           .      RT404
              .          .           .          .           .           .          V
              .          .           .          .           .           .          V
1198          .          .           .          .           .           .       R404
              .          .           .          .           .           .           .
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1204          .          .           .          .       C110.......................
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                                                  V
1207                                            R110
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1213                                     C115............
                                            V
                                            V
1216                                     R115
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1223                                              448
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1233                                                .          449
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1243                                           C6364............
                                                   V
                                                   V
1246                                           R6364
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1252                                                .          450
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1262                                                .            .        451
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1274                                                .            .          .          .<-------   WSH66
1272                                                .            .          .       RT66
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1275                                                .            .          .          .         452
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1285                                                .            .          .       C6465............
                                                   .            .          .          V
                                                   .            .          .          V
1288                                                .            .          .       R6566
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1294                                           C116.................................
                                                   V
                                                   V
1297                                          BASIN5
                                                   V
                                                   V
1304                                           R116
                                                   .
                                                   .
1310                                                .          453
                                                   .            .
                                                   .            .
1320                                           C117............
                                                   .
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1323                                     C118............
                                            V
                                            V
1326                                     R118
                                                   .
                                                   .
1335                                                .-------> BASIN6
1332                                     DIV7
                                                   .
                                                   .
1340                                                .<-------  BASIN6
1338                                          RTDIV7
                                                   V
                                                   V
1341                                          RFDIV7
                                                   .
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1347                                    CDIV7............
                                                   .
                                                   .
1350                                              454
                                                   .
                                                   .
1360                                 C119........................
                                        V
                                        V
1363                                 R454
                                        .
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1370                                          415
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1380                           415C........................
                                   .
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1386                               .-------> BS415
1383                           D415
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1391                                   .<-------  BS415
1389                                 RT415
                                        V
                                        V
1392                                 SR415
                                        .
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1398                           C415............
                                   V
                                   V
1401                           R415
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1408                                  455
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1423                                    .-------> BS455
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1418          .          .        D455
              .          .          .
              .          .          .
1428          .          .          .          .<-------   BS455
1426          .          .          .      RT455
              .          .          .          V
              .          .          .          V
1429          .          .          .      SR455
              .          .          .          .
              .          .          .          .
1435          .          .        C455............
              .          .          .
              .          .          .
1438       455C........................
              V
              V
1441      SR440
              V
              V
1450      RR455
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1456          .        456
              .          .
              .          .
1469          .          .------->  BASIN1
1466          .       DIV1
              .          .
              .          .
1475          .          .------->    WA30
1472          .       DIV2
              .          V
              .          V
1478          .       R456
              .          .
              .          .
1484          .          .        457
              .          .          .
              .          .          .
1494          .       C101............
              .          .
              .          .
1500          .          .------->  BASIN2
1497          .       DIV3
              .          .
              .          .
1505          .          .          .<-------  BASIN2
1503          .          .     RTDIV3
              .          .          V
              .          .          V
1506          .          .     RFDIV3
              .          .          .
              .          .          .
1512          .      CDIV3............
              .          V
              .          V
1515          .       R101
              .          .
              .          .
1521          .          .        458
              .          .          .
              .          .          .
1531          .       C103............
              .          V
              .          V
1534          .       R103
              .          .
              .          .
1542          .          .          .<-------    WA30
1540          .          .       RT30
              .          .          V
              .          .          V
1543          .          .        R30
              .          .          .
              .          .          .
1551          .          .          .          .<-------  BASIN1
1549          .          .          .       RTB1
              .          .          .          V
              .          .          .          V
1552          .          .          .         B1
              .          .          .          V
              .          .          .          V
1559          .          .          .        RB1
              .          .          .          .
              .          .          .          .
1565          .          .       CDIV............
              .          .          .
              .          .          .
1568          .          .          .        459
              .          .          .          .
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1578          .          .        C52............
              .          .          V
              .          .          V
1581          .          .        R52
              .          .          .
              .          .          .
1587          .          .          .        460
              .          .          .          .
              .          .          .          .
1597          .          .       C102............
              .          .          V
              .          .          V
1600          .          .     BASIN3
              .          .          V
              .          .          V
1607          .          .         R3
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1613          .          .          .        461
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1623          .          .       C104............
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1626            .       C106...........
                .          V
                .          V
1629            .       R106
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1635            .          .        462
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                .          .          .
1645            .        C56...........
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1648            .          .        480
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1663            .          .          .-------->   BS480
1658            .          .       D480
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1668            .          .          .          .<-------   BS480
1666            .          .          .      RT480
                .          .          .          V
                .          .          .          V
1669            .          .          .      SR480
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1675            .          .       C480...........
                .          .          .
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1678        480C........................
               V
               V
1681       RR480
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                .
1687            .        500
                .          .
                .          .
1697        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	572.	12.17	49.	13.	6.	.41		
+	ROUTED TO	R150	553.	12.23	49.	13.	6.	.41		
+	ROUTED TO	R152	523.	12.33	49.	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	7181.	12.30	860.	285.	168.	6.54		
+	HYDROGRAPH AT	383	650.	12.17	60.	17.	8.	.42		
+	ROUTED TO	R383	647.	12.17	60.	17.	8.	.42		
+	HYDROGRAPH AT	393	44.	12.13	4.	1.	0.	.04		
+	2 COMBINED AT	393C	687.	12.17	64.	18.	9.	.46		
	ROUTED TO	R393	681.	12.20	64.	18.	9.	.46		
	HYDROGRAPH AT	365	380.	12.27	45.	12.	6.	.41		
+	2 COMBINED AT	365C	1028.	12.20	108.	29.	14.	.88		
+	ROUTED TO	R365	1018.	12.23	108.	29.	14.	.88		

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1626            .       C106...........
                .          V
                .          V
1629            .       R106
                .          .
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1635            .          .        462
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                .          .          .
1645            .        C56...........
                .          .
                .          .
1648            .          .        480
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                .          .          .
1663            .          .          .-------->   BS480
1658            .          .       D480
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1668            .          .          .          .<-------   BS480
1666            .          .          .      RT480
                .          .          .          V
                .          .          .          V
1669            .          .          .      SR480
                .          .          .          .
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1675            .          .       C480...........
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                .          .          .
1678        480C........................
              V
              V
1681       RR480
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1687            .        500
                .          .
                .          .
1697        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	572.	12.17	49.	13.	6.	.41		
+	ROUTED TO	R150	553.	12.23	49.	13.	6.	.41		
+	ROUTED TO	R152	523.	12.33	49.	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	7181.	12.30	860.	285.	168.	6.54		
+	HYDROGRAPH AT	383	650.	12.17	60.	17.	8.	.42		
+	ROUTED TO	R383	647.	12.17	60.	17.	8.	.42		
+	HYDROGRAPH AT	393	44.	12.13	4.	1.	0.	.04		
+	2 COMBINED AT	393C	687.	12.17	64.	18.	9.	.46		
+	ROUTED TO	R393	681.	12.20	64.	18.	9.	.46		
+	HYDROGRAPH AT	365	380.	12.27	45.	12.	6.	.41		
+	2 COMBINED AT	365C	1028.	12.20	108.	29.	14.	.88		
+	ROUTED TO	R365	1018.	12.23	108.	29.	14.	.88		

+	ROUTED TO 365R	970.	12.33	108.	29.	14.	.88
+	HYDROGRAPH AT 353	401.	12.30	49.	12.	6.	.50
+	2 COMBINED AT 353C	1349.	12.33	155.	41.	20.	1.38
+	ROUTED TO R353	1308.	12.40	155.	41.	20.	1.38
+	ROUTED TO 353R	1291.	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	2528.	12.43	301.	79.	38.	2.87
+	ROUTED TO R310	2508.	12.47	301.	79.	38.	2.87
+	ROUTED TO R312	2458.	12.57	301.	79.	38.	2.87
+	HYDROGRAPH AT 295	364.	12.30	40.	10.	5.	.38
+	2 COMBINED AT 295C	2651.	12.57	339.	89.	43.	3.25
+	ROUTED TO 295R	2620.	12.60	339.	89.	43.	3.25
+	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
+	3 COMBINED AT 240C	3741.	12.50	565.	147.	71.	5.23
+	ROUTED TO SR240	1705.	12.93	500.	130.	62.	5.23
+	HYDROGRAPH AT 220	1126.	12.17	98.	25.	12.	.73
+	2 COMBINED AT 220C	1756.	12.90	590.	154.	74.	5.95
+	ROUTED TO SR220	1675.	13.07	579.	151.	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	806.	12.17	69.	19.	9.	.54
+	3 COMBINED AT 200C	2593.	12.30	751.	198.	95.	7.41
+	ROUTED TO SR200	2471.	12.37	746.	194.	93.	7.41
+	ROUTED TO 200SR	1862.	12.67	625.	164.	79.	7.41
+	2 COMBINED AT C180	7181.	12.30	1479.	450.	247.	13.94
+	ROUTED TO SR180	142.	19.00	142.	142.	114.	13.94
+	ROUTED TO R180	142.	19.03	142.	142.	114.	13.94
+	HYDROGRAPH AT 260	418.	12.10	43.	12.	6.	.27
+	2 COMBINED AT 260C	527.	12.10	179.	153.	122.	.27
+	ROUTED TO R260	515.	12.20	179.	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	218.	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	181.	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	276.	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	204.	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	2499.	12.33	548.	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	2503.	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	2816.	12.33	637.	310.	207.	6.00
+	HYDROGRAPH AT	420	515.	12.20	65.	18.	9.	.57
+	DIVERSION TO	BS420	370.	12.07	16.	4.	2.	.57
+	HYDROGRAPH AT	D420	515.	12.20	52.	14.	7.	.57
+	HYDROGRAPH AT	RT420	370.	12.07	16.	4.	2.	.57
+	ROUTED TO	SR420	13.	11.63	13.	4.	2.	.57
+	3 COMBINED AT	420C	3134.	12.33	688.	323.	213.	10.87
+	HYDROGRAPH AT	370	406.	12.07	34.	10.	5.	.26
+	HYDROGRAPH AT	395	204.	12.10	21.	6.	3.	.16
	2 COMBINED AT	395C	599.	12.07	55.	15.	7.	.42
+	DIVERSION TO	BS395	574.	12.07	43.	11.	5.	.42
+	HYDROGRAPH AT	D395	25.	11.60	12.	5.	2.	.42
+	HYDROGRAPH AT	RT395	574.	12.07	43.	11.	5.	.42
+	ROUTED TO	SR395	7.	11.63	7.	7.	5.	.42
+	2 COMBINED AT	C395	32.	11.63	17.	10.	7.	.42
+	ROUTED TO	R395	32.	11.87	17.	10.	7.	.42
+	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	490.	12.03	48.	19.	12.	.66
+	ROUTED TO	RR390	400.	12.30	48.	19.	12.	.66
+	HYDROGRAPH AT	410	345.	12.10	33.	9.	5.	.28
+	2 COMBINED AT	410C	633.	12.23	79.	28.	16.	.94
	HYDROGRAPH AT	385	314.	12.07	24.	7.	3.	.20
+	HYDROGRAPH AT	411	398.	12.10	30.	8.	4.	.24
+	2 COMBINED AT	411C	691.	12.10	53.	15.	7.	.43
+	DIVERSION TO	SF411	666.	12.10	44.	11.	5.	.43

	HYDROGRAPH AT							
+		D411	25.	11.63	9.	3.	2.	.43
	HYDROGRAPH AT							
+		RT411	666.	12.10	44.	11.	5.	.43
	ROUTED TO							
		SR411	8.	11.67	8.	8.	5.	.43
	2 COMBINED AT							
+		C411	33.	11.67	16.	10.	7.	.43
	ROUTED TO							
+		R411	33.	12.07	16.	10.	7.	.43
	HYDROGRAPH AT							
+		413	107.	12.03	8.	2.	1.	.06
	2 COMBINED AT							
+		413C	137.	12.03	23.	12.	8.	.50
	ROUTED TO							
+		R413	129.	12.13	23.	12.	8.	.50
	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

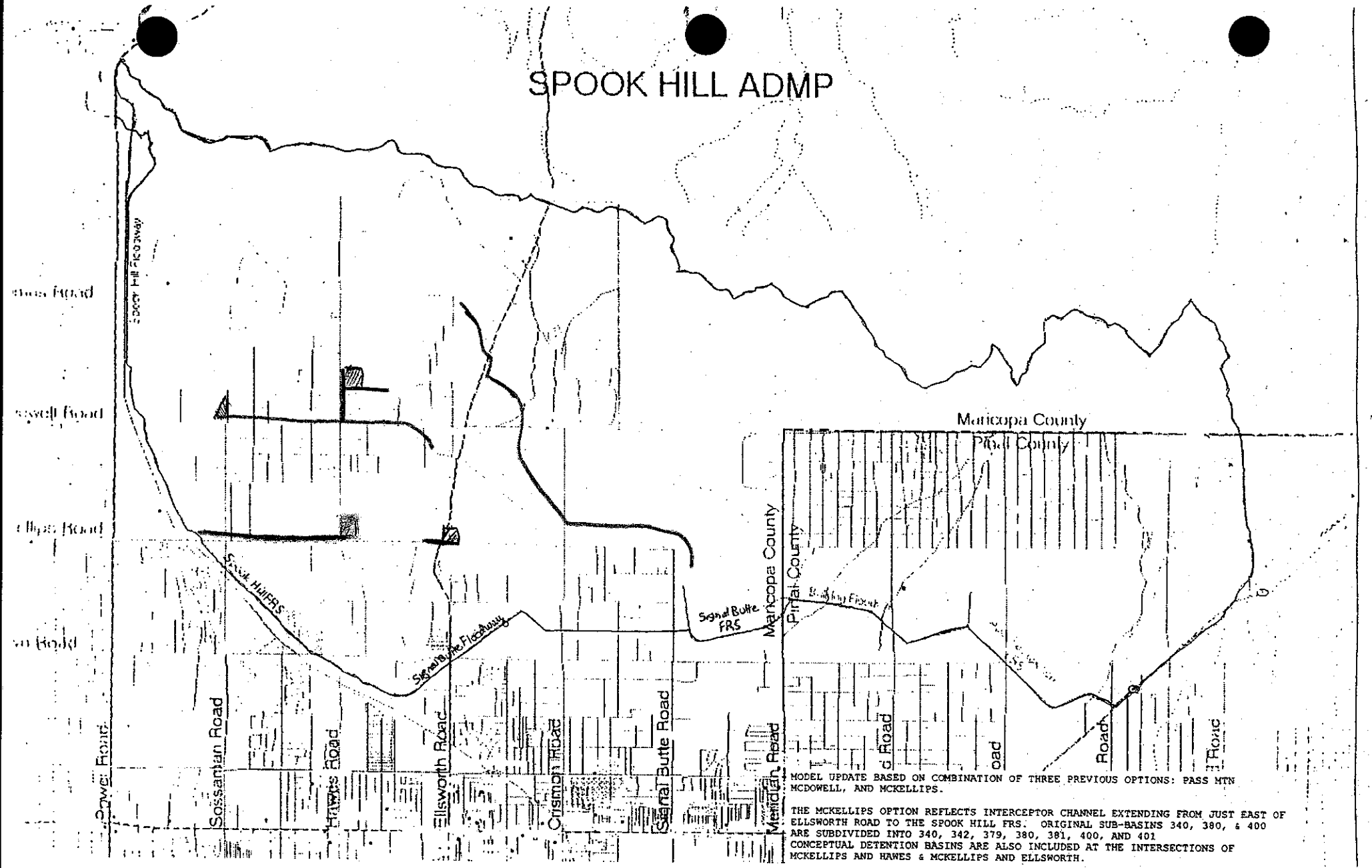
+	ROUTED TO R109	469.	12.10	27.	7.	3.	.27
+	HYDROGRAPH AT 447	138.	12.07	12.	4.	2.	.09
	HYDROGRAPH AT RT404	35.	11.73	8.	2.	1.	.27
+	ROUTED TO R404	35.	11.90	8.	2.	1.	.27
+	3 COMBINED AT C110	635.	12.07	46.	13.	6.	.36
+	ROUTED TO R110	632.	12.10	46.	13.	6.	.36
+	2 COMBINED AT C115	764.	12.10	59.	17.	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
+	3 COMBINED AT C119	873.	12.13	132.	43.	24.	1.60
+	ROUTED TO R454	841.	12.20	131.	43.	24.	1.60
+	HYDROGRAPH AT 415	280.	12.07	23.	7.	3.	.22
	3 COMBINED AT 415C	1654.	12.17	230.	76.	43.	2.75
+	DIVERSION TO BS415	554.	12.17	24.	6.	3.	2.75
+	HYDROGRAPH AT D415	1100.	12.03	206.	70.	40.	2.75
+	HYDROGRAPH AT RT415	554.	12.17	24.	6.	3.	2.75

+	ROUTED TO	SR415	4.	12.03	4.	4.	3.	2.75
+	2 COMBINED AT	C415	1104.	12.03	209.	73.	43.	2.75
	ROUTED TO	R415	1107.	12.13	209.	73.	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	4129.	12.37	907.	419.	272.	14.73
+	ROUTED TO	SR440	750.	13.63	735.	419.	272.	14.73
+	ROUTED TO	RR455	750.	13.97	734.	419.	269.	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	2505.	12.10	920.	498.	312.	2.09
+	ROUTED TO	RR480	2342.	12.13	917.	497.	312.	2.09
	HYDROGRAPH AT	500	1073.	12.27	122.	33.	16.	.93
+	2 COMBINED AT	500C	3231.	12.17	1029.	526.	326.	3.02

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

SPOOK HILL ADMP



MODEL UPDATE BASED ON COMBINATION OF THREE PREVIOUS OPTIONS: PASS MTN MCDOWELL, AND MCKELLIPS.

THE MCKELLIPS OPTION REFLECTS INTERCEPTOR CHANNEL EXTENDING FROM JUST EAST OF ELLSWORTH ROAD TO THE SPOOK HILL FRS. ORIGINAL SUB-BASINS 340, 380, & 400 ARE SUBDIVIDED INTO 340, 342, 379, 380, 381, 400, AND 401 CONCEPTUAL DETENTION BASINS ARE ALSO INCLUDED AT THE INTERSECTIONS OF MCKELLIPS AND HAWES & MCKELLIPS AND 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 385 & 411; AND 455

ANALYSIS FOR CURRENT ALTERNATIVE PERFORMED BY: WOOD/PATEL; MW; 07/20/00

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1*************************************
*                                   *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*            JUN   1998             *
*          VERSION 4.1              *
*                                   *
*  RUN DATE   26JUL00  TIME  08:25:33  *
*                                   *
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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 OPTIONS: PASS MTN
 13           ID   MCDOWELL, AND MCKELLIPS.
 14           ID
 15           ID   THE MCKELLIPS OPTION REFLECTS INTERCEPTOR CHANNEL EXTENDING FROM JUST EAST OF
 16           ID   ELLSWORTH ROAD TO THE SPOOK HILL FRS.  ORIGINAL SUB-BASINS 340, 380, & 400
 17           ID   ARE SUBDIVIDED INTO 340, 342, 379, 380, 381, 400, AND 401
 18           ID   CONCEPTUAL DETENTION BASINS ARE ALSO INCLUDED AT THE INTERSECTIONS OF
 19           ID   MCKELLIPS AND HAWES & MCKELLIPS AND ELLSWORTH.
 20           ID
 21           ID
 22           ID   UPDATE TO PASS MOUNTAIN DIVERSION ALTERNATIVE.  ADDITIONAL DIVERSIONS
 23           ID   PLACED UPSTREAM OF ORIGINAL LEVEE EXTENSION AT PASS MOUNTAIN DIVERSION
 24           ID   CREATING NEW DRAINAGE BASIN BOUNDARIES: 383 FROM 385; 393 FROM 395;
 25           ID   365 FROM 370; AND 353 FROM 355.  383, 393, 365, AND 353 WILL NOW BE ROUTED
 26           ID   TO THE PASS MOUNTAIN DIVERSION AND ULTIMATELY INTO SIGNAL BUTTE FRS.
 27           ID   SUB-BASINS: 385, 395, 370, AND 355 WILL REMAIN WITH REDUCED AREAS AND
 28           ID   CONTINUE TO BE ROUTED ON THEIR ORIGINAL WATERCOURSES.
 29           ID
 30           ID   UPDATE BASED ON IMPROVED NATURAL CHANNELS ALONG MCDOWELL BETWEEN
 31           ID   POWER & ELLSWORTH, ALONG OAK ST. BETWEEN HAWES & THUNDER MTN. , ALONG
 32           ID   HAWES NORTH OF OAK ST. TO MCDOWELL RD.  THIS WILL GENERATE NEW SUB-BASINS
 33           ID   410, AND 411 FROM SUB-BASINS 415 AND 420.  DETENTION BASINS WILL BE
 34           ID   ADDED OFF-LINE TO SUB-BASINS 385 & 411; AND 455
 35           ID
 36           ID   ANALYSIS FOR CURRENT ALTERNATIVE PERFORMED BY: WOOD/PATEL;      MW;  07/20/00
 37           ID   FILE:        S24CE46.DAT
 38           ID
 39           ID
 40           ID   DDM MCUHP1 SPOOK HILL AMDP
              *DIAGRAM
 41           IT       2                    1500
 42           IO       3
 43           IN      15
 44           JD    3.81    0.01
 45           PC    .000    .002    .005    .008    .011    .014    .017    .020    .023    .026
 46           PC    .029    .032    .035    .038    .041    .044    .048    .052    .056    .060
 47           PC    .064    .068    .072    .076    .080    .085    .090    .095    .100    .105
 48           PC    .110    .115    .120    .126    .133    .140    .147    .155    .163    .172
 49           PC    .181    .191    .203    .218    .236    .257    .283    .387    .663    .707
 50           PC    .735    .758    .776    .791    .804    .815    .825    .834    .842    .849
 51           PC    .856    .863    .869    .875    .881    .887    .893    .898    .903    .908
 52           PC    .913    .918    .922    .926    .930    .934    .938    .942    .946    .950
 53           PC    .953    .956    .959    .962    .965    .968    .971    .974    .977    .980
 54           PC    .983    .986    .989    .992    .995    .998   1.000
1                                          HEC-1 INPUT                                                    PAGE  2

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

 55           JD    3.58   10.00
 56           JD    3.43   30.00
 57           JD    3.28   60.00
 58           JD    3.22   90.00
 59           JD    3.18  120.00
 60           JD    3.14  150.00
 61           JD    3.05  300.00
 62           JD    2.97  500.00
              * DDM   ***** Updated *****

 63           KK      10
 64           KM   SUB-BASIN 10
 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  .996
 67           KM     L = 2.00  Kb = .044  Adj. Slope =  165.0
 68           BA    .702
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 69          LG    .350    .320   7.600    .090  15.000
 70          UC    .421    .302
 71          UA       0       3       5       8      12      20      43      75      90      96
 72          UA     100
             * DDM   ***** Preserved *****

 73          KK     R10
 74          KM   ROUTING OF FLOW FROM SUB-BASIN 10 TO R12
 75          RS       4    FLOW      -1
 76          RC    .045     .03    .045    8700    .021
 77          RX       0       1       2      17      27      42      43      44
 78          RY       5       5       5       0       0       5       5       5
             * DDM   ***** Preserved *****

 79          KK     R12
 80          KM   ROUTING OF FLOW FROM R12 TO SUB-BASIN 20
 81          RS       6    FLOW      -1
 82          RC    .045     .03    .045    4500     .01
 83          RX       0       1      30    37.5    57.5      65      94      95
 84          RY       3     2.5     2.5       0       0     2.5     2.5       3
             * DDM   ***** Updated *****

 85          KK      20
 86          KM   SUB-BASIN 20
 87          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 88          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
 89          KM     L = 2.50  Kb = .041  Adj. Slope =   88.0
 90          BA   1.120
 91          LG    .350    .390   5.800    .190   1.000
 92          UC    .658    .454
 93          UA       0       3       5       8      12      20      43      75      90      96
 94          UA     100
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE  3

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

 95          KK     C20
 96          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 10 AND 20
 97          HC       2
             * DDM   ***** Updated *****

 98          KK      40
 99          KM   SUB-BASIN 40
100          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
101          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
102          KM     L = 3.08  Kb = .036  Adj. Slope =  189.0
103          BA   2.233
104          LG    .340    .340   4.900    .280   5.000
105          UC    .496    .264
106          UA       0       3       5       8      12      20      43      75      90      96
107          UA     100
             * DDM   ***** Updated *****

108          KK      60
109          KM   SUB-BASIN 60
110          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
111          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .990
112          KM     L = 4.19  Kb = .038  Adj. Slope =  209.6
113          BA   1.746
114          LG    .330    .350   5.800    .190   9.000
115          UC    .596    .477
116          UA       0       3       5       8      12      20      43      75      90      96
117          UA     100
             * DDM   ***** Preserved *****

118          KK     60C
119          KM   HYDROGRAPH COMBINATION FOR APACHE JUNCTION FRS
             *      1       2
120          HC       3
             * DDM   ***** Preserved *****

121          KK    SR60
122          KM   APACHE JUNCTION FRS AS-BUILT PLANS 12/19/88
123          KM   OUTLET PIPE=30"RCP; L=136.6'; INLET INV.=1783.5; OUTLET INV.=1783
124          KM   EMERGENCY SPILLWAY ELEV.=1799.77'; PRINCIPLE SPILLWAY ELEV.=1793.5'
125          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 100 ACRE-FEET
126          RS       1    STOR       0
127          SV       0       1     100     200     300     400
128          SQ       0      71      81      87    91.5      94
129          SE    83.5    93.5      96    97.7      99   99.77
             * DDM   ***** Preserved *****

130          KK     R60
131          KM        ROUTE FLOW THROUGH BULLDOG FLOODWAY FROM APACHE JUNCTION FRS
132          RS       1    FLOW      -1
133          RC    .016    .016    .016    2850    .012
134          RX       0       1       2     2.1     5.6     5.7       6       7
135          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

136          KK    RR60
137          KM   ROUTE FLOW FROM BULLDOG FLOODWAY TO SUB-BASIN 80
138          RS       4    FLOW      -1
139          RC    .016    .016    .016    3500    .005
140          RX       0       1       2     2.1     7.1     7.2       8       9
141          RY     3.5     3.5     3.5       0       0     3.5     3.5     3.5
             * DDM   ***** Updated *****

142          KK      80
143          KM   SUB-BASIN 80
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  .991
146          KM     L = 2.69  Kb = .039  Adj. Slope =  229.8
147          BA   1.475
148          LG    .330    .330   5.600    .210   4.000
149          UC    .433    .259
150          UA       0       3       5       8      12      20      43      75      90      96
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151          UA     100
             * DDM   ***** Preserved *****

152          KK     80C
153          KM   HYDROGRAPH COMBINATION FOR FLOW FROM APACHE JUNCTION FRS & SUB-BASIN 80
154          HC       2   1.475
             * DDM   ***** Preserved *****

155          KK     R80
156          KM   ROUTE FLOW FROM SUB-BASIN 80 TO SUB-BASIN 100
157          RS       1    FLOW      -1
158          RC    .025    .016    .025    1200    .003
159          RX       0       2       6     6.1    41.1    41.2    56.2    58.2
160          RY     5.5     4.5     4.5       0       0     4.5     4.5     5.5
             * DDM   ***** Updated *****

161          KK     100
162          KM   SUB-BASIN 100
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  .997
165          KM     L = 1.94  Kb = .046  Adj. Slope =  108.0
166          BA    .484
167          LG    .320    .290   5.100    .260   3.000
168          UC    .533    .473
169          UA       0       5      16      30      65      77      84      90      94      97
170          UA     100
             * DDM   ***** Preserved *****

171          KK    100C
172          KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 80 & 100
173          HC       2
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

174          KK    R100
175          KM   ROUTE FLOW FROM SUB-BASIN 100 TO SUB-BASIN 120
176          RS       1    FLOW      -1
177          RC    .016    .016    .016     940    .005
178          RX       0       1       2     2.1    52.1    52.2      53      54
179          RY     4.5     4.5     4.5       0       0     4.5     4.5     4.5
             * DDM   ***** Updated *****

180          KK     120
181          KM   SUB-BASIN 120
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  .987
184          KM     L = 3.07  Kb = .037  Adj. Slope =  239.0
185          BA   2.202
186          LG    .330    .280   6.800    .130  11.000
187          UC    .429    .226
188          UA       0       3       5       8      12      20      43      75      90      96
189          UA     100
             * DDM   ***** Preserved *****

190          KK    120C
191          KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 100 & 120
192          HC       2
             * DDM   ***** Preserved *****

193          KK    R120
194          KM   ROUTE FLOW FROM SUB-BASIN 120 TO SIGNAL BUTTE FRS
195          RS       1    FLOW      -1
196          RC    .025    .016    .025    2100    .005
197          RX       0       6      10    10.1    60.1    60.2    74.2    80.2
198          RY       8       5       5       0       0       5       5       8
             * DDM   ***** Updated *****

199          KK     140
200          KM   SUB-BASIN 140
201          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
202          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
203          KM     L = 1.61  Kb = .044  Adj. Slope =  149.0
204          BA    .598
205          LG    .310    .280   4.200    .440   5.000
206          UC    .421    .278
207          UA       0       5      16      30      65      77      84      90      94      97
208          UA     100
             * DDM   ***** Updated *****

209          KK     150
210          KM   SUB-BASIN 150
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 = 1.50  Kb = .047  Adj. Slope =  314.6
214          BA    .408
215          LG    .350    .360   5.100    .260   7.000
216          UC    .296    .221
217          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

218          UA     100
             * DDM   ***** Preserved *****

219          KK    R150
220          KM   ROUTING OF FLOW FROM SUB-BASIN 150 TO R152
221          RS       3    FLOW      -1
222          RC    .045     .04    .045    3100    .032
223          RX       0       1       2      23      33      54      55      56
224          RY       7       7       7       0       0       7       7       7
             * DDM   ***** Preserved *****

225          KK    R152
226          KM   ROUTING OF FLOW FROM R152 TO SUB-BASIN 160
227          RS       4    FLOW      -1
228          RC    .045     .03    .045    5900    .019
229          RX       0       1       2       8      33      39      40      41
230          RY       2       2       2       0       0       2       2       2
             * DDM   ***** Updated *****
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231          KK     160
232          KM   SUB-BASIN 160
233          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
234          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
235          KM     L = 2.10  Kb = .047  Adj. Slope =  129.0
236          BA    .369
237          LG    .340    .330   4.150    .440   1.000
238          UC    .587    .655
239          UA       0       3       5       8      12      20      43      75      90      96
240          UA     100
             * DDM   ***** Updated *****

241          KK     180
242          KM   SUB-BASIN 180
243          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
244          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
245          KM     L = 2.42  Kb = .041  Adj. Slope =  140.0
246          BA   1.000
247          LG    .350    .350   4.150    .430    .000
248          UC    .571    .403
249          UA       0       3       5       8      12      20      43      75      90      96
250          UA     100
             * DDM   ***** Preserved *****

251          KK    180C
252          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
             *      1       2
253          HC       5
             * DDM   ***** Updated *****

254          KK     383
255          KM   SUB-BASIN 383
256          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
257          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
258          KM     L = 1.49  Kb = .047  Adj. Slope =  315.0
259          BA    .420
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

260          LG    .350    .400   6.000    .170  16.000
261          UC    .287    .209
262          UA       0       3       5       8      12      20      43      75      90      96
263          UA     100
             * DDM   ***** Preserved *****

264          KK    R383
265          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
266          KM   ROUTING OF FLOW FROM SUB-BASIN 383 TO SUB-BASIN 393
267          KM   OVERBANK MANNINGS INCREASED TO ACCOUNT FOR SKEWED FLOW TO NATURAL
268          KM   WATERCOURSE FLOW PATH
269          RS       2    FLOW      -1
270          RC     .07     .03     .07    1115    .045
271          RX       0       1       3       9      39      45      46      47
272          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

273          KK     393
274          KM   SUB-BASIN 393
275          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
276          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
277          KM     L =  .61  Kb = .061  Adj. Slope =  246.2
278          BA    .040
279          LG    .350    .350   4.200    .420    .000
280          UC    .233    .310
281          UA       0       3       5       8      12      20      43      75      90      96
282          UA     100
             * DDM   ***** Preserved *****

283          KK    393C
284          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 383 & 393
285          HC       2
             * DDM   ***** Preserved *****

286          KK    R393
287          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
288          KM   ROUTING OF FLOW FROM SUB-BASIN 393 TO SUB-BASIN 365
289          RS       1    FLOW      -1
290          RC    .055     .03    .055    1115    .045
291          RX       0       1       3       9      39      45      46      47
292          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

293          KK     365
294          KM   SUB-BASIN 365
295          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
296          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
297          KM     L = 2.20  Kb = .047  Adj. Slope =  299.5
298          BA    .415
299          LG    .350    .350   4.600    .330   4.000
300          UC    .400    .415
301          UA       0       3       5       8      12      20      43      75      90      96
302          UA     100
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

303          KK    365C
304          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 393 & 365
305          HC       2
             * DDM   ***** Preserved *****

306          KK    R365
307          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
308          KM   ROUTING OF FLOW FROM SUB-BASIN 365 TO ROUTING 365R
309          RS       3    FLOW      -1
310          RC    .045     .03    .045    1000    .025
311          RX       0       1      50      56      76      82     131     132
312          RY     2.5       2       2       0       0       2       2     2.5
             * DDM   ***** Preserved *****
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313          KK    365R
314          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
315          KM   ROUTING OF FLOW FROM 365R TO SUB-BASIN 353
316          KM   OVERBANK MANNINGS INCREASED TO ACCOUNT FOR SKEWED FLOW TO NATURAL
317          KM   WATERCOURSE FLOW PATH
318          RS       2    FLOW      -1
319          RC     .07     .03     .07    1300    .008
320          RX       0       3       5      11      41      47     147     247
321          RY       3     2.5       2       0       0       2     2.5       3
             * DDM   ***** Updated *****

322          KK     353
323          KM   SUB-BASIN 353
324          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
325          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
326          KM     L = 2.50  Kb = .046  Adj. Slope =  297.9
327          BA    .502
328          LG    .350    .350   4.350    .380   1.000
329          UC    .442    .460
330          UA       0       3       5       8      12      20      43      75      90      96
331          UA     100
             * DDM   ***** Preserved *****

332          KK    353C
333          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 365 & 353
334          HC       2
             * DDM   ***** Preserved *****

335          KK    R353
336          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
337          KM   ROUTING OF FLOW FROM SUB-BASIN 353 TO ROUTING 353R
338          KM   OVERBANK MANNINGS INCREASED TO ACCOUNT FOR SKEWED FLOW TO NATURAL
339          KM   WATERCOURSE FLOW PATH
340          RS       2    FLOW      -1
341          RC     .07     .03     .07    1100    .009
342          RX       0       3       5      11      41      47     172     302
343          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

344          KK    353R
345          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
346          KM   ROUTING OF FLOW FROM 353R TO SUB-BASIN 310
347          RS       1    FLOW      -1
348          RC    .045     .03    .045    1692     .03
349          RX       0       1      25      31      51      57      81      82
350          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

351          KK     350
352          KM   SUB-BASIN 350
353          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
354          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
355          KM     L = 2.22  Kb = .042  Adj. Slope =  311.0
356          BA    .935
357          LG    .350    .350   4.600    .330   5.000
358          UC    .367    .239
359          UA       0       3       5       8      12      20      43      75      90      96
360          UA     100
             * DDM   ***** Preserved *****

361          KK    350R
362          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
363          KM   ROUTING OF FLOW FROM SUB-BASIN 350 TO SUB-BASIN 310
364          RS       8    FLOW      -1
365          RC    .045    .035    .045    7650    .025
366          RX       0       1      50      56      86      92     141     142
367          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

368          KK     310
369          KM   SUB-BASIN 310
370          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
371          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
372          KM     L = 2.70  Kb = .045  Adj. Slope =  283.5
373          BA    .555
374          LG    .350    .350   3.910    .480    .000
375          UC    .483    .511
376          UA       0       3       5       8      12      20      43      75      90      96
377          UA     100
             * DDM   ***** Preserved *****

378          KK    C310
379          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 350 & 310
380          HC       3
             * DDM   ***** Preserved *****

381          KK    R310
382          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
383          KM   ROUTING OF FLOW FROM SUB-BASIN 310 TO R312
384          RS       2    FLOW      -1
385          RC    .045     .03    .045    1500    .021
386          RX       0       1     100     106     126     132     231     232
387          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

388          KK    R312
389          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
390          KM   ROUTING OF FLOW FROM R312 TO SUB-BASIN 295
391          KM   OVERBANK MANNINGS INCREASED TO ACCOUNT FOR SKEWED FLOW TO NATURAL
392          KM   WATERCOURSE FLOW PATH
393          RS       3    FLOW      -1
394          RC     .07     .03     .07    2100   .0124
395          RX       0       3       5      11      61      67     200     395
396          RY       4     2.5       2       0       0       2     2.5       4
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            * DDM   ***** Updated *****

397         KK     295
398         KM   SUB-BASIN 295
399         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
400         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
401         KM     L = 1.60  Kb = .047  Adj. Slope =  131.0
402         BA    .380
403         LG    .350    .350   4.900    .280    .000
404         UC    .450    .386
405         UA       0       3       5       8      12      20      43      75      90      96
406         UA     100
            * DDM   ***** Preserved *****

407         KK    295C
408         KM   HYDROGRAPH COMBINATION OF SUB-BASINS 310 & 295
409         HC       2
            * DDM   ***** Preserved *****

410         KK    295R
411         KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING & AERIAL MAPPING
412         KM   ROUTING OF FLOW FROM SUB-BASIN 295 TO BEGINNING OF PASS MTN. DIVERSION.
413         KM   OVERBANK MANNINGS INCREASED TO ACCOUNT FOR SKEWED FLOW TO NATURAL
414         KM   WATERCOURSE FLOW PATH
415         RS       2    FLOW      -1
416         RC     .07     .03     .07    1100    .013
417         RX       0       3       5      11      51      57     200     400
418         RY       4     2.5       2       0       0       2     2.5       4
            * DDM   ***** Updated *****

419         KK     210
420         KM   SUB-BASIN 210
421         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
422         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
423         KM     L = 1.84  Kb = .045  Adj. Slope =  315.0
424         BA    .583
425         LG    .350    .350   7.000    .120   5.000
426         UC    .321    .232
427         UA       0       3       5       8      12      20      43      75      90      96
428         UA     100
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

429         KK    R210
430         KM   ROUTING OF FLOW FROM SUB-BASIN 210 TO SUB-BASIN 220
431         RS       2    FLOW      -1
432         RC    .045     .03    .045    5100    .022
433         RX       0       1       2      14      34      46      47      48
434         RY       4       4       4       0       0       4       4       4
            * DDM   ***** Updated *****

435         KK     240
436         KM   SUB-BASIN 240
437         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
438         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .992
439         KM     L = 3.50  Kb = .039  Adj. Slope =  298.6
440         BA   1.398
441         LG    .350    .370   5.200    .240   2.000
442         UC    .471    .361
443         UA       0       3       5       8      12      20      43      75      90      96
444         UA     100
            * DDM   ***** Preserved *****

445         KK    240C
446         KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
447         HC       3
            * DDM   ***** Preserved *****

448         KK   SR240
449         KM   DIGITAL MAPPING SHOWS SEDIMENTATION.  FOR SIMPLICITY NO ADDITIONAL
450         KM   SEDIMENTATION WILL BE CONSIDERED FOR STORAGE ROUTING ANALYSIS. 5/11/00
451         KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
452         KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
453         RS       1    STOR       0
454         SA    1.38    14.2    36.5
455         SE       0       5      11
456         SS       5      42       3     1.5
            * DDM   ***** Updated *****

457         KK     220
458         KM   SUB-BASIN 220
459         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
460         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
461         KM     L = 1.92  Kb = .043  Adj. Slope =  315.0
462         BA    .725
463         LG    .350    .350   7.000    .120   4.000
464         UC    .317    .209
465         UA       0       3       5       8      12      20      43      75      90      96
466         UA     100
            * DDM   ***** Preserved *****

467         KK    220C
468         KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
469         HC       2
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

470         KK   SR220
471         KM   DIGITAL MAPPING SHOWS SEDIMENTATION.  FOR SIMPLICITY NO ADDITIONAL
472         KM   SEDIMENTATION WILL BE CONSIDERED FOR STORAGE ROUTING ANALYSIS. 5/11/00
473         KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
474         KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
475         RS       1    STOR       0
476         SA     .78     4.1    13.7
477         SE       0       3      10
478         SS       3      65       3     1.5
            * DDM   ***** Updated *****
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479          KK     190
480          KM   SUB-BASIN 190
481          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
482          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
483          KM     L = 1.91  Kb = .042  Adj. Slope =  315.0
484          BA    .918
485          LG    .350    .390   5.800    .190   8.000
486          UC    .321    .185
487          UA       0       3       5       8      12      20      43      75      90      96
488          UA     100
             * DDM   ***** Preserved *****

489          KK    R190
490          KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
491          RS       2    FLOW      -1
492          RC    .045     .03    .045    4740     .03
493          RX       0       1       2      17      37      52      53      54
494          RY       5       5       5       0       0       5       5       5
             * DDM   ***** Preserved *****

495          KK    R192
496          KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
497          RS       2    FLOW      -1
498          RC    .045    .035    .045    2200    .018
499          RX       0       1      50      59      79      88     137     138
500          RY     3.5       3       3       0       0       3       3     3.5
             * DDM   ***** Updated *****

501          KK     200
502          KM   SUB-BASIN 200
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  .997
505          KM     L = 1.58  Kb = .045  Adj. Slope =  305.6
506          BA    .535
507          LG    .350    .390   5.700    .200  10.000
508          UC    .300    .200
509          UA       0       3       5       8      12      20      43      75      90      96
510          UA     100
             * 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

511          KK    200C
512          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 220 & 200
513          HC       3
             * DDM   ***** Preserved *****

514          KK   SR200
515          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
516          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
517          RS       1    STOR       0
518          SA    2.56     3.1     9.4
519          SE       0       3      10
520          SS       3     112       3     1.5
             * DDM   ***** Preserved *****

521          KK   200SR
522          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
523          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
             *      1       2
524          RS       1    STOR       0
525          SA       8     9.2     9.2
526          SE       0       7      10
527          SS       7     251       3     1.5
528          KM   ******************************************************************
529          KM   ************* END OF PASS MOUNTAIN ALTERNATIVE UPDATE. **************
530          KM
             * DDM   ***** Preserved *****

531          KK    C180
532          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
             *      1       2
533          HC       2
             * DDM   ***** Preserved *****

534          KK   SR180
535          KM   SIGNAL BUTTE FRS DATED 1/28/85
536          KM   OUTLET PIPE=36"RCP; L= 147';  INLET INV.=1690; OUTLET INV.=1687
537          KM   EMERGENCY SPILLWAY ELEV.=1712.4; PRINCIPLE SPILLWAY ELEV.=1701
538          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 250 ACRE-FEET
539          RS       1    STOR       0
540          SV       0       1     250     500     750    1060
541          SQ       0   106.5   125.5   137.5     146     160
542          SE      90     101   104.5     107     109   112.4
             * DDM   ***** Preserved *****

543          KK    R180
544          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
545          KM   ROUTE FLOW FROM SIGNAL BUTTE FRS TO SUB-BASIN 260
546          RS       2    FLOW      -1
547          RC    .035    .025    .035    1500    .003
548          RX       0       1       2    22.6    38.6    59.2      60      61
549          RY     9.3     9.3     9.3       0       0     9.3     9.3     9.3
             * DDM   ***** Updated *****
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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

550          KK     260
551          KM   SUB-BASIN 260
552          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
553          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
554          KM     L =  .81  Kb = .049  Adj. Slope =   68.0
555          BA    .267
556          LG    .300    .170   6.800    .160  15.000
557          UC    .363    .215
558          UA       0       5      16      30      65      77      84      90      94      97
559          UA     100
             * DDM   ***** Preserved *****
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560          KK    260C
561          KM   HYDROGRAPH COMBINATION FOR OUTFLOW OF SIGNAL BUTTE FRS & SUB-BASIN 260
562          HC       2     .267
             * DDM   ***** Preserved *****

563          KK    R260
564          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
565          KM   ROUTE FLOW FROM SUB-BASIN 260 TO SUB-BASIN 280
566          RS       3    FLOW      -1
567          RC    .035    .025    .035    2300    .003
568          RX       0       1       2    23.4    43.4    64.8      65      66
569          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Updated *****

570          KK     280
571          KM   SUB-BASIN 280
572          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
573          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
574          KM     L =  .77  Kb = .049  Adj. Slope =   84.0
575          BA    .304
576          LG    .300    .250   5.300    .290  15.000
577          UC    .333    .175
578          UA       0       5      16      30      65      77      84      90      94      97
579          UA     100
             * DDM   ***** Preserved *****

580          KK    280C
581          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 260 & SUB-BASIN 280
582          HC       2
             * DDM   ***** Preserved *****

583          KK    R280
584          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
585          KM   ROUTE FLOW FROM SUB-BASIN 280 TO SUB-BASIN 300
586          RS       2    FLOW      -1
587          RC    .035    .025    .035    2500    .003
588          RX       0       1       2    23.4    43.4    64.8      65      66
589          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

590          KK     300
591          KM   SUB-BASIN 300
592          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
593          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
594          KM     L =  .80  Kb = .049  Adj. Slope =  100.0
595          BA    .297
596          LG    .320    .280   4.200    .480  11.000
597          UC    .333    .183
598          UA       0       5      16      30      65      77      84      90      94      97
599          UA     100
             * DDM   ***** Preserved *****

600          KK    C300
601          KM   HYDROGRAPH COMBINATION OF DIVERTED FLOW
602          HC       2
             * DDM   ***** Preserved *****

603          KK    D300
604          KM   DIVERT FLOW INTO OFFLINE BASIN AT SIGNAL BUTTE FLOODWAY TO BE COMBINED
605          KM   LATER WITH BASIN 305 AT END OF SIGNAL BUTTE FLOODWAY
606          DT   DIV300
607          DI       0     300    5000
608          DQ       0       0    4700
             * DDM   ***** Preserved *****

609          KK   RTDIV300
610          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
611          DR   DIV300
             * DDM   ***** Preserved *****

612          KK   SRDIV300
613          KM   RETRIEVE FLOW INTO BASIN AND BLEED OFF WITHIN 36 HOURS
614          KM
615          RS       1    STOR       0
616          SV       0      60
617          SE       0      12
618          SQ       0     300
             * DDM   ***** Preserved *****

619          KK    300C
620          KM   HYDROGRAPH COMBINATION OF DIVERTED FLOW
621          HC       2
             * DDM   ***** Updated *****

622          KK     305
623          KM   SUB-BASIN 305
624          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
625          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
626          KM     L = 1.20  Kb = .047  Adj. Slope =   92.0
627          BA    .377
628          LG    .340    .330   4.450    .380   8.000
629          UC    .438    .298
630          UA       0       3       5       8      12      20      43      75      90      96
631          UA     100
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

632          KK    D305
633          KM   DIVERT FLOW INTO OFFLINE BASIN TO BE COMBINED LATER WITH PASS MOUNTAIN
634          KM   DIVERSION FLOW AT END OF SIGNAL BUTTE FLOODWAY
635          DT    305D
636          DI       0    1000
637          DQ       0    1000
             * DDM   ***** Preserved *****
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638          KK   RT305D
639          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
640          DR    305D
             * DDM   ***** Preserved *****

641          KK   SR305D
642          KM   RETRIEVE FLOW INTO BASIN AND BLEED OFF WITHIN 36 HOURS
643          KM
644          RS       1    STOR       0
645          SV       0      25
646          SE       0       6
647          SQ       0     100
             * DDM   ***** Preserved *****

648          KK    305C
649          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 280 & 300
650          HC       3
             * DDM   ***** Preserved *****

651          KK    R305
652          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
653          KM   ROUTE FLOW FROM SUB-BASIN 300 TO START OF FLOODWAY CONCRETE CHANNEL
654          RS       2    FLOW      -1
655          RC    .035    .025    .035    2200    .003
656          RX       0       1       2    23.4    55.4    76.8      77      78
657          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Preserved *****

658          KK   RR305
659          KM   CHANNEL GEOMETRY FOR SPOOK HILL FRS OBTAINED FROM AS-BUILTS PLANS.
660          KM   CONTINUE TO ROUTE FLOW WITHIN CONCRETE CHANNEL TO SPOOK HILL FRS
661          RS       1    FLOW      -1
662          RC    .016    .016    .016    6050   .0146
663          RX       0       1       2     2.1    16.1    16.2      17      18
664          RY     7.5     7.5     7.5       0       0     7.5     7.5     7.5
             *      1       2
             * DDM   ***** Updated *****

665          KK     320
666          KM   SUB-BASIN 320
667          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
668          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .995
669          KM     L = 1.60  Kb = .042  Adj. Slope =  106.0
670          BA    .870
671          LG    .310    .290   4.500    .380  15.000
672          UC    .450    .240
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

673          UA       0       5      16      30      65      77      84      90      94      97
674          UA     100
             * DDM   ***** Preserved *****

675          KK    D320
676          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
677          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
678          KM   SIERRA HEIGHTS        FALCON RIDGE    & MARBLE CREEK
679          KM        MAXIMUM VOLUME DIVERSION = 12.27acre-feet
             *      1
680          DT   BS320   12.27
681          DI       0   10000
682          DQ       0   10000
             * DDM   ***** Preserved *****

683          KK   RT320
684          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
685          DR   BS320
             * DDM   ***** Preserved *****

686          KK   SR320
687          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
688          KM   12.27 ACRE-FEETx43560/36x3600=4.1cfs
             *      1
689          RS       1    STOR       0
690          SV       0     .01    12.3
691          SQ       0     4.2     4.2
             * DDM   ***** Preserved *****

692          KK    C320
693          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
694          HC       3
             * DDM   ***** Inserted *****

695          KK     342
696          KM   SUB-BASIN 342
697          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
698          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
699          KM     L = 1.01  Kb = .048  Adj. Slope =  213.1
700          BA    .298
701          LG    .310    .280   3.950    .530  16.000
702          UC    .279    .180
703          UA       0       5      16      30      65      77      84      90      94      97
704          UA     100
             * DDM   ***** Preserved *****

705          KK   D3421
706          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
707          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
708          KM   GRANDVIEW ESTATES    BOULDER MOUNTAIN & 33⅓ OF MESA HIGHLANDS
709          KM        MAXIMUM VOLUME DIVERSION  =8.4 Acre feet
             *      1
710          DT  BS3421     8.4
711          DI       0   10000
712          DQ       0   10000
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

713          KK  RT3421
714          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
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715          DR  BS3421
             * DDM   ***** Preserved *****

716          KK  SR3421
717          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
718          KM     8.4 ACRE-FEETx43560\36x3600=2.8 cfs
             *      1
719          RS       1    STOR       0
720          SV       0     .01     8.4
721          SQ       0     2.8     2.8
             * DDM   ***** Preserved *****

722          KK    C342
723          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
             *      1       2
724          HC       2
             *
             * DDM   ***** Preserved *****

725          KK   D3422
726          KM   DIVERT FLOW INTO ONLINE DETENTION  BASIN AT NE CORNER OF ELLSWORTH
727          KM   AND  McKELLIPS ROAD
728          KM   MAXIMUM VOLUME OF DIVERSION IS 15 ACRE FEET
             *      1       2
729          DT  BS3422      15
730          DI       0   10000
731          DQ       0   10000
             *
             * DDM   ***** Preserved *****

732          KK  RT3422
733          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
             *      1       2
734          DR  BS3422
             *
             * DDM   ***** Preserved *****

735          KK  SR3422
736          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS
737          KM      15 ACRE-FEETx43560/36x3600 =5.0 cfs
738          RS       1    STOR       0
739          SV       0     .01      15
740          SQ       0     5.0     5.0
             *
             * DDM   ***** Preserved *****

741          KK   CC342
742          KM   HYDROGRAPH COMBINATION AT McKELLIPS RD CHANNEL
743          HC       2
             *
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

744          KK    R342
745          KM   ROUTING OF FLOW FROM SUB-BASIN 342 TO 341
746          RS      25    FLOW      -1
747          RC    0.05    0.03    0.05    8265    .019
748          RX       0       5      10      16      21      27      32      37
749          RY     3.0     2.5       2       0       0       2     2.5     3.0
             *
             * DDM   ***** Updated *****

750          KK     340
751          KM   SUB-BASIN 340
752          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
753          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .992
754          KM     L = 2.40  Kb = .044  Adj. Slope =  108.0
755          BA   1.253
756          LG    .250    .250   4.200    .540  27.000
757          UC    .625    .389
758          UA       0       5      16      30      65      77      84      90      94      97
759          UA     100
             * DDM   ***** Preserved *****

760          KK    D340
761          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
762          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
763          KM   GRANDVIEW ESTATES    BOULDER MOUNTAIN & 33% OF MESA HIGHLANDS
764          KM        MAXIMUM VOLUME DIVERSION = 56.0 acre-feet
             *      1
765          DT   BS340      56
766          DI       0   10000
767          DQ       0   10000
             * DDM   ***** Preserved *****

768          KK   RT340
769          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
770          DR   BS340
             * DDM   ***** Preserved *****

771          KK   SR340
772          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
773          KM    56.0 ACRE-FEETx43560/36x3600=18.8cfs
             *      1
774          RS       1    STOR       0
775          SV       0     .01      56
776          SQ       0    18.9    18.9
             * DDM   ***** Preserved *****

777          KK    C340
778          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
779          HC       4
             * DDM   ***** Updated *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

780          KK     355
781          KM   SUB-BASIN 355
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782          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
783          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
784          KM     L =  .80  Kb = .052  Adj. Slope =  125.0
785          BA    .174
786          LG    .320    .300   4.550    .360  12.000
787          UC    .308    .227
788          UA       0       5      16      30      65      77      84      90      94      97
789          UA     100
             * DDM   ***** Preserved *****

790          KK    R355
791          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
792          KM   ROUTING OF FLOW FROM SUB-BASIN 355 TO SUB-BASIN 360
793          RS       8    FLOW      -1
794          RC    .045    .035    .045   10100    .026
795          RX       0       1      40      46      56      62     102     103
796          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

797          KK     360
798          KM   SUB-BASIN 360
799          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
800          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
801          KM     L = 2.10  Kb = .048  Adj. Slope =  124.0
802          BA    .670
803          LG    .260    .270   4.100    .560  20.000
804          UC    .587    .466
805          UA       0       5      16      30      65      77      84      90      94      97
806          UA     100
             * DDM   ***** Preserved *****

807          KK    D360
808          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
809          KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
810          KM        MAXIMUM VOLUME DIVERSION = 28.6 acre-feet
             *      1
811          DT   BS360    28.6
812          DI       0   10000
813          DQ       0   10000
             * DDM   ***** Preserved *****

814          KK   RT360
815          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
816          DR   BS360
             * DDM   ***** Preserved *****

817          KK   SR360
818          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
819          KM    28.6 ACRE-FEETx43560/36x3600=9.6cfs
820          RS       1    STOR       0
821          SV       0     .01    28.6
822          SQ       0     9.6     9.6
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

823          KK    360C
824          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
825          HC       4
             * DDM   ***** Updated *****

826          KK     380
827          KM   SUB-BASIN 380
828          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
829          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
830          KM     L =  .67  Kb = .077  Adj. Slope =  119.0
831          BA    .268
832          LG    .180    .250   4.100    .710  19.000
833          UC    .387    .199
834          UA       0       5      16      30      65      77      84      90      94      97
835          UA     100
             * DDM   ***** Preserved *****

836          KK    D380
837          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
838          KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
839          KM        MAXIMUM VOLUME DIVERSION = 28.6 acre-feet
             *      1
840          DT   BS380    28.6
841          DI       0   10000
842          DQ       0   10000
             * DDM   ***** Preserved *****

843          KK   RT380
844          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
845          DR   BS380
             * DDM   ***** Preserved *****

846          KK   SR380
847          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
848          KM    28.6 ACRE-FEETx43560/36x3600=9.6cfs
849          RS       1    STOR       0
850          SV       0     .01    28.6
851          SQ       0     9.6     9.6
             * DDM   ***** Preserved *****

852          KK    380C
853          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
854          HC       3
             * DDM   ***** Updated *****

855          KK     400
856          KM   SUB-BASIN 400
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 1.000
859          KM     L =  .30  Kb = .112  Adj. Slope =  100.0
860          BA    .051
861          LG    .200    .250   4.000    .740    .000
862          UC    .333    .227
863          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

 864          UA     100
              * DDM   ***** Preserved *****

 865          KK    D400
 866          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
 867          KM   DETENTION/RETENTION BASIN LOCATED WITHIN SAGUARO VISTA SUBDIVISION
 868          KM        MAXIMUM VOLUME DIVERSION = 5.6 ACRE-FEET
              *      1
 869          DT   BS400      5.6
 870          DI       0   10000
 871          DQ       0   10000
              * DDM   ***** Preserved *****

 872          KK   RT400
 873          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
 874          DR   BS400
              * DDM   ***** Preserved *****

 875          KK   SR400
 876          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
 877          KM     5.6 ACRE-FEETx43560/36x3600 = 2 cfs
 878          RS       1    STOR       0
 879          SV       0     .01     5.6
 880          SQ       0       2       2
              * DDM   ***** Preserved *****

 881          KK    C400
 882          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
 883          HC       2
              * DDM   ***** Preserved *****

 884          KK    400C
 885          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
 886          HC       2
              * DDM   ***** Inserted *****

 887          KK     379
 888          KM   SUB-BASIN 379
 889          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 890          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
 891          KM     L = 1.03  Kb = .051  Adj. Slope =  146.0
 892          BA    .218
 893          LG    .290    .260   4.350    .470  19.000
 894          UC    .342    .274
 895          UA       0       5      16      30      65      77      84      90      94      97
 896          UA     100
              * DDM   ***** Preserved *****

 897          KK    D379
 898          KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN AT NW CORNER OF ELLSWORTH
 899          KM   AND  McKELLIPS ROAD
 900          KM   MAXIMUM VOLUME OF DIVERSION IS 10 ACFT
 901          DT   BS379
 902          DI       0      20    5000
 903          DQ       0       0    4980
              *
              * DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 904          KK   RT379
 905          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
 906          DR   BS379
              *
              * DDM   ***** Preserved *****

 907          KK   SR379
 908          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS
 909          KM     10 ACRE-FEETx43560/36x3600 = 3.4cfs
 910          RS       1    STOR       0
 911          SV       0     .01      10
 912          SQ       0     3.4     3.4
              *
              * DDM   ***** Preserved *****

 913          KK    C379
 914          KM   HYDROGRAPH COMBINATION AT McKELLIPS RD CHANNEL
 915          HC       2
              * DDM   ***** Preserved *****

 916          KK    R379
 917          KM   ROUTING OF FLOW FROM SUB-BASIN 379 TO 381
 918          RS      12    FLOW      -1
 919          RC   0.050   0.030   0.050    3854  0.0156
 920          RX       0     0.1     0.2       6      21      27      31      32
 921          RY     2.5    2.25       2       0       0       2    2.25     2.5
              * DDM   ***** Inserted *****

 922          KK     381
 923          KM   SUB-BASIN 381
 924          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 925          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
 926          KM     L = 1.65  Kb = .045  Adj. Slope =  119.0
 927          BA    .508
 928          LG    .320    .280   4.150    .500  11.000
 929          UC    .479    .359
 930          UA       0       5      16      30      65      77      84      90      94      97
 931          UA     100
              * DDM   ***** Preserved *****

 932          KK    D381
 933          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
 934          KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
 935          KM        MAXIMUM VOLUME DIVERSION  =21.5 acre-feet
              *      1
 936          DT   BS381    21.5
 937          DI       0   10000
 938          DQ       0   10000
              * DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 939          KK   RT381
 940          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
 941          DR   BS381
              * DDM   ***** Preserved *****

 942          KK   SR381
 943          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
 944          KM   21.5  ACRE-FEETx43560/36x3600=7.2 cfs
 945          RS       1    STOR       0
 946          SV       0     .01    21.5
 947          SQ       0     7.2     7.2
              * DDM   ***** Preserved *****

 948          KK    381C
 949          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
 950          HC       3
              *
              * DDM   ***** Preserved *****

 951          KK   RR381
 952          KM   ROUTING OF FLOW FROM SUB-BASIN 381 TO 401
 953          RS       4    FLOW      -1
 954          RC    0.05    0.03    0.05    2992  0.0134
 955          RX       0     0.1     0.2       8      33      41     241   241.1
 956          RY     3.5     2.5       2       0       0       2       3     3.5
              * DDM   ***** Inserted *****

 957          KK     401
 958          KM   SUB-BASIN 401
 959          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 960          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
 961          KM     L = 1.71  Kb = .051  Adj. Slope =  105.0
 962          BA    .605
 963          LG    .280    .250   4.150    .570  12.000
 964          UC    .583    .416
 965          UA       0       5      16      30      65      77      84      90      94      97
 966          UA     100
              * DDM   ***** Preserved *****

 967          KK    D401
 968          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
 969          KM   DETENTION/RETENTION BASIN LOCATED WITHIN SAGUARO VISTA SUBDIVISION
 970          KM        MAXIMUM VOLUME DIVERSION = 4.0 ACRE-FEET
              *      1
 971          DT   BS401     4.0
 972          DI       0   10000
 973          DQ       0   10000
              * DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 974          KK   RT401
 975          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
 976          DR   BS401
              * DDM   ***** Preserved *****

 977          KK   SR401
 978          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
 979          KM     4.0 ACRE-FEETx43560/36x3600= 1.3 cfs
 980          RS       1    STOR       0
 981          SV       0     .01     4.0
 982          SQ       0     1.3     1.3
              * DDM   ***** Preserved *****

 983          KK    C401
 984          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
 985          HC       4
              *
              *
              * END OF ALTERNATIVE 15 REVISIONS
              *
              * DDM   ***** Updated *****

 986          KK     420
 987          KM   SUB-BASIN 420
 988          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 989          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
 990          KM     L = 1.69  Kb = .045  Adj. Slope =  107.0
 991          BA    .570
 992          LG    .320    .280   4.350    .440  10.000
 993          UC    .500    .359
 994          UA       0       5      16      30      65      77      84      90      94      97
 995          UA     100
              * DDM   ***** Preserved *****

 996          KK    D420
 997          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
 998          KM   DETENTION/RETENTION BASINS LOCATED WITHIN GRAY FOX SUBDIVISION
 999          KM        MAXIMUM VOLUME DIVERSION = 8.65 acre-feet
              *      1
1000          DT   BS420    8.65
1001          DI       0   10000
1002          DQ       0   10000
              * DDM   ***** Preserved *****

1003          KK   RT420
1004          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1005          DR   BS420
              * DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1006          KK   SR420
1007          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
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1008        KM   38.55 ACRE-FEETx43560/36x3600=13cfs
1009        RS       1    STOR       0
1010        SV       0     .01   38.55
1011        SQ       0      13      13
            * DDM   ***** Preserved *****

1012        KK    420C
1013        KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1014        HC       3   10.87
            * DDM   ***** Updated *****

1015        KK     370
1016        KM   SUB-BASIN 370
1017        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1018        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1019        KM     L =  .90  Kb = .050  Adj. Slope =  189.0
1020        BA    .257
1021        LG    .310    .280   4.800    .340  16.000
1022        UC    .271    .173
1023        UA       0       5      16      30      65      77      84      90      94      97
1024        UA     100
            * DDM   ***** Updated *****

1025        KK     395
1026        KM   SUB-BASIN 395
1027        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1028        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1029        KM     L = 1.00  Kb = .052  Adj. Slope =  188.0
1030        BA    .160
1031        LG    .330    .320   5.100    .280  12.000
1032        UC    .300    .276
1033        UA       0       5      16      30      65      77      84      90      94      97
1034        UA     100
            * DDM   ***** Preserved *****

1035        KK    395C
1036        KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1037        HC       2
            * DDM   ***** Preserved *****

1038        KK    R395
1039        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1040        KM   ROUTING OF FLOW FROM SUB-BASINS 370 AND 395 TO SUB-BASIN 390
1041        RS       3    FLOW      -1
1042        RC    .045    .035    .045    2600    .023
1043        RX       0       1      40      46      56      62     102     103
1044        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

1045        KK     385
1046        KM   SUB-BASIN 385
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  .999
1049        KM     L =  .90  Kb = .051  Adj. Slope =  309.5
1050        BA    .197
1051        LG    .330    .320   4.800    .310   9.000
1052        UC    .233    .171
1053        UA       0       5      16      30      65      77      84      90      94      97
1054        UA     100
            * DDM   ***** Updated *****

1055        KK     411
1056        KM   SUB-BASIN 411
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  .999
1059        KM     L = 1.38  Kb = .050  Adj. Slope =  315.0
1060        BA    .237
1061        LG    .340    .350   5.000    .270  10.000
1062        UC    .292    .277
1063        UA       0       3       5       8      12      20      43      75      90      96
1064        UA     100
            * DDM   ***** Preserved *****

1065        KK    411C
1066        KM   HYDROGRAPH COMBINATION OF SUB-BASIN 411
1067        HC       2
            * DDM   ***** Preserved *****

1068        KK    D411
1069        KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN LOCATED WITHIN SUB-BASINS
1070        KM   385 AND 411.
1071        DT   SF411
1072        DI       0      25    5000
1073        DQ       0       0    4975
            * DDM   ***** Preserved *****

1074        KK   RT411
1075        KM   RETRIEVE FLOW FROM DIVERSION OF SUB-BASIN 411.
1076        DR   SF411
            * DDM   ***** Preserved *****

1077        KK   SR411
1078        KM   RETRIEVE FLOW INTO OFFLINE BASIN AND BLEED OFF WITHIN 36 HOURS.
1079        KM      21 ACRE-FEETx43560/36x3600  = 7cfs
1080        RS       1    STOR       0
1081        SV       0     .01      21
1082        SQ       0       7       7
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1083        KK    C411
1084        KM   HYDROGRAPH COMBINATION OF SUB-BASIN 411
1085        HC       2
            * DDM   ***** Preserved *****

1086        KK    R411
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1087          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1088          KM   ROUTING OF SPLIT FLOW FROM SUB-BASIN 385 AND SUB-BASIN 411 TO SUB-BASIN 390.
1089          RS       3    FLOW      -1
1090          RC    .045    .035    .045    1300    .038
1091          RX       0       1      40      46      56      62     102     103
1092          RY       3       2       2       0       0       2       2       3
              * DDM   ***** Updated *****

1093          KK     390
1094          KM   SUB-BASIN 390
1095          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1096          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1097          KM     L =  .70  Kb = .050  Adj. Slope =  299.4
1098          BA    .244
1099          LG    .300    .250   4.700    .380  18.000
1100          UC    .204    .107
1101          UA       0       5      16      30      65      77      84      90      94      97
1102          UA     100
              * DDM   ***** Preserved *****

1103          KK    D390
1104          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1105          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THUNDER MOUNTAIN ESTATES
1106          KM        MAXIMUM VOLUME DIVERSION  = 3.5 acre-feet
              *      1
1107          DT   BS390     3.5
1108          DI       0    5000
1109          DQ       0    5000
              * DDM   ***** Preserved *****

1110          KK   RT390
1111          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1112          DR   BS390
              * DDM   ***** Preserved *****

1113          KK   SR390
1114          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1115          KM     3.5 ACRE-FEETx43560/36x3600=1.2cfs
1116          RS       1    STOR       0
1117          SV       0     .01     3.5
1118          SQ       0     1.2     1.2
              * DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1119          KK    390C
1120          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1121          HC       4
              * DDM   ***** Preserved *****

1122          KK   RR390
1123          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1124          KM   FROM SUB-BASIN 390 TO SUB-BASIN 410.
1125          RS       5    FLOW      -1
1126          RC    .045    .035    .045    5500    .020
1127          RX       0       1      40      46      56      62     102     103
1128          RY       3       2       2       0       0       2       2       3
              * DDM   ***** Updated *****

1129          KK     410
1130          KM   SUB-BASIN 410
1131          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1132          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1133          KM     L = 1.00  Kb = .049  Adj. Slope =  150.0
1134          BA    .278
1135          LG    .300    .250   3.950    .580  15.000
1136          UC    .329    .224
1137          UA       0       5      16      30      65      77      84      90      94      97
1138          UA     100
              * DDM   ***** Preserved *****

1139          KK    410C
1140          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1141          HC       2
              * DDM   ***** Updated *****

1142          KK     440
1143          KM   SUB-BASIN 440
1144          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1145          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1146          KM     L =  .40  Kb = .039  Adj. Slope =  315.0
1147          BA    .080
1148          LG    .190    .380   6.400    .140  13.000
1149          UC    .129    .077
1150          UA       0       3       5       8      12      20      43      75      90      96
1151          UA     100
              * DDM   ***** Preserved *****

1152          KK     R70
1153          KM   ROUTE FLOW FROM SUB-BASIN 440 TO C108
1154          RS       1    FLOW      -1
1155          RC     .05    .035     .05    2250     .08
1156          RX    1000    1025    1050    1070    1075    1095    1120    1145
1157          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

1158          KK     441
1159          KM   SUB-BASIN 441
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 1.000
1162          KM     L =  .28  Kb = .069  Adj. Slope =  315.0
1163          BA    .010
1164          LG    .300    .250   5.600    .220   5.000
1165          UC    .150    .225
1166          UA       0       5      16      30      65      77      84      90      94      97
1167          UA     100
              * DDM   ***** Preserved *****
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1168        KK    C108
1169        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 440 & 441
1170        HC       2
            * DDM   ***** Preserved *****

1171        KK    DIV4
1172        KM        SPLIT FLOW WITH TWO 42 INCH PIPES TO WEST AND SOUTH
            *      1
1173        DT   SPLIT
1174        DI       0      14      40      82     120     154     180
1175        DQ       0       7      20      41      60      77      90
            * DDM   ***** Preserved *****

1176        KK    R108
1177        KM        ROUTE FLOW FROM SUB-BASIN C108 TO C67
1178        RS       2    FLOW      -1
1179        RC     .05    .035     .05    3200      .1
1180        RX    1000    1025    1050    1070    1075    1095    1120    1145
1181        RY      30    22.9    15.7      10      10    15.7    22.9      30
            * DDM   ***** Updated *****

1182        KK     442
1183        KM   SUB-BASIN 442
1184        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1185        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1186        KM     L =  .83  Kb = .055  Adj. Slope =  274.2
1187        BA    .100
1188        LG    .300    .270   3.290    .770   5.000
1189        UC    .258    .264
1190        UA       0       5      16      30      65      77      84      90      94      97
1191        UA     100
            * DDM   ***** Preserved *****

1192        KK     C67
1193        KM   COMBINE FLOW FROM SUB-BASIN 442 & DIV4
1194        HC       2
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1195        KK    DIV6
1196        KM        OFFLINE BASIN WITH 25 FOOT WEIR SET AT 2.5 FEET ABOVE BOTTOM OF CHANNEL
1197        KM        FLOW CONTINUES BEYOND BASIN THROUGH 2-30" PIPES
            *      1
1198        DT  BASIN4
1199        DI       0      10      32      44    79.9   132.5     198   272.9   356.8
1200        DQ       0       0       0       0    23.9    67.5     124   190.9   266.8
            * DDM   ***** Preserved *****

1201        KK  RTDIV6
1202        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1203        DR  BASIN4
            * DDM   ***** Preserved *****

1204        KK  RFDIV6
1205        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1206        KM     3.3 ACRE-FEETx43560/36x3600=1.1cfs
            *      1
1207        RS       1    STOR       0
1208        SV       0     .01     3.3
1209        SQ       0     1.1     1.1
            * DDM   ***** Preserved *****

1210        KK   CDIV6
1211        KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1212        HC       2
            * DDM   ***** Updated *****

1213        KK     443
1214        KM   SUB-BASIN 443
1215        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1216        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1217        KM     L =  .71  Kb = .050  Adj. Slope =  315.0
1218        BA    .080
1219        LG    .250    .190   8.000    .080  10.000
1220        UC    .196    .194
1221        UA       0       5      16      30      65      77      84      90      94      97 ;
1222        UA     100
            * DDM   ***** Preserved *****

1223        KK   DIV66
1224        KM        DIVERT FLOW INTO 3 NATURAL WASHES WITH ONE 24" PIPE IN EACH WASH.
1225        KM        EACH PIPE CAPACITY BASED ON 4 FEET OF HEAD
1226        DT   WSH66
1227        DI       0      78     100     200
1228        DQ       0      78      78      78
            * DDM   ***** Preserved *****

1229        KK    R113
1230        KM        ROUTE FLOW FROM C113 TO C114
1231        RS       1    FLOW      -1
1232        RC    .019    .019    .019    1300    .029
1233        RX    1000    1004    1008    1012    1018    1022    1026    1030
1234        RY      17   15.33   12.67      10      10   12.67   15.33      17
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1235        KK    C114
1236        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 67 AND C113
1237        HC       2
            * DDM   ***** Updated *****

1238        KK     444
1239        KM   SUB-BASIN 444
1240        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1241        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1242        KM     L =  .33  Kb = .034  Adj. Slope =  315.0
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1243          BA    .040
1244          LG    .130    .350   4.450    .320   1.000
1245          UC    .112    .084
1246          UA       0       3       5       8      12      20      43      75      90      96
1247          UA     100
              * DDM   ***** Preserved *****

1248          KK     R58
1249          KM   ROUTE FLOW FROM SUB-BASIN 444 TO C107
1250          RS       1    FLOW      -1
1251          RC     .05    .035     .05    2370   .0516
1252          RX    1000    1010    1020    1050    1055    1085    1095    1105
1253          RY      19      18      17      10      10      17      18      19
              * DDM   ***** Updated *****

1254          KK     445
1255          KM   SUB-BASIN 445
1256          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1257          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1258          KM     L =  .82  Kb = .036  Adj. Slope =  315.0
1259          BA    .190
1260          LG    .170    .320   3.470    .590   3.000
1261          UC    .192    .130
1262          UA       0       5      16      30      65      77      84      90      94      97
1263          UA     100
              * DDM   ***** Preserved *****

1264          KK    C107
1265          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 444 & 445
1266          HC       2
              * DDM   ***** Preserved *****

1267          KK    R107
1268          KM        ROUTE FLOW FROM C107 TO C109
1269          RS       1    FLOW      -1
1270          RC     .05    .035     .05     700   .0516
1271          RX    1000    1010    1020    1050    1055    1085    1095    1105
1272          RY      19      18      17      10      10      17      18      19
              * DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1273          KK    RTB2
1274          KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
              *      1
1275          DR   SPLIT
              * DDM   ***** Preserved *****

1276          KK  RSPLIT
1277          KM        ROUTE FLOW FROM SPLIT TO C109
1278          RS       1    FLOW      -1
1279          RC     .05    .035     .05     800     .05
1280          RX    1000    1025    1050    1070    1075    1095    1120    1145
1281          RY      30    22.9    15.7      10      10    15.7    22.9      30
              * DDM   ***** Updated *****

1282          KK     446
1283          KM   SUB-BASIN 446
1284          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1285          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1286          KM     L =  .46  Kb = .061  Adj. Slope =  303.9
1287          BA    .040
1288          LG    .270    .250   4.500    .400  19.000
1289          UC    .183    .189
1290          UA       0       5      16      30      65      77      84      90      94      97
1291          UA     100
              * DDM   ***** Preserved *****

1292          KK    C109
1293          KM        COMBINE HYDROGRAPHS FROM COMBINES C107 AND C108
1294          HC       3
              * DDM   ***** Preserved *****

1295          KK    DIV5
1296          KM        DIVERT FLOW INTO WASHES TOWARDS WEST
1297          KM        DIVERSION THROUGH 36" PIPE WITH 3 FEET OF HEAD
              *      1
1298          DT  WSH404
1299          DI       0    40.7    71.2   121.6     190     276   379.4   500.6
1300          DQ       0      35      35      35      35      35      35      35
              * DDM   ***** Preserved *****

1301          KK    R109
1302          KM        ROUTE FLOW FROM C109 TO C110
1303          RS       1    FLOW      -1
1304          RC    .019    .019    .019    3080     .05
1305          RX    1000    1005    1010    1015    1025    1030    1035    1040
1306          RY   13.75    12.5   11.25      10      10   11.25    12.5   13.75
              * DDM   ***** Updated *****

1307          KK     447
1308          KM   SUB-BASIN 447
1309          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1310          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1311          KM     L =  .49  Kb = .056  Adj. Slope =  221.0
1312          BA    .090
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1313          LG    .250    .270   3.350    .870  30.000
1314          UC    .208    .145
1315          UA       0       5      16      30      65      77      84      90      94      97
1316          UA     100
              * DDM   ***** Preserved *****

1317          KK   RT404
1318          KM        RETRIEVE DIVERTED FLOW FOR WASH 109
1319          DR  WSH404
              * DDM   ***** Preserved *****
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1320          KK    R404
1321          KM        ROUTE FLOW FROM C110 TO C110
1322          RS       5    FLOW      -1
1323          RC    .019    .019    .019    3540     .03
1324          RX    1000    1012    1016    1020    1025    1029    1033    1045
1325          RY      15      12      11      10      10      11      12      15
              * DDM   ***** Preserved *****

1326          KK    C110
1327          KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 447 AND R404
1328          HC       3
              * DDM   ***** Preserved *****

1329          KK    R110
1330          KM        ROUTE FLOW FROM C110 TO C115
1331          RS       1    FLOW      -1
1332          RC    .019    .019    .019     580   .0291
1333          RX    1000    1012    1016    1020    1035    1039    1043    1055
1334          RY      15      12      11      10      10      11      12      15
              * DDM   ***** Preserved *****

1335          KK    C115
1336          KM        COMBINE HYDROGRAPHS FROM C114 AND C110
1337          HC       2
              * DDM   ***** Preserved *****

1338          KK    R115
1339          KM        ROUTE FLOW FROM C115 TO C119
1340          RS       1    FLOW      -1
1341          RC    .019    .019    .019    2125    .029
1342          RC    .019    .019    .019     580   .0291
1343          RX    1000    1012    1016    1020    1035    1039    1043    1055
1344          RY      15      12      11      10      10      11      12      15
              * DDM   ***** Updated *****

1345          KK     448
1346          KM   SUB-BASIN 448
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 1.000
1349          KM     L =  .36  Kb = .042  Adj. Slope =  315.0
1350          BA    .045
1351          LG    .170    .310   4.200    .390  11.000
1352          UC    .133    .102
1353          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

1354          UA     100
              * DDM   ***** Updated *****

1355          KK     449
1356          KM   SUB-BASIN 449
1357          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1358          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1359          KM     L =  .40  Kb = .054  Adj. Slope =  315.0
1360          BA    .050
1361          LG    .260    .280   3.500    .640   6.000
1362          UC    .167    .134
1363          UA       0       5      16      30      65      77      84      90      94      97
1364          UA     100
              * DDM   ***** Preserved *****

1365          KK   C6364
1366          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 448 & 449
1367          HC       2
              * DDM   ***** Preserved *****

1368          KK   R6364
1369          KM   ROUTE FLOW FROM C116 AND SUB-BASINS 448 AND 449
1370          RS       4    FLOW      -1
1371          RC     .05    .035     .05    4375   .0333
1372          RX    1000    1027    1053    1080    1090    1117    1143    1170
1373          RY      15   13.33   11.67      10      10   11.67   13.33      15
              * DDM   ***** Updated *****

1374          KK     450
1375          KM   SUB-BASIN 450
1376          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1377          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1378          KM     L =  .85  Kb = .057  Adj. Slope =  210.5
1379          BA    .070
1380          LG    .340    .350   3.630    .570   4.000
1381          UC    .296    .383
1382          UA       0       3       5       8      12      20      43      75      90      96
1383          UA     100
              * DDM   ***** Updated *****

1384          KK     451
1385          KM   SUB-BASIN 451
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 1.000
1388          KM     L =  .57  Kb = .063  Adj. Slope =  175.0
1389          BA    .025
1390          LG    .340    .340   3.290    .750   3.000
1391          UC    .271    .453
1392          UA       0       3       5       8      12      20      43      75      90      96
1393          UA     100
              * DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1394          KK    RT66
1395          KM        RETRIEVE DIVERTED FLOW FROM SUB-BASIN 66
1396          DR   WSH66
              * DDM   ***** Updated *****

1397          KK     452
1398          KM   SUB-BASIN 452
1399          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1400          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
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1401        KM     L =  .43  Kb = .055  Adj. Slope =  315.0
1402        BA    .040
1403        LG    .260    .280   3.700    .550   9.000
1404        UC    .171    .166
1405        UA       0       5      16      30      65      77      84      90      94      97
1406        UA     100
            * DDM   ***** Preserved *****

1407        KK   C6465
1408        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 443 AND 452
1409        HC       2
            * DDM   ***** Preserved *****

1410        KK   R6566
1411        KM        ROUTE FLOW FROM DIVERSIONS 65 AND 66 TO C116
1412        RS       2    FLOW      -1
1413        RC     .05    .035     .05    2435   .0282
1414        RX    1000    1045    1090    1150    1160    1220    1265    1310
1415        RY      25      23      20      10      10      20      23      25
            * DDM   ***** Preserved *****

1416        KK    C116
1417        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 450 & 451 AND R6364 & R6465
1418        HC       4
            * DDM   ***** Preserved *****

1419        KK  BASIN5
1420        KM        RESERVOIR WITHIN PARCEL 31      2-48 INCH PIPES AT OUTFALL
1421        KM        BASIN 5 FEET DEEP
1422        RS       1    ELEV       0
1423        SV       0     4.5     9.9
1424        SQ       0      69     190
1425        SE       0     2.5       5
            * DDM   ***** Preserved *****

1426        KK    R116
1427        KM   ROUTE FLOW FROM C116 TO C117
1428        RS       2    FLOW      -1
1429        RC     .05    .035     .05    1300   .0333
1430        RX    1000    1100    1200    1300    1320    1420    1520    1620
1431        RY      13      12      11      10      10      11      12      13
            * DDM   ***** Updated *****
1                                   HEC-1 INPUT                                          PAGE 37

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


1432        KK     453
1433        KM   SUB-BASIN 453
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 1.000
1436        KM     L =  .58  Kb = .058  Adj. Slope =  138.0
1437        BA    .060
1438        LG    .290    .300   3.290    .820  18.000
1439        UC    .275    .284
1440        UA       0       5      16      30      65      77      84      90      94      97
1441        UA     100
            * DDM   ***** Preserved *****

1442        KK    C117
1443        KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 453 AND R116
1444        HC       2
            * DDM   ***** Preserved *****

1445        KK    C118
1446        KM   COMBINE HYDROGRAPHS FROM R115 AND C117
1447        HC       2
            * DDM   ***** Preserved *****

1448        KK    R118
1449        KM        ROUTE FLOW FROM C118 TO  DIV7
1450        RS       1    FLOW      -1
1451        RC    .019    .019    .019    1500    .024
1452        RX    1000    1012    1016    1020    1035    1039    1043    1055
1453        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Preserved *****

1454        KK    DIV7
1455        KM        OFFLINE BASIN AT NORTH MOUNTAIN RIDGE   FLOWS ENTER BASIN OVER
1456        KM        30' WEIR SET AT 5.3' ABOVE THE CHANNEL BOTTOM
            *      1
1457        DT  BASIN6
1458        DI       0     363     487     563     645     844
1459        DQ       0       3      47      83     125     244
            * DDM   ***** Preserved *****

1460        KK  RTDIV7
1461        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1462        DR  BASIN6
            * DDM   ***** Preserved *****

1463        KK  RFDIV7
1464        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1465        KM     3.6 ACRE-FEETx43560/36x3600=1.2cfs
1466        RS       1    STOR       0
1467        SV       0     .01     3.6
1468        SQ       0     1.2     1.2
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 38

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


1469        KK   CDIV7
1470        KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1471        HC       2
            * DDM   ***** Updated *****

1472        KK     454
1473        KM   SUB-BASIN 454
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  .999
1476        KM     L = 1.23  Kb = .051  Adj. Slope =  163.0
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1477        BA    .180
1478        LG    .300    .310   3.780    .560  14.000
1479        UC    .379    .395
1480        UA      0       5      16      30      65      77      84      90      94      97
1481        UA    100
            * DDM   ***** Preserved *****

1482        KK    C119
1483        KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 454 AND DIV7.
            *      1       2
1484        HC       2
            * DDM   ***** Preserved *****

1485        KK    R454
1486        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1487        KM   ROUTING OF FLOW FROM LAS SENDAS AND R413 TO SUB-BASIN 415.
1488        RS       2    FLOW      -1
1489        RC    .045    .035    .045    2500    .012
1490        RX       0      .5       1      33      42      67    67.5      68
1491        RY       5       4       4       0       0       6       6       6
            * DDM   ***** Updated *****

1492        KK     415
1493        KM   SUB-BASIN 415
1494        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1495        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1496        KM     L = 1.10  Kb = .049  Adj. Slope =  155.0
1497        BA    .281
1498        LG    .300    .260   3.630    .710  15.000
1499        UC    .358    .264
1500        UA      0       5      16      30      65      77      84      90      94      97
1501        UA    100
            * DDM   ***** Preserved *****

1502        KK    415C
1503        KM   HYDROGRAPH COMBINATION OF R454, SUB-BASIN 415, R410.
1504        HC       3
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1505        KK    D415
1506        KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN
1507        KM   MAXIMUM STORAGE VOLUME FOR DIVERSION = 45 AC-FT @ 5' DEPTH.
            *      1
1508        DT   BS415
1509        DI       0    1275    5000
1510        DQ       0       0    3725
            * DDM   ***** Preserved *****

1511        KK   RT415
1512        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1513        DR   BS415
            * DDM   ***** Preserved *****

1514        KK   SR415
1515        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1516        KM      15 ACRE-FEETx43560/36x3600 = 5 cfs
1517        RS       1    STOR       0
1518        SV       0     .01      15
1519        SQ       0       5       5
            * DDM   ***** Preserved *****

1520        KK    C415
1521        KM   HYDROGRAPH COMBINATION OF 415 DIVERSION.
1522        HC       2
            * DDM   ***** Preserved *****

1523        KK    R415
1524        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1525        KM   ROUTING OF FLOW FROM 415C TO 455C
1526        RS       4    FLOW      -1
1527        RC    .045     .03    .045    4100    .024
1528        RX       0      .5       1       8      16      23    23.5      24
1529        RY       8       8       8       0       0       8       8       8
            * DDM   ***** Updated *****

1530        KK     455
1531        KM   SUB-BASIN 455
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  .993
1534        KM     L = 1.70  Kb = .041  Adj. Slope =  146.0
1535        BA   1.111
1536        LG    .270    .280   3.700    .640  24.000
1537        UC    .421    .204
1538        UA      0       5      16      30      65      77      84      90      94      97
1539        UA    100
            * DDM   ***** Preserved *****

1540        KK    D455
1541        KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1542        KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1543        KM   FOR BASIN #: 30      34      43      47&58
1544        KM        MAXIMUM VOLUME DIVERSION = 74.1 acre-feet
            *      1
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1545        DT   BS455    74.1
1546        DI       0   10000
1547        DQ       0   10000
            * DDM   ***** Preserved *****

1548        KK   RT455
1549        KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1550        DR   BS455
            * DDM   ***** Preserved *****

1551        KK   SR455
1552        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
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1553        KM    74.1 ACRE-FEETx43560/36x3600=25cfs
1554        RS       1    STOR       0
1555        SV       0     .01    74.1
1556        SQ       0      25      25
            * DDM   ***** Preserved *****

1557        KK    C455
1558        KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 455 AND DIVERTED BASIN STORAGE OF 455
1559        HC       2
            * DDM   ***** Preserved *****

1560        KK    455C
1561        KM  HYDROGRAPH COMBINATION OF 420C, R415 AND C455
            *      1       2
1562        HC       3
            * DDM   ***** Preserved *****

1563        KK   SR440
1564        KM   SPOOK HILL FRS PLANS DATED 6/15/77
1565        KM   OUTLET PIPE=7'x7.5'RCBC; L=70 INLET INV.=1566; OUTLET INV.=1566
1566        KM   EMERGENCY SPILLWAY ELEV.=1582; PRINCIPLE SPILLWAY ELEV.=1577.5
1567        KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 200 ACRE-FEET
1568        RS       1    STOR       0
1569        SV       0      10     100     300     500     680
1570        SQ       0     640     720     780     825     860
1571        SE      66    77.5      79    80.2    81.2      82
            * DDM   ***** Preserved *****

1572        KK   RR455
1573        KM   ROUTE FLOW FROM SPOOK HILL FRS TO SUB-BASIN 462
1574        RS       9    FLOW      -1
1575        RC    .035    .025    .035    9200    .002
1576        RX       0       1       2      28      58      84      85      86
1577        RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
            * DDM   ***** Updated *****

1578        KK     456
1579        KM   SUB-BASIN 456
1580        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1581        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1582        KM     L =  .94  Kb = .045  Adj. Slope =  315.0
1583        BA    .260
1584        LG    .300    .380   5.600    .200  12.000
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1585        UC    .217    .139
1586        UA       0       5      16      30      65      77      84      90      94      97
1587        UA     100
            * DDM   ***** Preserved *****

1588        KK    DIV1
1589        KM        DIVERT FLOW INTO OFFLINE DETENTION BASIN
1590        KM        WEIR FOR BASIN SET AT 4 FEET ABOVE CHANNEL BOTTOM
            *      1
1591        DT  BASIN1
1592        DI       0    11.1   127.9   234.4   577.7   789.9  1025.5  1280.9  1555.7
1593        DQ       0       0       0    47.7     248   381.8   533.6   701.5     884
            * DDM   ***** Preserved *****

1594        KK    DIV2
1595        KM        SPLIT OUT FLOW FOR WASHES THAT FLOW TO THE SOUTH FROM
1596        KM        WASHES THAT DRAIN TO THE WES, SOUTHERN WASHES FED BY 30" & 24" PIPE
1597        DT    WA30
1598        DI       0    11.1   127.9   189.6   329.7     408   491.9   579.4   671.7
1599        DQ       0    11.1    38.4    48.2      63    69.5      76      81      86
            * DDM   ***** Preserved *****

1600        KK    R456
1601        KM        ROUTE FLOW FROM SUB-BASIN 51 TO C101
1602        RS       2    FLOW      -1
1603        RC     .05    .035     .05    3800    .044
1604        RX    1000    1010    1020    1036    1041    1057    1067    1077
1605        RY   14.88   14.44      14      10      10      14   14.44   14.88
            * DDM   ***** Updated *****

1606        KK     457
1607        KM   SUB-BASIN 457
1608        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1609        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1610        KM     L = 1.01  Kb = .045  Adj. Slope =  308.8
1611        BA    .190
1612        LG    .270    .330   3.950    .460   6.000
1613        UC    .237    .195
1614        UA       0       5      16      30      65      77      84      90      94      97
1615        UA     100
            * DDM   ***** Preserved *****

1616        KK    C101
1617        KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 50 AND 51
1618        HC       2
            * DDM   ***** Preserved *****

1619        KK    DIV3
1620        KM        RESERVOIR AT THE EDGE OF THE PROPERTY   FLOW FROM CHANNEL
1621        KM        DIVERTED  INTO OFFLINE BASIN A 25' WEIR SET AT ELEVATION 1808 FT
            *      1
1622        DT  BASIN2
1623        DI       0      36      70     110     180   313.5     402   500.9
1624        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

1625        KK  RTDIV3
1626        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1627        DR  BASIN2
            * DDM   ***** Preserved *****

1628        KK  RFDIV3
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1629        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1630        KM     5.0 ACRE-FEETx43560/36x3600=1.7cfs
1631        RS       1     STOR       0
1632        SV       0      .01       5
1633        SQ       0      1.7     1.7
            * DDM   ***** Preserved *****

1634        KK   CDIV3
1635        KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1636        HC       2
            * DDM   ***** Preserved *****

1637        KK    R101
1638        KM        ROUTE FLOW FROM SUBBASIN C101 TO C103
1639        RS       1     FLOW      -1
1640        RC     .05     .035     .05    1450     .05
1641        RX    1000     1010    1020    1036    1041    1057    1067    1077
1642        RY      15     14.5      14      10      10      14    14.5      15
            * DDM   ***** Updated *****

1643        KK     458
1644        KM   SUB-BASIN 458
1645        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1646        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1647        KM     L =  .76  Kb = .048  Adj. Slope =  299.0
1648        BA    .190
1649        LG    .290    .330   5.800    .190   6.000
1650        UC    .204    .131
1651        UA       0       5      16      30      65      77      84      90      94      97
1652        UA     100
            * DDM   ***** Preserved *****

1653        KK    C103
1654        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 55 AND C101
1655        HC       2
            * DDM   ***** Preserved *****

1656        KK    R103
1657        KM        ROUTE FLOW FROM SUBBASIN C103 TO C106
1658        RS       1     FLOW      -1
1659        RC     .05     .035     .05     900     .03
1660        RX    1000     1010    1020    1030    1050    1060    1070    1080
1661        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

1662        KK    RT30
1663        KM        RETRIEVE DIVERTED FLOW FOR WASH BELOW 30 INCH PIPE
1664        DR    WA30
            * DDM   ***** Preserved *****

1665        KK     R30
1666        KM        ROUTE FLOW FROM WASH DIVERSION TO COMBINE C52
1667        RS       1     FLOW      -1
1668        RC     .05     .035     .05    1630     .05
1669        RX    1000     1010    1020    1036    1041    1057    1067    1077
1670        RY      15     14.5      14      10      10      14    14.5      15
            * DDM   ***** Preserved *****

1671        KK    RTB1
1672        KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
            *      1       2
1673        DR  BASIN1
            * DDM   ***** Preserved *****

1674        KK      B1
1675        KM        ROUTE FLOW THROUGH OFFLINE DETENTION BASIN
1676        KM        FLOW OUTLETS THROUGH A 30 INCH OUTLET PIPE
            *      1       2
1677        RS       1     ELEV       0
1678        SV              .7     1.4     2.3     2.7     3.2
1679        SQ       0       5      16      28    32.5      37
1680        SE       0       1       2       3     3.5       4
            * DDM   ***** Preserved *****

1681        KK     RB1
1682        KM        ROUTE FLOW FROM BASIN DIVERSION TO COMBINE C52
1683        RS       2     FLOW      -1
1684        RC     .05     .035     .05    1720     .05
1685        RX    1000     1010    1020    1036    1041    1057    1067    1077
1686        RY      15     14.5      14      10      10      14    14.5      15
            * DDM   ***** Preserved *****

1687        KK    CDIV
1688        KM        COMBINE FLOWS FROM WA30 AND BASIN 1
1689        HC       2     .12
            * DDM   ***** Updated *****

1690        KK     459
1691        KM   SUB-BASIN 459
1692        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1693        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1694        KM     L =  .35  Kb = .052  Adj. Slope =  251.6
1695        BA    .030
1696        LG    .220    .300   3.330    .710   8.000
1697        UC    .162    .157
1698        UA       0       5      16      30      65      77      84      90      94      97
1699        UA     100
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1700        KK     C52
1701        KM        COMBINE FLOWS FROM SUB-BASIN 52 WA30 AND BASIN 1
1702        HC       2
            * DDM   ***** Preserved *****

1703        KK     R52
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1704          KM        ROUTE FLOW FROM SUBBASIN 52 TO C102
1705          RS       2    FLOW      -1
1706          RC     .05    .035     .05    2000     .05
1707          RX    1000    1010    1020    1036    1041    1057    1067    1077
1708          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Updated *****

1709          KK     460
1710          KM   SUB-BASIN 460
1711          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1712          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1713          KM     L =  .62  Kb = .058  Adj. Slope =  194.0
1714          BA    .140
1715          LG    .250    .260   3.740    .690  27.000
1716          UC    .242    .160
1717          UA       0       5      16      30      65      77      84      90      94      97
1718          UA     100
              * DDM   ***** Preserved *****

1719          KK    C102
1720          KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 52 AND 53
1721          HC       2
              * DDM   ***** Preserved *****

1722          KK  BASIN3
1723          KM        RESERVOIR AT CLUBHOUSE LOCATION 1-30 INCH PIPE AT OUTFALL
1724          KM        BOTTOM OF BASIN AT 6 FEET ABOVE 1795 ELEVATION
1725          RS       1    ELEV       0
1726          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
1727          SQ       0      22      45    47.4      48      51      57      62      67      73
1728          SE    1795  1797.5    1800  1800.4  1800.5    1801    1802    1803    1804  1805.5
              * DDM   ***** Preserved *****

1729          KK      R3
1730          KM        ROUTE FLOW FROM C102 to C106
1731          RS       4    FLOW      -1
1732          RC     .05     .03     .05    2750   .0375
1733          RX    1000    1010    1020    1052    1086    1118    1128    1138
1734          RY    19.2    18.4      18      10      10      18    18.4    19.2
              * DDM   ***** Updated *****

1735          KK     461
1736          KM   SUB-BASIN 461
1737          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1738          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1739          KM     L =  .83  Kb = .052  Adj. Slope =  181.0
1740          BA    .120
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1741          LG    .270    .250   4.250    .450  21.000
1742          UC    .271    .250
1743          UA       0       5      16      30      65      77      84      90      94      97
1744          UA     100
              * DDM   ***** Preserved *****

1745          KK    C104
1746          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 54 AND R102
1747          HC       2
              * DDM   ***** Preserved *****

1748          KK    C106
1749          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN C103 AND C104
1750          HC       2
              * DDM   ***** Preserved *****

1751          KK    R106
1752          KM        ROUTE FLOW FROM C106 TO C49
1753          RS       2    FLOW      -1
1754          RC     .05    .035     .05    3950    .033
1755          RX    1000    1010    1020    1030    1050    1060    1070    1080
1756          RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
              * DDM   ***** Updated *****

1757          KK     462
1758          KM   SUB-BASIN 462
1759          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1760          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1761          KM     L =  .97  Kb = .045  Adj. Slope =  297.7
1762          BA    .301
1763          LG    .300    .330   5.300    .240  12.000
1764          UC    .225    .137
1765          UA       0       5      16      30      65      77      84      90      94      97
1766          UA     100
              * DDM   ***** Preserved *****

1767          KK     C56
1768          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 56 AND C106
              *      1       2
1769          HC       2
              * DDM   ***** Updated *****

1770          KK     480
1771          KM   SUB-BASIN 480
1772          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1773          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
1774          KM     L = 1.21  Kb = .042  Adj. Slope =  165.0
1775          BA    .731
1776          LG    .270    .270   3.580    .730  27.000
1777          UC    .325    .148
1778          UA       0       5      16      30      65      77      84      90      94      97
1779          UA     100
              * DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1780          KK    D480
1781          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1782          KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
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1783          KM   FOR BASIN #: 18 & 26
1784          KM        MAXIMUM VOLUME DIVERSION = 16.5 acre-feet
              *      1
1785          DT   BS480    16.5
1786          DI       0   10000
1787          DQ       0   10000
              * DDM   ***** Preserved *****

1788          KK   RT480
1789          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1790          DR   BS480
              * DDM   ***** Preserved *****

1791          KK   SR480
1792          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1793          KM    16.5 ACRE-FEETx43560/36x3600=5.5cfs
1794          RS       1    STOR       0
1795          SV       0     .01    16.5
1796          SQ       0     5.6     5.6
              * DDM   ***** Preserved *****

1797          KK    C480
1798          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1799          HC       2
              * DDM   ***** Preserved *****

1800          KK    480C
1801          KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1802          HC       3    2.09
              * DDM   ***** Preserved *****

1803          KK   RR480
1804          KM   ROUTE FLOW FROM SUB-BASIN 480 TO SUB-BASIN 500
1805          RS       2    FLOW      -1
1806          RC    .025    .025    .025    6500     .05
1807          RX       0       1       2      28      58      84      85      86
1808          RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
              * DDM   ***** Updated *****

1809          KK     500
1810          KM   SUB-BASIN 500
1811          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1812          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
1813          KM     L = 2.77  Kb = .042  Adj. Slope =  286.8
1814          BA    .930
1815          LG    .350    .400   6.000    .170   9.000
1816          UC    .421    .333
1817          UA       0       3       5       8      12      20      43      75      90      96
1818          UA     100
              * DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1819          KK    500C
1820          KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1821          HC       2    3.02
1822          ZZ
```

SCHEMATIC DIAGRAM OF STREAM NETWORK

```
INPUT
 LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

  NO.      (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

  63          10
               V
               V
  73         R10
               V
               V
  79         R12
               .
               .
  85           .          20
               .           .
               .           .
  95         C20...........
               .
               .
  98           .          40
               .           .
               .           .
 108           .           .          60
               .           .           .
               .           .           .
 118         60C.......................
               V
               V
 121        SR60
               V
               V
 130         R60
               V
               V
 136        RR60
               .
               .
 142           .          80
               .           .
               .           .
 152         80C...........
               V
               V
 155         R80
               .
               .
 161           .         100
               .           .
               .           .
 171        100C...........
               V
               V
 174        R100
               .
               .
 180           .         120
               .           .
               .           .
 190        120C...........
               V
               V
 193        R120
               .
               .
 199           .         140
               .           .
               .           .
 209           .           .         150
               .           .           V
               .           .           V
 219           .           .        R150
               .           .           V
               .           .           V
 225           .           .        R152
               .           .           .
               .           .           .
 231           .           .           .         160
               .           .           .           .
               .           .           .           .
 241           .           .           .           .         180
               .           .           .           .           .
               .           .           .           .           .
 251        180C..............................................
               .
               .
 254           .         383
               .           V
               .           V
 264           .        R383
               .           .
               .           .
 273           .           .         393
               .           .           .
               .           .           .
 283           .        393C...........
               .           V
               .           V
 286           .        R393
               .           .
               .           .
 293           .           .         365
               .           .           .
               .           .           .
 303           .        365C...........
               .           V
               .           V
 306           .        R365
               .           V
               .           V
 313           .        365R
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322                 353
                      .
                      .
332           353C............
                 V
                 V
335           R353
                 V
                 V
344           353R
                 .
                 .
351                 350
                      V
                      V
361                350R
                      .
                      .
368                      .         310
                         .           .
                         .           .
378           C310........................
                 V
                 V
381           R310
                 V
                 V
388           R312
                 .
                 .
397                 295
                      .
                      .
407           295C............
                 V
                 V
410           295R
                 .
                 .
419                 210
                      V
                      V
429                R210
                      .
                      .
435                      .         240
                         .           .
                         .           .
445           240C........................
                 V
                 V
448           SR240
                 .
                 .
457                 220
                      .
                      .
467           220C............
                 V
                 V
470           SR220
                 .
                 .
479                 190
                      V
                      V
489                R190
                      V
                      V
495                R192
                      .
                      .
501                      .         200
                         .           .
                         .           .
511           200C........................
                 V
                 V
514           SR200
                 V
                 V
521           200SR
                 .
                 .
531        C180............
              V
              V
534       SR180
              V
              V
543        R180
              .
              .
550           .         260
                 .
                 .
560        260C............
              V
              V
563        R260
              .
              .
570           .         280
                 .
                 .
580        280C............
              V
              V
583        R280
              .
              .
```

```
590          .         300
             .           .
             .           .
600       C300...........
             .
             .
606          .-------->   DIV30
603       D300
             .
             .
611          .           .<-------   DIV30
609          .       RTDIV
             .           V
             .           V
612          .       SRDIV
             .           .
             .           .
619       300C...........
             .
             .
622          .         305
             .           .
             .           .
635          .           .-------->    305D
632          .        D305
             .           .
             .           .
640          .           .           .<-------    305D
638          .           .       RT305
             .           .           V
             .           .           V
641          .           .       SR305
             .           .           .
             .           .           .
648       305C........................
             V
             V
651       R305
             V
             V
658      RR305
             .
             .
665          .         320
             .           .
             .           .
680          .           .-------->   BS320
675          .        D320
             .           .
             .           .
685          .           .           .<-------   BS320
683          .           .       RT320
             .           .           V
             .           .           V
686          .           .       SR320
             .           .           .
             .           .           .
692       C320........................
             .
             .
695          .         342
             .           .
             .           .
710          .           .-------->  BS3421
705          .       D3421
             .           .
             .           .
715          .           .           .<-------  BS3421
713          .           .      RT3421
             .           .           V
             .           .           V
716          .           .      SR3421
             .           .           .
             .           .           .
722          .        C342............
             .           .
             .           .
729          .           .-------->  BS3422
725          .       D3422
             .           .
             .           .
734          .           .           .<-------  BS3422
732          .           .      RT3422
             .           .           V
             .           .           V
735          .           .      SR3422
             .           .           .
             .           .           .
741          .       CC342............
             .           V
             .           V
744          .        R342
             .           .
             .           .
750          .           .         340
             .           .           .
             .           .           .
765          .           .           .-------->   BS340
760          .           .        D340
             .           .           .
             .           .           .
770          .           .           .           .<-------   BS340
768          .           .           .       RT340
             .           .           .           V
             .           .           .           V
771          .           .           .       SR340
             .           .           .           .
             .           .           .           .
777       C340.................................
             .
             .
780          .         355
             .           V
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```
                .          V
790             .        R355
                .          .
                .          .
797             .          .         360
                .          .           .
                .          .           .
811             .          .           .-------->   BS360
807             .          .        D360
                .          .           .
                .          .           .
816             .          .           .           .<-------   BS360
814             .          .           .       RT360
                .          .           .           V
                .          .           .           V
817             .          .           .       SR360
                .          .           .           .
                .          .           .           .
823          360C...................................
                .
                .
826             .         380
                .          .
                .          .
840             .          .-------->   BS380
836             .        D380
                .          .
                .          .
845             .          .           .<-------   BS380
843             .          .        RT380
                .          .           V
                .          .           V
846             .          .        SR380
                .          .           .
                .          .           .
852          380C......................
                .
                .
855             .         400
                .          .
                .          .
869             .          .-------->   BS400
865             .        D400
                .          .
                .          .
874             .          .           .<-------   BS400
872             .          .        RT400
                .          .           V
                .          .           V
875             .          .        SR400
                .          .           .
                .          .           .
881             .        C400............
                .          .
                .          .
884          400C............
                .
                .
887             .         379
                .          .
                .          .
901             .          .-------->   BS379
897             .        D379
                .          .
                .          .
906             .          .           .<-------   BS379
904             .          .        RT379
                .          .           V
                .          .           V
907             .          .        SR379
                .          .           .
                .          .           .
913             .        C379............
                .          V
                .          V
916             .        R379
                .          .
                .          .
922             .          .         381
                .          .           .
                .          .           .
936             .          .           .-------->   BS381
932             .          .        D381
                .          .           .
                .          .           .
941             .          .           .           .<-------   BS381
939             .          .           .       RT381
                .          .           .           V
                .          .           .           V
942             .          .           .       SR381
                .          .           .           .
                .          .           .           .
948             .        381C......................
                .          V
                .          V
951             .       RR381
                .          .
                .          .
957             .          .         401
                .          .           .
                .          .           .
971             .          .           .-------->   BS401
967             .          .        D401
                .          .           .
                .          .           .
976             .          .           .           .<-------   BS401
974             .          .           .       RT401
                .          .           .           V
                .          .           .           V
977             .          .           .       SR401
                .          .           .           .
                .          .           .           .
983          C401...................................
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```
986          .        420
             .          .
1000         .          .------->  BS420
996          .       D420
             .          .
             .          .
1005         .          .          .<-------  BS420
1003         .          .      RT420
             .          .          V
             .          .          V
1006         .          .      SR420
             .          .          .
             .          .          .
1012       420C.......................
             .
             .
1015         .        370
             .          .
             .          .
1025         .          .        395
             .          .          .
             .          .          .
1035         .       395C............
             .          V
             .          V
1038         .       R395
             .          .
             .          .
1045         .          .        385
             .          .          .
             .          .          .
1055         .          .          .        411
             .          .          .          .
             .          .          .          .
1065         .          .      411C............
             .          .          .
             .          .          .
1071         .          .          .------->  SF411
1068         .          .      D411
             .          .          .
             .          .          .
1076         .          .          .          .<-------  SF411
1074         .          .          .      RT411
             .          .          .          V
             .          .          .          V
1077         .          .          .      SR411
             .          .          .          .
             .          .          .          .
1083         .          .      C411............
             .          .          V
             .          .          V
1086         .          .      R411
             .          .          .
             .          .          .
1093         .          .          .        390
             .          .          .          .
             .          .          .          .
1107         .          .          .          .------->  BS390
1103         .          .          .      D390
             .          .          .          .
             .          .          .          .
1112         .          .          .          .          .<-------  BS390
1110         .          .          .          .      RT390
             .          .          .          .          V
             .          .          .          .          V
1113         .          .          .          .      SR390
             .          .          .          .          .
             .          .          .          .          .
1119         .       390C...................................
             .          V
             .          V
1122         .      RR390
             .          .
             .          .
1129         .          .        410
             .          .          .
             .          .          .
1139         .       410C............
             .          .
             .          .
1142         .          .        440
             .          .          V
             .          .          V
1152         .          .        R70
             .          .          .
             .          .          .
1158         .          .          .        441
             .          .          .          .
             .          .          .          .
1168         .          .      C108............
             .          .          .
             .          .          .
1173         .          .          .------->  SPLIT
1171         .          .      DIV4
             .          .          V
             .          .          V
1176         .          .      R108
             .          .          .
             .          .          .
1182         .          .          .        442
             .          .          .          .
             .          .          .          .
1192         .          .        C67............
             .          .          .
             .          .          .
1198         .          .          .------->  BASIN4
1195         .          .      DIV6
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             .          .          .
1203         .          .          .          .<-------  BASIN4
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1201                    RTDIV6
                           V
                           V
1204                    RFDIV6
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1210                CDIV6............
                           .
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1213                       443
                           .
                           .
1226                       .-------->   WSH66
1223                    DIV66
                           V
                           V
1229                    R113
                           .
                           .
1235                C114............
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                           .
1238                       444
                           V
                           V
1248                    R58
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1254                       .         445
                           .          .
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1264                    C107............
                           V
                           V
1267                    R107
                           .
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1275                       .           .<-------   SPLIT
1273                       .        RTB2
                           .           V
                           .           V
1276                       .      RSPLIT
                           .           .
                           .           .
1282                       .           .         446
                           .           .           .
                           .           .           .
1292                    C109........................
                           .
                           .
1298                       .-------->  WSH404
1295                    DIV5
                           V
                           V
1301                    R109
                           .
                           .
1307                       .         447
                           .          .
                           .          .
1319                       .           .           .<-------  WSH404
1317                       .           .       RT404
                           .           .          V
                           .           .          V
1320                       .           .       R404
                           .           .           .
                           .           .           .
1326                    C110........................
                           V
                           V
1329                    R110
                           .
                           .
1335                C115............
                       V
                       V
1338                R115
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                           .
1345                       448
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1355                       .         449
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1365                    C6364...........
                           V
                           V
1368                    R6364
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1374                       .         450
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1384                       .           .         451
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1396                       .           .           .           .<-------   WSH66
1394                       .           .           .       RT66
                           .           .           .           .
                           .           .           .           .
1397                       .           .           .           .         452
                           .           .           .           .          .
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1407                       .           .           .      C6465...........
                           .           .           .           V
                           .           .           .           V
1410                       .           .           .      R6566
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1416                    C116.................................
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1419          .           .           .      BASIN5
              .           .           .          V
              .           .           .          V
1426          .           .           .       R116
              .           .           .          .
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1432          .           .           .          .         453
              .           .           .          .           .
              .           .           .          .           .
1442          .           .           .       C117............
              .           .           .          .
              .           .           .          .
1445          .           .       C118............
              .           .          V
              .           .          V
1448          .           .       R118
              .           .          .
              .           .          .
1457          .           .          .-------> BASIN6
1454          .           .       DIV7
              .           .          .
              .           .          .
1462          .           .          .           .<-------  BASIN6
1460          .           .          .      RTDIV7
              .           .          .          V
              .           .          .          V
1463          .           .          .      RFDIV7
              .           .          .          .
              .           .          .          .
1469          .           .      CDIV7............
              .           .          .
              .           .          .
1472          .           .          .         454
              .           .          .          .
              .           .          .          .
1482          .           .       C119............
              .           .          V
              .           .          V
1485          .           .       R454
              .           .          .
              .           .          .
1492          .           .          .         415
              .           .          .          .
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1502          .       415C........................
              .           .
              .           .
1508          .           .------->   BS415
1505          .       D415
              .           .
              .           .
1513          .           .          .<-------   BS415
1511          .           .      RT415.
              .           .          V
              .           .          V
1514          .           .      SR415
              .           .          .
              .           .          .
1520          .       C415............
              .          V
              .          V
1523          .       R415
              .           .
              .           .
1530          .           .        455
              .           .          .
              .           .          .
1545          .           .          .------->   BS455
1540          .           .       D455
              .           .          .
              .           .          .
1550          .           .          .           .<-------   BS455
1548          .           .          .      RT455
              .           .          .          V
              .           .          .          V
1551          .           .          .      SR455
              .           .          .          .
              .           .          .          .
1557          .           .       C455............
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              .           .          .
1560       455C........................
              V
              V
1563      SR440
              V
              V
1572      RR455
              .
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1578          .        456
              .           .
              .           .
1591          .           .-------> BASIN1
1588          .       DIV1
              .           .
              .           .
1597          .           .------->    WA30
1594          .       DIV2
              .          V
              .          V
1600          .       R456
              .           .
              .           .
1606          .           .        457
              .           .          .
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1616          .       C101............
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1622          .           .-------> BASIN2
1619          .       DIV3
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1627          .           .           .<-------  BASIN2
1625          .           .      RTDIV3
              .           .           V
              .           .           V
1628          .           .      RFDIV3
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              .           .           .
1634          .       CDIV3............
              .           V
              .           V
1637          .        R101
              .           .
              .           .
1643          .           .         458
              .           .           .
              .           .           .
1653          .        C103............
              .           V
              .           V
1656          .        R103
              .           .
              .           .
1664          .           .           .<-------    WA30
1662          .           .        RT30
              .           .           V
              .           .           V
1665          .           .         R30
              .           .           .
              .           .           .
1673          .           .           .           .<-------  BASIN1
1671          .           .           .        RTB1
              .           .           .           V
              .           .           .           V
1674          .           .           .          B1
              .           .           .           V
              .           .           .           V
1681          .           .           .         RB1
              .           .           .           .
              .           .           .           .
1687          .           .        CDIV............
              .           .           .
              .           .           .
1690          .           .           .         459
              .           .           .           .
              .           .           .           .
1700          .           .         C52............
              .           .           V
              .           .           V
1703          .           .         R52
              .           .           .
              .           .           .
1709          .           .           .         460
              .           .           .           .
              .           .           .           .
1719          .           .        C102............
              .           .           V
              .           .           V
1722          .           .      BASIN3
              .           .           V
              .           .           V
1729          .           .          R3
              .           .           .
              .           .           .
1735          .           .           .         461
              .           .           .           .
              .           .           .           .
1745          .           .        C104............
              .           .           .
              .           .           .
1748          .        C106............
              .           V
              .           V
1751          .        R106
              .           .
              .           .
1757          .           .         462
              .           .           .
              .           .           .
1767          .         C56............
              .           .
              .           .
1770          .           .         480
              .           .           .
              .           .           .
1785          .           .           .------->   BS480
1780          .           .        D480
              .           .           .
              .           .           .
1790          .           .           .           .<-------   BS480
1788          .           .           .       RT480
              .           .           .           V
              .           .           .           V
1791          .           .           .       SR480
              .           .           .           .
              .           .           .           .
1797          .           .        C480............
              .           .           .
              .           .           .
1800       480C........................
              V
              V
1803      RR480
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              .
1809          .         500
              .           .
              .           .
1819       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	572.	12.17	49.	13.	6.	.41		
+	ROUTED TO	R150	553.	12.23	49.	13.	6.	.41		
+	ROUTED TO	R152	510.	12.37	49.	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	7168.	12.30	860.	285.	168.	6.54		
+	HYDROGRAPH AT	383	650.	12.17	60.	17.	8.	.42		
+	ROUTED TO	R383	647.	12.17	60.	17.	8.	.42		
+	HYDROGRAPH AT	393	44.	12.13	4.	1.	0.	.04		
+	2 COMBINED AT	393C	687.	12.17	64.	18.	9.	.46		
+	ROUTED TO	R393	681.	12.20	64.	18.	9.	.46		
+	HYDROGRAPH AT	365	380.	12.27	45.	12.	6.	.41		
+	2 COMBINED AT	365C	1028.	12.20	108.	29.	14.	.88		
+	ROUTED TO	R365	1021.	12.23	108.	29.	14.	.88		

+	ROUTED TO 365R	957.	12.33	108.	29.	14.	.88
+	HYDROGRAPH AT 353	401.	12.30	49.	12.	6.	.50
+	2 COMBINED AT 353C	1336.	12.33	155.	41.	20.	1.38
+	ROUTED TO R353	1298.	12.40	155.	41.	20.	1.38
+	ROUTED TO 353R	1281.	12.43	155.	41.	20.	1.38
+	HYDROGRAPH AT 350	1151.	12.20	102.	27.	13.	.94
+	ROUTED TO 350R	992.	12.47	102.	27.	13.	.94
+	HYDROGRAPH AT 310	376.	12.33	49.	12.	6.	.56
+	3 COMBINED AT C310	2539.	12.43	301.	79.	38.	2.87
+	ROUTED TO R310	2517.	12.47	301.	79.	38.	2.87
+	ROUTED TO R312	2453.	12.57	301.	79.	38.	2.87
+	HYDROGRAPH AT 295	364.	12.30	40.	10.	5.	.38
+	2 COMBINED AT 295C	2645.	12.57	339.	89.	43.	3.25
+	ROUTED TO 295R	2613.	12.63	339.	89.	43.	3.25
+	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
+	3 COMBINED AT 240C	3733.	12.50	565.	147.	71.	5.23
+	ROUTED TO SR240	1705.	12.93	500.	130.	62.	5.23
+	HYDROGRAPH AT 220	1126.	12.17	98.	25.	12.	.73
+	2 COMBINED AT 220C	1756.	12.90	590.	154.	74.	5.95
+	ROUTED TO SR220	1675.	13.07	579.	151.	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	806.	12.17	69.	19.	9.	.54
+	3 COMBINED AT 200C	2593.	12.30	751.	198.	95.	7.41
+	ROUTED TO SR200	2470.	12.37	746.	194.	93.	7.41
+	ROUTED TO 200SR	1862.	12.67	625.	164.	79.	7.41
+	2 COMBINED AT C180	7168.	12.30	1479.	450.	247.	13.94
+	ROUTED TO SR180	142.	19.00	142.	142.	114.	13.94
+	ROUTED TO R180	142.	19.03	142.	142.	114.	13.94
+	HYDROGRAPH AT 260	418.	12.10	43.	12.	6.	.27
+	2 COMBINED AT 260C	527.	12.10	179.	153.	122.	.27
+	ROUTED TO R260	515.	12.20	179.	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	218.	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	181.	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	276.	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	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.	22.13	8.	8.	5.	.30
+ HYDROGRAPH AT	340	1090.	12.23	176.	54.	26.	1.25
DIVERSION TO	BS340	1090.	12.23	103.	28.	14.	1.25
HYDROGRAPH AT	D340	813.	12.50	91.	25.	12.	1.25
+ HYDROGRAPH AT	RT340	1090.	12.23	103.	28.	14.	1.25
+ ROUTED TO	SR340	19.	8.73	19.	19.	14.	1.25

+	4 COMBINED AT	C340	1675.	12.50	482.	260.	179.	3.67
+	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	1857.	12.50	545.	284.	193.	4.51
+	HYDROGRAPH AT	380	323.	12.13	32.	9.	4.	.27
+	DIVERSION TO	BS380	323.	12.13	32.	9.	4.	.27
+	HYDROGRAPH AT	D380	0.	.00	0.	0.	0.	.27
+	HYDROGRAPH AT	RT380	323.	12.13	32.	9.	4.	.27
+	ROUTED TO	SR380	10.	11.43	10.	9.	4.	.27
+	3 COMBINED AT	380C	1864.	12.50	554.	291.	197.	4.78
+	HYDROGRAPH AT	400	53.	12.10	4.	1.	0.	.05
+	DIVERSION TO	BS400	53.	12.10	4.	1.	0.	.05
+	HYDROGRAPH AT	D400	0.	.00	0.	0.	0.	.05
	HYDROGRAPH AT	RT400	53.	12.10	4.	1.	0.	.05
	ROUTED TO	SR400	2.	11.87	2.	1.	0.	.05
+	2 COMBINED AT	C400	2.	11.87	2.	1.	0.	.05
+	2 COMBINED AT	400C	1865.	12.50	556.	292.	198.	4.83
+	HYDROGRAPH AT	379	260.	12.13	29.	8.	4.	.22
+	DIVERSION TO	BS379	240.	12.13	20.	5.	2.	.22
+	HYDROGRAPH AT	D379	20.	11.70	9.	3.	2.	.22
+	HYDROGRAPH AT	RT379	240.	12.13	20.	5.	2.	.22
+	ROUTED TO	SR379	3.	11.73	3.	3.	2.	.22
+	2 COMBINED AT	C379	23.	11.73	11.	6.	4.	.22
+	ROUTED TO	R379	23.	12.10	11.	6.	4.	.22
+	HYDROGRAPH AT	381	450.	12.17	57.	16.	8.	.51
+	DIVERSION TO	BS381	450.	12.17	42.	11.	5.	.51
+	HYDROGRAPH AT	D381	183.	12.63	18.	5.	2.	.51
+	HYDROGRAPH AT	RT381	450.	12.17	42.	11.	5.	.51
+	ROUTED TO	SR381	7.	11.07	7.	7.	5.	.51
	3 COMBINED AT	381C	213.	12.63	36.	18.	12.	.73
	ROUTED TO	RR381	180.	12.77	36.	18.	12.	.73
+	HYDROGRAPH AT	401	462.	12.23	67.	19.	9.	.61
+	DIVERSION TO	BS401	39.	11.80	6.	2.	1.	.61

+ HYDROGRAPH AT	D401	462.	12.23	65.	17.	8.	.61
+ HYDROGRAPH AT	RT401	39.	11.80	6.	2.	1.	.61
ROUTED TO	SR401	1.	.90	1.	1.	1.	.61
+ 4 COMBINED AT	C401	2210.	12.50	651.	327.	217.	6.16
+ HYDROGRAPH AT	420	515.	12.20	65.	18.	9.	.57
+ DIVERSION TO	BS420	370.	12.07	16.	4.	2.	.57
+ HYDROGRAPH AT	D420	515.	12.20	52.	14.	7.	.57
+ HYDROGRAPH AT	RT420	370.	12.07	16.	4.	2.	.57
+ ROUTED TO	SR420	13.	11.63	13.	4.	2.	.57
+ 3 COMBINED AT	420C	2435.	12.50	703.	340.	224.	10.87
+ HYDROGRAPH AT	370	406.	12.07	34.	10.	5.	.26
+ HYDROGRAPH AT	395	204.	12.10	21.	6.	3.	.16
+ 2 COMBINED AT	395C	599.	12.07	55.	15.	7.	.42
+ ROUTED TO	R395	556.	12.17	55.	15.	7.	.42
+ HYDROGRAPH AT	385	314.	12.07	24.	7.	3.	.20
+ HYDROGRAPH AT	411	304.	12.17	30.	8.	4.	.24
+ 2 COMBINED AT	411C	566.	12.10	53.	15.	7.	.43
+ DIVERSION TO	SF411	541.	12.10	43.	11.	5.	.43
HYDROGRAPH AT	D411	25.	11.63	10.	4.	2.	.43
+ HYDROGRAPH AT	RT411	541.	12.10	43.	11.	5.	.43
+ ROUTED TO	SR411	7.	11.67	7.	7.	5.	.43
+ 2 COMBINED AT	C411	32.	11.67	16.	10.	7.	.43
+ ROUTED TO	R411	32.	11.77	16.	10.	7.	.43
+ 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	882.	12.10	100.	33.	19.	1.10
+ ROUTED TO	RR390	802.	12.27	100.	33.	19.	1.10
+ HYDROGRAPH AT	410	345.	12.10	33.	9.	5.	.28
+ 2 COMBINED AT	410C	1028.	12.27	131.	41.	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

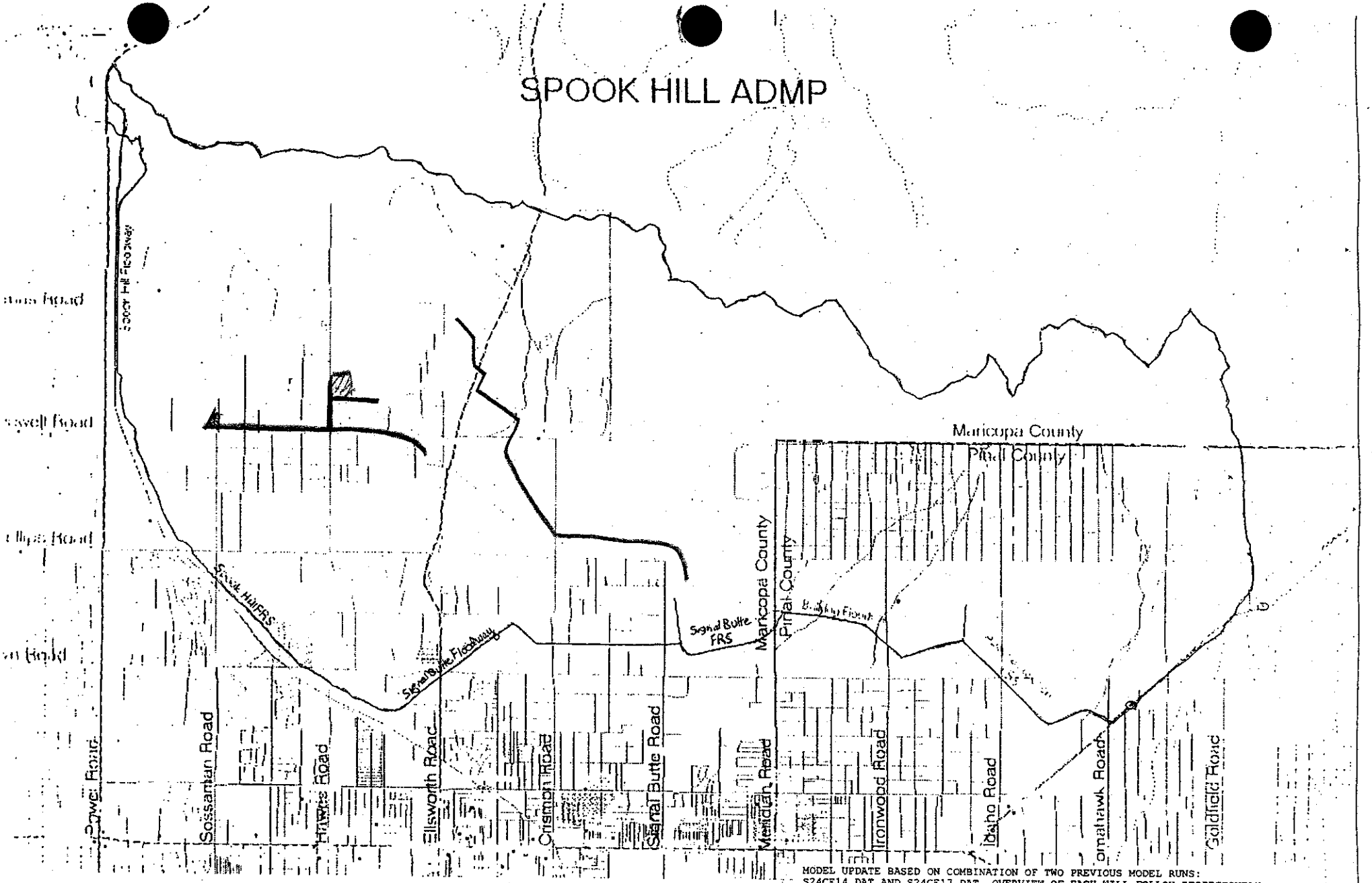
+	HYDROGRAPH AT	RT66	78.	11.90	12.	3.	2.	.08
+	HYDROGRAPH AT	452	62.	12.03	4.	1.	1.	.04
+	2 COMBINED AT	C6465	140.	12.03	16.	4.	2.	.04
+	ROUTED TO	R6566	135.	12.10	16.	4.	2.	.04
+	4 COMBINED AT	C116	341.	12.17	35.	9.	4.	.23
+	ROUTED TO	BASIN5	152.	12.47	35.	9.	4.	.23
+	ROUTED TO	R116	150.	12.53	35.	9.	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	1958.	12.23	267.	80.	43.	2.75
+	DIVERSION TO	BS415	683.	12.23	30.	7.	4.	2.75
+	HYDROGRAPH AT	D415	1275.	12.07	238.	73.	39.	2.75
+	HYDROGRAPH AT	RT415	683.	12.23	30.	7.	4.	2.75
+	ROUTED TO	SR415	5.	12.07	5.	5.	3.	2.75
+	2 COMBINED AT	C415	1280.	12.07	242.	77.	43.	2.75
+	ROUTED TO	R415	1282.	12.17	242.	77.	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	3661.	12.20	955.	438.	283.	14.73
	ROUTED TO	SR440	755.	13.73	741.	437.	282.	14.73
	ROUTED TO	RR455	755.	14.03	741.	437.	280.	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	2523.	12.10	927.	517.	323.	2.09
+	ROUTED TO	RR480	2433.	12.13	925.	517.	322.	2.09
+	HYDROGRAPH AT	500	1073.	12.27	122.	33.	16.	.93
+	2 COMBINED AT	500C	3323.	12.17	1036.	545.	337.	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 385 & 411; AND 455

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1****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*             JUN  1998                *
*           VERSION 4.1                *
*                                      *
*  RUN DATE   20JUL00  TIME  09:05:28  *
*                                      *
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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 385 & 411; AND 455
 28           ID
 29           ID   ANALYSIS FOR CURRENT ALTERNATIVE PERFORMED BY: WOOD/PATEL;      MW;  07/20/00
 30           ID   FILE:        S24CE47.DAT
 31           ID
 32           ID
 33           ID   DDM MCUHP1 SPOOK HILL AMDP
              *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
1                                        HEC-1 INPUT                                                    PAGE  3

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 *****
1                                        HEC-1 INPUT                                                    PAGE  4

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 =  314.6
207          BA    .408
208          LG    .350    .360   5.100    .260   7.000
209          UC    .296    .221
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 = 1.49  Kb = .047  Adj. Slope =  315.0
252          BA    .420
253          LG    .350    .400   6.000    .170  16.000
254          UC    .287    .209
1                                    HEC-1 INPUT                                          PAGE  7

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 *****
1                                    HEC-1 INPUT                                          PAGE  8

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 *****
1                                          HEC-1 INPUT                                                    PAGE  9

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 *****
1                                          HEC-1 INPUT                                                    PAGE 10

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   5.000
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 = 1.58  Kb = .045  Adj. Slope =  305.6
499          BA    .535
500          LG    .350    .390   5.700    .200  10.000
501          UC    .300    .200
502          UA       0       3       5       8      12      20      43      75      90      96
503          UA     100
             * DDM   ***** Preserved *****
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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 *****
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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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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 = 1.58  Kb = .045  Adj. Slope =  305.6
499          BA    .535
500          LG    .350    .390   5.700    .200  10.000
501          UC    .300    .200
502          UA       0       3       5       8      12      20      43      75      90      96
503          UA     100
             * DDM   ***** Preserved *****
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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 *****
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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
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  .997
829          KM     L = 1.69  Kb = .045  Adj. Slope =  107.0
830          BA    .570
831          LG    .320    .280   4.350    .440  10.000
832          UC    .500    .359
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   ***** Updated *****

864          KK     395
865          KM   SUB-BASIN 395
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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  .999
868          KM     L = 1.00  Kb = .052  Adj. Slope =  188.0
869          BA    .160
870          LG    .330    .320   5.100    .280  12.000
871          UC    .300    .276
872          UA       0       5      16      30      65      77      84      90      94      97
873          UA     100
             * DDM   ***** Preserved *****

874          KK    395C
875          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
876          HC       2
             * DDM   ***** Preserved *****

877          KK    R395
878          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
879          KM   ROUTING OF FLOW FROM SUB-BASINS 370 AND 395 TO SUB-BASIN 390
880          RS       3    FLOW      -1
881          RC    .045    .035    .045    2600    .023
882          RX       0       1      40      46      56      62     102     103
883          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

884          KK     385
885          KM   SUB-BASIN 385
886          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
887          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
888          KM     L =  .90  Kb = .051  Adj. Slope =  309.5
889          BA    .197
890          LG    .330    .320   4.800    .310   9.000
891          UC    .233    .171
892          UA       0       5      16      30      65      77      84      90      94      97
893          UA     100
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

894          KK    D385
895          KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN LOCATED WITHIN SUB-BASINS
896          KM   385 AND 411.
897          DT   SF385
898          DI       0      50    5000
899          DQ       0       0    4950
             * DDM   ***** Preserved *****

900          KK   RT385
901          KM   RETRIEVE FLOW FROM DIVERSION OF SUB-BASIN 385
902          DR   SF385
             * DDM   ***** Preserved *****

903          KK   SR385
904          KM   RETRIEVE FLOW INTO OFFLINE BASIN AND BLEED OFF WITHIN 36 HOURS.
905          KM       9 ACRE-FEETx43560/36x3600 = 3 cfs
906          RS       1    STOR       0
907          SV       0     .01       9
908          SQ       0       3       3
             * DDM   ***** Preserved *****

909          KK    385C
910          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 385 AND DIVERTED 385 FLOW
911          HC       2
             * DDM   ***** Updated *****

912          KK     411
913          KM   SUB-BASIN 411
914          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
915          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
916          KM     L = 1.38  Kb = .050  Adj. Slope =  315.0
917          BA    .237
918          LG    .340    .350   5.000    .270  10.000
919          UC    .292    .277
920          UA       0       3       5       8      12      20      43      75      90      96
921          UA     100
             * DDM   ***** Preserved *****

922          KK    D411
923          KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN LOCATED WITHIN SUB-BASINS
924          KM   385 AND 411.
925          DT   SF411
926          DI       0      25    5000
927          DQ       0       0    4975
             * DDM   ***** Preserved *****

928          KK   RT411
929          KM   RETRIEVE FLOW FROM DIVERSION OF SUB-BASIN 411.
930          DR   SF411
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

931          KK   SR411
932          KM   RETRIEVE FLOW INTO OFFLINE BASIN AND BLEED OFF WITHIN 36 HOURS.
933          KM       9 ACRE-FEETx43560/36x3600 = 3 cfs
934          RS       1    STOR       0
935          SV       0     .01       9
936          SQ       0       3       3
             * DDM   ***** Preserved *****

937          KK    411C
938          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 411
939          HC       3
             * DDM   ***** Preserved *****

940          KK    R411
941          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
942          KM   ROUTING OF SPLIT FLOW FROM SUB-BASIN 385 AND SUB-BASIN 411 TO SUB-BASIN 390.
943          RS       3    FLOW      -1
944          RC    .045    .035    .045    1300    .038
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 945          RX       0       1      40      46      56      62     102     103
 946          RY       3       2       2       0       0       2       2       3
              * DDM   ***** Updated *****

 947          KK     390
 948          KM   SUB-BASIN 390
 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  .999
 951          KM     L =  .70  Kb = .050  Adj. Slope =  299.4
 952          BA    .244
 953          LG    .300    .250   4.700    .380  18.000
 954          UC    .204    .107
 955          UA       0       5      16      30      65      77      84      90      94      97
 956          UA     100
              * DDM   ***** Preserved *****

 957          KK    D390
 958          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
 959          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THUNDER MOUNTAIN ESTATES
 960          KM        MAXIMUM VOLUME DIVERSION  = 3.5 acre-feet
              *      1
 961          DT   BS390     3.5
 962          DI       0    5000
 963          DQ       0    5000
              * DDM   ***** Preserved *****

 964          KK   RT390
 965          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
 966          DR   BS390
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 25

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

 967          KK   SR390
 968          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
 969          KM     3.5 ACRE-FEETx43560/36x3600=1.2cfs
 970          RS       1    STOR       0
 971          SV       0     .01     3.5
 972          SQ       0     1.2     1.2
              * DDM   ***** Preserved *****

 973          KK    390C
 974          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
 975          HC       4
              * DDM   ***** Preserved *****

 976          KK   RR390
 977          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
 978          KM   FROM SUB-BASIN 390 TO SUB-BASIN 410.
 979          RS       5    FLOW      -1
 980          RC    .045    .035    .045    5500    .020
 981          RX       0       1      40      46      56      62     102     103
 982          RY       3       2       2       0       0       2       2       3
              * DDM   ***** Updated *****

 983          KK     410
 984          KM   SUB-BASIN 410
 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  .998
 987          KM     L = 1.00  Kb = .049  Adj. Slope =  150.0
 988          BA    .278
 989          LG    .300    .250   3.950    .580  15.000
 990          UC    .329    .224
 991          UA       0       5      16      30      65      77      84      90      94      97
 992          UA     100
              * DDM   ***** Preserved *****

 993          KK    410C
 994          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
 995          HC       2
              * DDM   ***** Updated *****

 996          KK     440
 997          KM   SUB-BASIN 440
 998          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 999          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1000          KM     L =  .40  Kb = .039  Adj. Slope =  315.0
1001          BA    .080
1002          LG    .190    .380   6.400    .140  13.000
1003          UC    .129    .077
1004          UA       0       3       5       8      12      20      43      75      90      96
1005          UA     100
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 26

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

1006          KK     R70
1007          KM   ROUTE FLOW FROM SUB-BASIN 440 TO C108
1008          RS       1    FLOW      -1
1009          RC     .05    .035     .05    2250     .08
1010          RX    1000    1025    1050    1070    1075    1095    1120    1145
1011          RY      30    22.9    15.7      10      10    15.7    22.9      30
              * DDM   ***** Updated *****

1012          KK     441
1013          KM   SUB-BASIN 441
1014          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1015          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1016          KM     L =  .28  Kb = .069  Adj. Slope =  315.0
1017          BA    .010
1018          LG    .300    .250   5.600    .220   5.000
1019          UC    .150    .225
1020          UA       0       5      16      30      65      77      84      90      94      97
1021          UA     100
              * DDM   ***** Preserved *****

1022          KK    C108
1023          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 440 & 441
1024          HC       2
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            * DDM   ***** Preserved *****

1025        KK    DIV4
1026        KM        SPLIT FLOW WITH TWO 42 INCH PIPES TO WEST AND SOUTH
            *      1
1027        DT   SPLIT
1028        DI       0      14      40      82     120     154     180
1029        DQ       0       7      20      41      60      77      90
            * DDM   ***** Preserved *****

1030        KK    R108
1031        KM        ROUTE FLOW FROM SUB-BASIN C108 TO C67
1032        RS       2    FLOW      -1
1033        RC     .05    .035     .05    3200      .1
1034        RX    1000    1025    1050    1070    1075    1095    1120    1145
1035        RY      30    22.9    15.7      10      10    15.7    22.9      30
            * DDM   ***** Updated *****

1036        KK     442
1037        KM   SUB-BASIN 442
1038        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1039        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1040        KM     L =  .83  Kb = .055  Adj. Slope =  274.2
1041        BA    .100
1042        LG    .300    .270   3.290    .770   5.000
1043        UC    .258    .264
1044        UA       0       5      16      30      65      77      84      90      94      97
1045        UA     100
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 27

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


1046        KK     C67
1047        KM   COMBINE FLOW FROM SUB-BASIN 442 & DIV4
1048        HC       2
            * DDM   ***** Preserved *****

1049        KK    DIV6
1050        KM        OFFLINE BASIN WITH 25 FOOT WEIR SET AT 2.5 FEET ABOVE BOTTOM OF CHANNEL
1051        KM        FLOW CONTINUES BEYOND BASIN THROUGH 2-30" PIPES
            *      1
1052        DT  BASIN4
1053        DI       0      10      32      44    79.9   132.5     198   272.9   356.8
1054        DQ       0       0       0       0    23.9    67.5     124   190.9   266.8
            * DDM   ***** Preserved *****

1055        KK  RTDIV6
1056        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1057        DR  BASIN4
            * DDM   ***** Preserved *****

1058        KK  RFDIV6
1059        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1060        KM     3.3 ACRE-FEETx43560/36x3600=1.1cfs
            *      1
1061        RS       1    STOR       0
1062        SV       0     .01     3.3
1063        SQ       0     1.1     1.1
            * DDM   ***** Preserved *****

1064        KK   CDIV6
1065        KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1066        HC       2
            * DDM   ***** Updated *****

1067        KK     443
1068        KM   SUB-BASIN 443
1069        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1070        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1071        KM     L =  .71  Kb = .050  Adj. Slope =  315.0
1072        BA    .080
1073        LG    .250    .190   8.000    .080  10.000
1074        UC    .196    .194
1075        UA       0       5      16      30      65      77      84      90      94      97
1076        UA     100
            * DDM   ***** Preserved *****

1077        KK   DIV66
1078        KM        DIVERT FLOW INTO 3 NATURAL WASHES WITH ONE 24" PIPE IN EACH WASH.
1079        KM        EACH PIPE CAPACITY BASED ON 4 FEET OF HEAD
1080        DT   WSH66
1081        DI       0      78     100     200
1082        DQ       0      78      78      78
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 28

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


1083        KK    R113
1084        KM        ROUTE FLOW FROM C113 TO C114
1085        RS       1    FLOW      -1
1086        RC    .019    .019    .019    1300    .029
1087        RX    1000    1004    1008    1012    1018    1022    1026    1030
1088        RY      17   15.33   12.67      10      10   12.67   15.33      17
            * DDM   ***** Preserved *****

1089        KK    C114
1090        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 67 AND C113
1091        HC       2
            * DDM   ***** Updated *****

1092        KK     444
1093        KM   SUB-BASIN 444
1094        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1095        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1096        KM     L =  .33  Kb = .034  Adj. Slope =  315.0
1097        BA    .040
1098        LG    .130    .350   4.450    .320   1.000
1099        UC    .112    .084
1100        UA       0       3       5       8      12      20      43      75      90      96
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1101          UA     100
              * DDM   ***** Preserved *****

1102          KK     R58
1103          KM   ROUTE FLOW FROM SUB-BASIN 444 TO C107
1104          RS       1    FLOW      -1
1105          RC     .05    .035     .05    2370   .0516
1106          RX    1000    1010    1020    1050    1055    1085    1095    1105
1107          RY      19      18      17      10      10      17      18      19
              * DDM   ***** Updated *****

1108          KK     445
1109          KM   SUB-BASIN 445
1110          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1111          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1112          KM     L =  .82  Kb = .036  Adj. Slope =  315.0
1113          BA    .190
1114          LG    .170    .320   3.470    .590   3.000
1115          UC    .192    .130
1116          UA       0       5      16      30      65      77      84      90      94      97
1117          UA     100
              * DDM   ***** Preserved *****

1118          KK    C107
1119          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 444 & 445
1120          HC       2
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 29

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

1121          KK    R107
1122          KM        ROUTE FLOW FROM C107 TO C109
1123          RS       1    FLOW      -1
1124          RC     .05    .035     .05     700   .0516
1125          RX    1000    1010    1020    1050    1055    1085    1095    1105
1126          RY      19      18      17      10      10      17      18      19
              * DDM   ***** Preserved *****

1127          KK    RTB2
1128          KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
              *      1
1129          DR   SPLIT
              * DDM   ***** Preserved *****

1130          KK  RSPLIT
1131          KM        ROUTE FLOW FROM SPLIT TO C109
1132          RS       1    FLOW      -1
1133          RC     .05    .035     .05     800     .05
1134          RX    1000    1025    1050    1070    1075    1095    1120    1145
1135          RY      30    22.9    15.7      10      10    15.7    22.9      30
              * DDM   ***** Updated *****

1136          KK     446
1137          KM   SUB-BASIN 446
1138          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1139          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1140          KM     L =  .46  Kb = .061  Adj. Slope =  303.9
1141          BA    .040
1142          LG    .270    .250   4.500    .400  19.000
1143          UC    .183    .189
1144          UA       0       5      16      30      65      77      84      90      94      97
1145          UA     100
              * DDM   ***** Preserved *****

1146          KK    C109
1147          KM        COMBINE HYDROGRAPHS FROM COMBINES C107 AND C108
1148          HC       3
              * DDM   ***** Preserved *****

1149          KK    DIV5
1150          KM        DIVERT FLOW INTO WASHES TOWARDS WEST
1151          KM        DIVERSION THROUGH 36" PIPE WITH 3 FEET OF HEAD
              *      1
1152          DT  WSH404
1153          DI       0    40.7    71.2   121.6     190     276   379.4   500.6
1154          DQ       0      35      35      35      35      35      35      35
              * DDM   ***** Preserved *****

1155          KK    R109
1156          KM        ROUTE FLOW FROM C109 TO C110
1157          RS       1    FLOW      -1
1158          RC    .019    .019    .019    3080     .05
1159          RX    1000    1005    1010    1015    1025    1030    1035    1040
1160          RY   13.75    12.5   11.25      10      10   11.25    12.5   13.75
              * DDM   ***** Updated *****
1                                        HEC-1 INPUT                                          PAGE 30

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

1161          KK     447
1162          KM   SUB-BASIN 447
1163          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1164          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1165          KM     L =  .49  Kb = .056  Adj. Slope =  221.0
1166          BA    .090
1167          LG    .250    .270   3.350    .870  30.000
1168          UC    .208    .145
1169          UA       0       5      16      30      65      77      84      90      94      97
1170          UA     100
              * DDM   ***** Preserved *****

1171          KK   RT404
1172          KM        RETRIEVE DIVERTED FLOW FOR WASH 109
1173          DR  WSH404
              * DDM   ***** Preserved *****

1174          KK    R404
1175          KM        ROUTE FLOW FROM C110 TO C110
1176          RS       5    FLOW      -1
1177          RC    .019    .019    .019    3540     .03
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1178          RX    1000    1012    1016    1020    1025    1029    1033    1045
1179          RY      15      12      11      10      10      11      12      15
              * DDM   ***** Preserved *****

1180          KK    C110
1181          KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 447 AND R404
1182          HC       3
              * DDM   ***** Preserved *****

1183          KK    R110
1184          KM        ROUTE FLOW FROM C110 TO C115
1185          RS       1    FLOW      -1
1186          RC    .019    .019    .019     580   .0291
1187          RX    1000    1012    1016    1020    1035    1039    1043    1055
1188          RY      15      12      11      10      10      11      12      15
              * DDM   ***** Preserved *****

1189          KK    C115
1190          KM        COMBINE HYDROGRAPHS FROM C114 AND C110
1191          HC       2
              * DDM   ***** Preserved *****

1192          KK    R115
1193          KM        ROUTE FLOW FROM C115 TO C119
1194          RS       1    FLOW      -1
1195          RC    .019    .019    .019    2125    .029
1196          RC    .019    .019    .019     580   .0291
1197          RX    1000    1012    1016    1020    1035    1039    1043    1055
1198          RY      15      12      11      10      10      11      12      15
              * DDM   ***** Updated *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1199          KK     448
1200          KM   SUB-BASIN 448
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 1.000
1203          KM     L =  .36  Kb = .042  Adj. Slope =  315.0
1204          BA    .045
1205          LG    .170    .310   4.200    .390  11.000
1206          UC    .133    .102
1207          UA       0       5      16      30      65      77      84      90      94      97
1208          UA     100
              * DDM   ***** Updated *****

1209          KK     449
1210          KM   SUB-BASIN 449
1211          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1212          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1213          KM     L =  .40  Kb = .054  Adj. Slope =  315.0
1214          BA    .050
1215          LG    .260    .280   3.500    .640   6.000
1216          UC    .167    .134
1217          UA       0       5      16      30      65      77      84      90      94      97
1218          UA     100
              * DDM   ***** Preserved *****

1219          KK   C6364
1220          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 448 & 449
1221          HC       2
              * DDM   ***** Preserved *****

1222          KK   R6364
1223          KM   ROUTE FLOW FROM C116 AND SUB-BASINS 448 AND 449
1224          RS       4    FLOW      -1
1225          RC     .05    .035     .05    4375   .0333
1226          RX    1000    1027    1053    1080    1090    1117    1143    1170
1227          RY      15   13.33   11.67      10      10   11.67   13.33      15
              * DDM   ***** Updated *****

1228          KK     450
1229          KM   SUB-BASIN 450
1230          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1231          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1232          KM     L =  .85  Kb = .057  Adj. Slope =  210.5
1233          BA    .070
1234          LG    .340    .350   3.630    .570   4.000
1235          UC    .296    .383
1236          UA       0       3       5       8      12      20      43      75      90      96
1237          UA     100
              * DDM   ***** Updated *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1238          KK     451
1239          KM   SUB-BASIN 451
1240          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1241          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1242          KM     L =  .57  Kb = .063  Adj. Slope =  175.0
1243          BA    .025
1244          LG    .340    .340   3.290    .750   3.000
1245          UC    .271    .453
1246          UA       0       3       5       8      12      20      43      75      90      96
1247          UA     100
              * DDM   ***** Preserved *****

1248          KK    RT66
1249          KM        RETRIEVE DIVERTED FLOW FROM SUB-BASIN 66
1250          DR   WSH66
              * DDM   ***** Updated *****

1251          KK     452
1252          KM   SUB-BASIN 452
1253          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1254          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1255          KM     L =  .43  Kb = .055  Adj. Slope =  315.0
1256          BA    .040
1257          LG    .260    .280   3.700    .550   9.000
1258          UC    .171    .166
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1259          UA       0       5      16      30      65      77      84      90      94      97
1260          UA     100
              * DDM   ***** Preserved *****

1261          KK   C6465
1262          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 443 AND 452
1263          HC       2
              * DDM   ***** Preserved *****

1264          KK   R6566
1265          KM        ROUTE FLOW FROM DIVERSIONS 65 AND 66 TO C116
1266          RS       2    FLOW      -1
1267          RC     .05    .035     .05    2435   .0282
1268          RX    1000    1045    1090    1150    1160    1220    1265    1310
1269          RY      25      23      20      10      10      20      23      25
              * DDM   ***** Preserved *****

1270          KK    C116
1271          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 450 & 451 AND R6364 & R6465
1272          HC       4
              * DDM   ***** Preserved *****

1273          KK  BASIN5
1274          KM        RESERVOIR WITHIN PARCEL 31      2-48 INCH PIPES AT OUTFALL
1275          KM        BASIN 5 FEET DEEP
1276          RS       1    ELEV       0
1277          SV       0     4.5     9.9
1278          SQ       0      69     190
1279          SE       0     2.5       5
              * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 33

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


1280          KK    R116
1281          KM   ROUTE FLOW FROM C116 TO C117
1282          RS       2    FLOW      -1
1283          RC     .05    .035     .05    1300   .0333
1284          RX    1000    1100    1200    1300    1320    1420    1520    1620
1285          RY      13      12      11      10      10      11      12      13
              * DDM   ***** Updated *****

1286          KK     453
1287          KM   SUB-BASIN 453
1288          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1289          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1290          KM     L =  .58  Kb = .058  Adj. Slope =  138.0
1291          BA    .060
1292          LG    .290    .300   3.290    .820  18.000
1293          UC    .275    .284
1294          UA       0       5      16      30      65      77      84      90      94      97
1295          UA     100
              * DDM   ***** Preserved *****

1296          KK    C117
1297          KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 453 AND R116
1298          HC       2
              * DDM   ***** Preserved *****

1299          KK    C118
1300          KM   COMBINE HYDROGRAPHS FROM R115 AND C117
1301          HC       2
              * DDM   ***** Preserved *****

1302          KK    R118
1303          KM        ROUTE FLOW FROM C118 TO  DIV7
1304          RS       1    FLOW      -1
1305          RC    .019    .019    .019    1500    .024
1306          RX    1000    1012    1016    1020    1035    1039    1043    1055
1307          RY      15      12      11      10      10      11      12      15
              * DDM   ***** Preserved *****

1308          KK    DIV7
1309          KM        OFFLINE BASIN AT NORTH MOUNTAIN RIDGE   FLOWS ENTER BASIN OVER
1310          KM        30' WEIR SET AT 5.3' ABOVE THE CHANNEL BOTTOM
              *      1
1311          DT  BASIN6
1312          DI       0     363     487     563     645     844
1313          DQ       0       3      47      83     125     244
              * DDM   ***** Preserved *****

1314          KK  RTDIV7
1315          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1316          DR  BASIN6
              * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 34

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


1317          KK  RFDIV7
1318          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1319          KM     3.6 ACRE-FEETx43560/36x3600=1.2cfs
1320          RS       1    STOR       0
1321          SV       0     .01     3.6
1322          SQ       0     1.2     1.2
              * DDM   ***** Preserved *****

1323          KK   CDIV7
1324          KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1325          HC       2
              * DDM   ***** Updated *****

1326          KK     454
1327          KM   SUB-BASIN 454
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  .999
1330          KM     L = 1.23  Kb = .051  Adj. Slope =  163.0
1331          BA    .180
1332          LG    .300    .310   3.780    .560  14.000
1333          UC    .379    .395
1334          UA       0       5      16      30      65      77      84      90      94      97
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1335          UA     100
              * DDM   ***** Preserved *****

1336          KK    C119
1337          KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 454 AND DIV7.
              *      1        2
1338          HC       2
              * DDM   ***** Preserved *****

1339          KK    R454
1340          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1341          KM   ROUTING OF FLOW FROM LAS SENDAS AND R413 TO SUB-BASIN 415.
1342          RS       2    FLOW      -1
1343          RC    .045    .035    .045    2500    .012
1344          RX       0      .5       1      33      42      67    67.5      68
1345          RY       5       4       4       0       0       6       6       6
              * DDM   ***** Updated *****

1346          KK     415
1347          KM   SUB-BASIN 415
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  .998
1350          KM     L = 1.10  Kb = .049  Adj. Slope =  155.0
1351          BA    .281
1352          LG    .300    .260   3.630    .710  15.000
1353          UC    .358    .264
1354          UA       0       5      16      30      65      77      84      90      94      97
1355          UA     100
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 35

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

1356          KK    415C
1357          KM   HYDROGRAPH COMBINATION OF R454, SUB-BASIN 415, R410.
1358          HC       3
              * DDM   ***** Preserved *****

1359          KK    D415
1360          KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN
1361          KM   MAXIMUM STORAGE VOLUME FOR DIVERSION = 45 AC-FT @ 5' DEPTH.
              *      1
1362          DT   BS415
1363          DI       0    1100    5000
1364          DQ       0       0    3900
              * DDM   ***** Preserved *****

1365          KK   RT415
1366          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1367          DR   BS415
              * DDM   ***** Preserved *****

1368          KK   SR415
1369          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1370          KM      15 ACRE-FEETx43560/36x3600 = 5 cfs
1371          RS       1    STOR       0
1372          SV       0     .01      15
1373          SQ       0       5       5
              * DDM   ***** Preserved *****

1374          KK    C415
1375          KM   HYDROGRAPH COMBINATION OF 415 DIVERSION.
1376          HC       2
              * DDM   ***** Preserved *****

1377          KK    R415
1378          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1379          KM   ROUTING OF FLOW FROM 415C TO 455C
1380          RS       4    FLOW      -1
1381          RC    .045     .03    .045    4100    .024
1382          RX       0      .5       1       8      16      23    23.5      24
1383          RY       8       8       8       0       0       8       8       8
              * DDM   ***** Updated *****

1384          KK     455
1385          KM   SUB-BASIN 455
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  .993
1388          KM     L = 1.70  Kb = .041  Adj. Slope =  146.0
1389          BA   1.111
1390          LG    .270    .280   3.700    .640  24.000
1391          UC    .421    .204
1392          UA       0       5      16      30      65      77      84      90      94      97
1393          UA     100
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 36

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

1394          KK    D455
1395          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1396          KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1397          KM   FOR BASIN #: 30      34      43      47&58
1398          KM        MAXIMUM VOLUME DIVERSION = 74.1 acre-feet
              *      1
1399          DT   BS455    74.1
1400          DI       0   10000
1401          DQ       0   10000
              * DDM   ***** Preserved *****

1402          KK   RT455
1403          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1404          DR   BS455
              * DDM   ***** Preserved *****

1405          KK   SR455
1406          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1407          KM    74.1 ACRE-FEETx43560/36x3600=25cfs
1408          RS       1    STOR       0
1409          SV       0     .01    74.1
1410          SQ       0      25      25
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                * DDM   ***** Preserved *****

1411            KK    C455
1412            KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 455 AND DIVERTED BASIN STORAGE OF 455
1413            HC       2
                * DDM   ***** Preserved *****

1414            KK    455C
1415            KM  HYDROGRAPH COMBINATION OF 420C, R415 AND C455
                *      1       2
1416            HC       3
                * DDM   ***** Preserved *****

1417            KK   SR440
1418            KM   SPOOK HILL FRS PLANS DATED 6/15/77
1419            KM   OUTLET PIPE=7'x7.5'RCBC; L=70 INLET INV.=1566; OUTLET INV.=1566
1420            KM   EMERGENCY SPILLWAY ELEV.=1582; PRINCIPLE SPILLWAY ELEV.=1577.5
1421            KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 200 ACRE-FEET
1422            RS       1    STOR       0
1423            SV       0      10     100     300     500     680
1424            SQ       0     640     720     780     825     860
1425            SE      66    77.5      79    80.2    81.2      82
                * DDM   ***** Preserved *****

1426            KK   RR455
1427            KM   ROUTE FLOW FROM SPOOK HILL FRS TO SUB-BASIN 462
1428            RS       9    FLOW      -1
1429            RC    .035    .025    .035    9200    .002
1430            RX       0       1       2      28      58      84      85      86
1431            RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
                * DDM   ***** Updated *****
1                                          HEC-1 INPUT                                                    PAGE 37

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


1432            KK     456
1433            KM   SUB-BASIN 456
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  .998
1436            KM     L =  .94  Kb = .045  Adj. Slope =  315.0
1437            BA    .260
1438            LG    .300    .380   5.600    .200  12.000
1439            UC    .217    .139
1440            UA       0       5      16      30      65      77      84      90      94      97
1441            UA     100
                * DDM   ***** Preserved *****

1442            KK    DIV1
1443            KM        DIVERT FLOW INTO OFFLINE DETENTION BASIN
1444            KM        WEIR FOR BASIN SET AT 4 FEET ABOVE CHANNEL BOTTOM
                *      1
1445            DT  BASIN1
1446            DI       0    11.1   127.9   234.4   577.7   789.9  1025.5  1280.9  1555.7
1447            DQ       0       0       0    47.7     248   381.8   533.6   701.5     884
                * DDM   ***** Preserved *****

1448            KK    DIV2
1449            KM        SPLIT OUT FLOW FOR WASHES THAT FLOW TO THE SOUTH FROM
1450            KM        WASHES THAT DRAIN TO THE WES, SOUTHERN WASHES FED BY 30" & 24" PIPE
1451            DT    WA30
1452            DI       0    11.1   127.9   189.6   329.7     408   491.9   579.4   671.7
1453            DQ       0    11.1    38.4    48.2      63    69.5      76      81      86
                * DDM   ***** Preserved *****

1454            KK    R456
1455            KM        ROUTE FLOW FROM SUB-BASIN 51 TO C101
1456            RS       2    FLOW      -1
1457            RC     .05    .035     .05    3800    .044
1458            RX    1000    1010    1020    1036    1041    1057    1067    1077
1459            RY   14.88   14.44      14      10      10      14   14.44   14.88
                * DDM   ***** Updated *****

1460            KK     457
1461            KM   SUB-BASIN 457
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  .999
1464            KM     L = 1.01  Kb = .045  Adj. Slope =  308.8
1465            BA    .190
1466            LG    .270    .330   3.950    .460   6.000
1467            UC    .237    .195
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    C101
1471            KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 50 AND 51
1472            HC       2
                * DDM   ***** Preserved *****

1473            KK    DIV3
1474            KM        RESERVOIR AT THE EDGE OF THE PROPERTY  FLOW FROM CHANNEL
1475            KM        DIVERTED  INTO OFFLINE BASIN A 25' WEIR SET AT ELEVATION 1808 FT
                *      1
1476            DT  BASIN2
1477            DI       0      36      70     110     180   313.5     402   500.9
1478            DQ       0       0       0       0       0    67.5     124   190.9
                * DDM   ***** Preserved *****

1479            KK  RTDIV3
1480            KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1481            DR  BASIN2
                * DDM   ***** Preserved *****

1482            KK  RFDIV3
1483            KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1484            KM     5.0 ACRE-FEETx43560/36x3600=1.7cfs
1485            RS       1    STOR       0
1486            SV       0     .01       5
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1487          SQ       0     1.7     1.7
              * DDM   ***** Preserved *****

1488          KK   CDIV3
1489          KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1490          HC       2
              * DDM   ***** Preserved *****

1491          KK    R101
1492          KM        ROUTE FLOW FROM SUBBASIN C101 TO C103
1493          RS       1    FLOW      -1
1494          RC     .05    .035     .05    1450     .05
1495          RX    1000    1010    1020    1036    1041    1057    1067    1077
1496          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Updated *****

1497          KK     458
1498          KM   SUB-BASIN 458
1499          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1500          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1501          KM     L =  .76  Kb = .048  Adj. Slope =  299.0
1502          BA    .190
1503          LG    .290    .330   5.800    .190   6.000
1504          UC    .204    .131
1505          UA       0       5      16      30      65      77      84      90      94      97
1506          UA     100
              * DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1507          KK    C103
1508          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 55 AND C101
1509          HC       2
              * DDM   ***** Preserved *****

1510          KK    R103
1511          KM        ROUTE FLOW FROM SUBBASIN C103 TO C106
1512          RS       1    FLOW      -1
1513          RC     .05    .035     .05     900     .03
1514          RX    1000    1010    1020    1030    1050    1060    1070    1080
1515          RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
              * DDM   ***** Preserved *****

1516          KK    RT30
1517          KM        RETRIEVE DIVERTED FLOW FOR WASH BELOW 30 INCH PIPE
1518          DR    WA30
              * DDM   ***** Preserved *****

1519          KK     R30
1520          KM        ROUTE FLOW FROM WASH DIVERSION TO COMBINE C52
1521          RS       1    FLOW      -1
1522          RC     .05    .035     .05    1630     .05
1523          RX    1000    1010    1020    1036    1041    1057    1067    1077
1524          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Preserved *****

1525          KK    RTB1
1526          KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
              *      1       2
1527          DR  BASIN1
              * DDM   ***** Preserved *****

1528          KK      B1
1529          KM        ROUTE FLOW THROUGH OFFLINE DETENTION BASIN
1530          KM        FLOW OUTLETS THROUGH A 30 INCH OUTLET PIPE
              *      1       2
1531          RS       1    ELEV       0
1532          SV              .7     1.4     2.3     2.7     3.2
1533          SQ       0       5      16      28    32.5      37
1534          SE       0       1       2       3     3.5       4
              * DDM   ***** Preserved *****

1535          KK     RB1
1536          KM        ROUTE FLOW FROM BASIN DIVERSION TO COMBINE C52
1537          RS       2    FLOW      -1
1538          RC     .05    .035     .05    1720     .05
1539          RX    1000    1010    1020    1036    1041    1057    1067    1077
1540          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 40

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

1541          KK    CDIV
1542          KM        COMBINE FLOWS FROM WA30 AND BASIN 1
1543          HC       2     .12
              * DDM   ***** Updated *****

1544          KK     459
1545          KM   SUB-BASIN 459
1546          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1547          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1548          KM     L =  .35  Kb = .052  Adj. Slope =  251.6
1549          BA    .030
1550          LG    .220    .300   3.330    .710   8.000
1551          UC    .162    .157
1552          UA       0       5      16      30      65      77      84      90      94      97
1553          UA     100
              * DDM   ***** Preserved *****

1554          KK     C52
1555          KM        COMBINE FLOWS FROM SUB-BASIN 52 WA30 AND BASIN 1
1556          HC       2
              * DDM   ***** Preserved *****

1557          KK     R52
1558          KM        ROUTE FLOW FROM SUBBASIN 52 TO C102
1559          RS       2    FLOW      -1
1560          RC     .05    .035     .05    2000     .05
1561          RX    1000    1010    1020    1036    1041    1057    1067    1077
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1562        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Updated *****

1563        KK     460
1564        KM   SUB-BASIN 460
1565        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1566        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1567        KM     L =  .62  Kb = .058  Adj. Slope =  194.0
1568        BA    .140
1569        LG    .250    .260   3.740    .690  27.000
1570        UC    .242    .160
1571        UA       0       5      16      30      65      77      84      90      94      97
1572        UA     100
            * DDM   ***** Preserved *****

1573        KK    C102
1574        KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 52 AND 53
1575        HC       2
            * DDM   ***** Preserved *****

1576        KK  BASIN3
1577        KM        RESERVOIR AT CLUBHOUSE LOCATION 1-30 INCH PIPE AT OUTFALL
1578        KM        BOTTOM OF BASIN AT 6 FEET ABOVE 1795 ELEVATION
1579        RS       1    ELEV       0
1580        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
1581        SQ       0      22      45    47.4      48      51      57      62      67      73
1                                          HEC-1 INPUT                                          PAGE 41

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

1582        SE    1795  1797.5    1800  1800.4  1800.5    1801    1802    1803    1804  1805.5
            * DDM   ***** Preserved *****

1583        KK      R3
1584        KM        ROUTE FLOW FROM C102 to C106
1585        RS       4    FLOW      -1
1586        RC     .05     .03     .05    2750   .0375
1587        RX    1000    1010    1020    1052    1086    1118    1128    1138
1588        RY    19.2    18.4      18      10      10      18    18.4    19.2
            * DDM   ***** Updated *****

1589        KK     461
1590        KM   SUB-BASIN 461
1591        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1592        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1593        KM     L =  .83  Kb = .052  Adj. Slope =  181.0
1594        BA    .120
1595        LG    .270    .250   4.250    .450  21.000
1596        UC    .271    .250
1597        UA       0       5      16      30      65      77      84      90      94      97
1598        UA     100
            * DDM   ***** Preserved *****

1599        KK    C104
1600        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 54 AND R102
1601        HC       2
            * DDM   ***** Preserved *****

1602        KK    C106
1603        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN C103 AND C104
1604        HC       2
            * DDM   ***** Preserved *****

1605        KK    R106
1606        KM        ROUTE FLOW FROM C106 TO C49
1607        RS       2    FLOW      -1
1608        RC     .05    .035     .05    3950    .033
1609        RX    1000    1010    1020    1030    1050    1060    1070    1080
1610        RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
            * DDM   ***** Updated *****

1611        KK     462
1612        KM   SUB-BASIN 462
1613        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1614        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1615        KM     L =  .97  Kb = .045  Adj. Slope =  297.7
1616        BA    .301
1617        LG    .300    .330   5.300    .240  12.000
1618        UC    .225    .137
1619        UA       0       5      16      30      65      77      84      90      94      97
1620        UA     100
            * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                          PAGE 42

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


1621        KK     C56
1622        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 56 AND C106
            *      1       2
1623        HC       2
            * DDM   ***** Updated *****

1624        KK     480
1625        KM   SUB-BASIN 480
1626        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1627        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
1628        KM     L = 1.21  Kb = .042  Adj. Slope =  165.0
1629        BA    .731
1630        LG    .270    .270   3.580    .730  27.000
1631        UC    .325    .148
1632        UA       0       5      16      30      65      77      84      90      94      97
1633        UA     100
            * DDM   ***** Preserved *****

1634        KK    D480
1635        KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1636        KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1637        KM   FOR BASIN #: 18 & 26
1638        KM        MAXIMUM VOLUME DIVERSION = 16.5 acre-feet
            *      1
1639        DT   BS480    16.5
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1640          DI        0   10000
1641          DQ        0   10000
              * DDM   ***** Preserved *****

1642          KK   RT480
1643          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1644          DR   BS480
              * DDM   ***** Preserved *****

1645          KK   SR480
1646          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1647          KM    16.5 ACRE-FEETx43560/36x3600=5.5cfs
1648          RS        1    STOR       0
1649          SV        0     .01    16.5
1650          SQ        0     5.6     5.6
              * DDM   ***** Preserved *****

1651          KK    C480
1652          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1653          HC        2
              * DDM   ***** Preserved *****

1654          KK    480C
1655          KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1656          HC        3    2.09
              * DDM   ***** Preserved *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1657          KK   RR480
1658          KM   ROUTE FLOW FROM SUB-BASIN 480 TO SUB-BASIN 500
1659          RS        1    FLOW      -1
1660          RC     .025    .025    .025    6500     .05
1661          RX        0       1       2      28      58      84      85      86
1662          RY     13.5    13.5    13.5       0       0    13.5    13.5    13.5
              * DDM   ***** Updated *****

1663          KK     500
1664          KM   SUB-BASIN 500
1665          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1666          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
1667          KM     L = 2.77  Kb = .042  Adj. Slope =  286.8
1668          BA     .930
1669          LG     .350    .400   6.000    .170   9.000
1670          UC     .421    .333
1671          UA        0       3       5       8      12      20      43      75      90      96
1672          UA      100
              * DDM   ***** Preserved *****

1673          KK    500C
1674          KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1675          HC        2    3.02
1676          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
                .          .
                .          .
864             .          .        395
                .          .          .
                .          .          .
874             .       395C............
                .          V
                .          V
877             .       R395
                .          .
                .          .
884             .          .        385
                .          .          .
                .          .          .
897             .          .          .-------->   SF385
894             .          .      D385
                .          .          .
                .          .          .
902             .          .          .          .<-------   SF385
900             .          .          .      RT385
                .          .          .          V
                .          .          .          V
903             .          .          .      SR385
                .          .          .          .
                .          .          .          .
909             .          .      385C............
                .          .          .
                .          .          .
912             .          .          .        411
                .          .          .          .
                .          .          .          .
925             .          .          .          .-------->   SF411
922             .          .          .       D411
                .          .          .          .
                .          .          .          .
930             .          .          .          .          .<-------   SF411
928             .          .          .          .      RT411
                .          .          .          .          V
                .          .          .          .          V
931             .          .          .          .      SR411
                .          .          .          .          .
                .          .          .          .          .
937             .          .      411C.......................
                .          .          V
                .          .          V
940             .          .      R411
                .          .          .
                .          .          .
947             .          .          .        390
                .          .          .          .
                .          .          .          .
961             .          .          .          .-------->   BS390
957             .          .          .       D390
                .          .          .          .
                .          .          .          .
966             .          .          .          .          .<-------   BS390
964             .          .          .          .      RT390
                .          .          .          .          V
                .          .          .          .          V
967             .          .          .          .      SR390
                .          .          .          .          .
                .          .          .          .          .
973             .       390C...................................
                .          V
                .          V
976             .      RR390
                .          .
                .          .
983             .          .        410
                .          .          .
                .          .          .
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993          410C............
996                440
                     V
                     V
1006               R70
1012                          441
1022           C108............
1027                 -------->   SPLIT
1025           DIV4
                     V
                     V
1030           R108
1036                          442
1046            C67............
1052                 -------->  BASIN4
1049           DIV6
1057                               <-------  BASIN4
1055                      RTDIV6
                                V
                                V
1058                      RFDIV6
1064          CDIV6............
1067                          443
1080                               -------->   WSH66
1077                       DIV66
                                V
                                V
1083                       R113
1089           C114............
1092                          444
                                V
                                V
1102                          R58
1108                                     445
1118                       C107............
                                V
                                V
1121                       R107
1129                                          <-------   SPLIT
1127                                   RTB2
                                          V
                                          V
1130                                 RSPLIT
1136                                                446
1146                       C109......................
1152                               -------->  WSH404
1149                       DIV5
                                V
                                V
1155                       R109
1161                                     447
1173                                                     <-------  WSH404
1171                                            RT404
                                                   V
                                                   V
1174                                           R404
1180                       C110......................
                                V
                                V
1183                       R110
1189           C115............
                     V
                     V
1192           R115
1199                          448
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1209                                449
                                     .
1219                        C6364.........
                                V
                                V
1222                        R6364
                                .
1228                                450
                                     .
1238                                     .        451
                                         .          .
1250                                     .          .          .<-------   WSH66
1248                                     .          .       RT66
                                         .          .          .
1251                                     .          .          .         452
                                         .          .          .          .
1261                                     .          .      C6465.........
                                         .          .          V
                                         .          .          V
1264                                     .          .      R6566
                                         .          .          .
1270                        C116.................................
                                V
                                V
1273                       BASIN5
                                V
                                V
1280                        R116
                                .
1286                                453
                                     .
1296                        C117.........
                                .
1299                  C118.........
                          V
                          V
1302                  R118
                          .
1311                      .------->  BASIN6
1308                  DIV7
                          .
1316                          .<-------  BASIN6
1314                       RTDIV7
                                V
                                V
1317                       RFDIV7
                                .
1323                  CDIV7.........
                          .
1326                          454
                                .
1336                  C119.........
                          V
                          V
1339                  R454
                          .
1346                          415
                                .
1356            415C......................
                    .
1362                .------->   BS415
1359            D415
                    .
1367                    .<-------   BS415
1365                  RT415
                          V
                          V
1368                  SR415
                          .
1374            C415.........
                    V
                    V
1377            R415
                    .
1384                   455
                          .
1399                      .------->   BS455
1394                  D455
                          .
1404                          .<-------   BS455
1402                       RT455
                                V
                                V
1405                       SR455
                                .
1411                  C455.........
                          .
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1414      455C.......................
             V
             V
1417     SR440
             V
             V
1426     RR455
             .
             .
1432         .        456
             .          .
             .          .
1445         .          .-------> BASIN1
1442         .       DIV1
             .          .
             .          .
1451         .          .------->   WA30
1448         .       DIV2
             .          V
             .          V
1454         .       R456
             .          .
             .          .
1460         .          .        457
             .          .          .
             .          .          .
1470         .       C101............
             .          .
             .          .
1476         .          .-------> BASIN2
1473         .       DIV3
             .          .
             .          .
1481         .          .          .<-------  BASIN2
1479         .          .     RTDIV3
             .          .          V
             .          .          V
1482         .          .     RFDIV3
             .          .          .
             .          .          .
1488         .      CDIV3............
             .          V
             .          V
1491         .       R101
             .          .
             .          .
1497         .          .        458
             .          .          .
             .          .          .
1507         .       C103............
             .          V
             .          V
1510         .       R103
             .          .
             .          .
1518         .          .          .<-------   WA30
1516         .          .       RT30
             .          .          V
             .          .          V
1519         .          .       R30
             .          .          .
             .          .          .
1527         .          .          .          .<-------  BASIN1
1525         .          .          .       RTB1
             .          .          .          V
             .          .          .          V
1528         .          .          .         B1
             .          .          .          V
             .          .          .          V
1535         .          .          .        RB1
             .          .          .          .
             .          .          .          .
1541         .          .       CDIV............
             .          .          .
             .          .          .
1544         .          .          .        459
             .          .          .          .
             .          .          .          .
1554         .          .       C52............
             .          .          V
             .          .          V
1557         .          .       R52
             .          .          .
             .          .          .
1563         .          .          .        460
             .          .          .          .
             .          .          .          .
1573         .          .       C102............
             .          .          V
             .          .          V
1576         .          .     BASIN3
             .          .          V
             .          .          V
1583         .          .        R3
             .          .          .
             .          .          .
1589         .          .          .        461
             .          .          .          .
             .          .          .          .
1599         .          .       C104............
             .          .          .
             .          .          .
1602         .       C106............
             .          V
             .          V
1605         .       R106
             .          .
             .          .
1611         .          .        462
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1621         .        C56............
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1624            .           .        480
                .           .          .
                .           .          .
1639            .           .          .-------->   BS480
1634            .           .       D480
                .           .          .
                .           .          .
1644            .           .          .           .<-------   BS480
1642            .           .          .       RT480
                .           .          .           V
                .           .          .           V
1645            .           .          .       SR480
                .           .          .           .
                .           .          .           .
1651            .           .       C480............
                .           .          .
                .           .          .
1654        480C........................
               V
               V
1657       RR480
                .
                .
1663            .        500
                .          .
                .          .
1673        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	572.	12.17	49.	13.	6.	.41		
+	ROUTED TO	R150	553.	12.23	49.	13.	6.	.41		
+	ROUTED TO	R152	523.	12.33	49.	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	7181.	12.30	860.	285.	168.	6.54		
+	HYDROGRAPH AT	383	650.	12.17	60.	17.	8.	.42		
+	ROUTED TO	R383	647.	12.17	60.	17.	8.	.42		
+	HYDROGRAPH AT	393	44.	12.13	4.	1.	0.	.04		
+	2 COMBINED AT	393C	687.	12.17	64.	18.	9.	.46		
	ROUTED TO	R393	681.	12.20	64.	18.	9.	.46		
+	HYDROGRAPH AT	365	380.	12.27	45.	12.	6.	.41		
+	2 COMBINED AT	365C	1028.	12.20	108.	29.	14.	.88		
+	ROUTED TO	R365	1018.	12.23	108.	29.	14.	.88		

+	ROUTED TO	365R	970.	12.33	108.	29.	14.	.88
+	HYDROGRAPH AT	353	401.	12.30	49.	12.	6.	.50
	2 COMBINED AT	353C	1349.	12.33	155.	41.	20.	1.38
+	ROUTED TO	R353	1308.	12.40	155.	41.	20.	1.38
+	ROUTED TO	353R	1291.	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	2528.	12.43	301.	79.	38.	2.87
+	ROUTED TO	R310	2508.	12.47	301.	79.	38.	2.87
+	ROUTED TO	R312	2458.	12.57	301.	79.	38.	2.87
+	HYDROGRAPH AT	295	364.	12.30	40.	10.	5.	.38
+	2 COMBINED AT	295C	2651.	12.57	339.	89.	43.	3.25
+	ROUTED TO	295R	2620.	12.60	339.	89.	43.	3.25
+	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
+	3 COMBINED AT	240C	3741.	12.50	565.	147.	71.	5.23
	ROUTED TO	SR240	1705.	12.93	500.	130.	62.	5.23
+	HYDROGRAPH AT	220	1126.	12.17	98.	25.	12.	.73
+	2 COMBINED AT	220C	1756.	12.90	590.	154.	74.	5.95
+	ROUTED TO	SR220	1675.	13.07	579.	151.	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	806.	12.17	69.	19.	9.	.54
+	3 COMBINED AT	200C	2593.	12.30	751.	198.	95.	7.41
+	ROUTED TO	SR200	2471.	12.37	746.	194.	93.	7.41
+	ROUTED TO	200SR	1862.	12.67	625.	164.	79.	7.41
+	2 COMBINED AT	C180	7181.	12.30	1479.	450.	247.	13.94
+	ROUTED TO	SR180	142.	19.00	142.	142.	114.	13.94
+	ROUTED TO	R180	142.	19.03	142.	142.	114.	13.94
+	HYDROGRAPH AT	260	418.	12.10	43.	12.	6.	.27
+	2 COMBINED AT	260C	527.	12.10	179.	153.	122.	.27
	ROUTED TO	R260	515.	12.20	179.	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	218.	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	181.	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	276.	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	548.	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	2500.	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	637.	310.	207.	6.00
+	HYDROGRAPH AT	420	515.	12.20	65.	18.	9.	.57
+	DIVERSION TO	BS420	370.	12.07	16.	4.	2.	.57
+	HYDROGRAPH AT	D420	515.	12.20	52.	14.	7.	.57
+	HYDROGRAPH AT	RT420	370.	12.07	16.	4.	2.	.57
+	ROUTED TO	SR420	13.	11.63	13.	4.	2.	.57
+	3 COMBINED AT	420C	3130.	12.33	688.	323.	213.	10.87
+	HYDROGRAPH AT	370	406.	12.07	34.	10.	5.	.26
+	HYDROGRAPH AT	395	204.	12.10	21.	6.	3.	.16
+	2 COMBINED AT	395C	599.	12.07	55.	15.	7.	.42
+	ROUTED TO	R395	556.	12.17	55.	15.	7.	.42
+	HYDROGRAPH AT	385	314.	12.07	24.	7.	3.	.20
+	DIVERSION TO	SF385	264.	12.07	14.	4.	2.	.20
+	HYDROGRAPH AT	D385	50.	11.77	10.	3.	1.	.20
+	HYDROGRAPH AT	RT385	264.	12.07	14.	4.	2.	.20
+	ROUTED TO	SR385	3.	11.80	3.	3.	2.	.20
+	2 COMBINED AT	385C	53.	11.80	12.	6.	3.	.20
+	HYDROGRAPH AT	411	304.	12.17	30.	8.	4.	.24
+	DIVERSION TO	SF411	279.	12.17	21.	5.	3.	.24
+	HYDROGRAPH AT	D411	25.	11.77	8.	3.	1.	.24
+	HYDROGRAPH AT	RT411	279.	12.17	21.	5.	3.	.24
+	ROUTED TO	SR411	3.	11.80	3.	3.	2.	.24
+	3 COMBINED AT	411C	81.	11.80	23.	11.	7.	.43
+	ROUTED TO	R411	81.	11.87	23.	11.	7.	.43
+	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	931.	12.10	107.	34.	19.	1.10
+	ROUTED TO	RR390	859.	12.27	107.	34.	18.	1.10
	HYDROGRAPH AT	410	345.	12.10	33.	9.	5.	.28
+	2 COMBINED AT	410C	1089.	12.23	138.	42.	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	2021.	12.23	274.	82.	43.	2.75
+	DIVERSION TO	BS415	921.	12.23	48.	12.	6.	2.75
+	HYDROGRAPH AT	D415	1100.	12.03	226.	70.	37.	2.75
+	HYDROGRAPH AT	RT415	921.	12.23	48.	12.	6.	2.75
+	ROUTED TO	SR415	5.	12.03	5.	5.	4.	2.75
+	2 COMBINED AT	C415	1105.	12.03	230.	73.	41.	2.75
+	ROUTED TO	R415	1108.	12.13	230.	73.	41.	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	4127.	12.37	927.	418.	271.	14.73
+	ROUTED TO	SR440	754.	13.63	738.	418.	270.	14.73
+	ROUTED TO	RR455	754.	13.93	738.	418.	268.	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	2507.	12.10	922.	497.	310.	2.09
+	ROUTED TO	RR480	2344.	12.13	920.	497.	310.	2.09
+	HYDROGRAPH AT	500	1073.	12.27	122.	33.	16.	.93
+	2 COMBINED AT	500C	3235.	12.20	1031.	525.	324.	3.02

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

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1*************************************
*                                   *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)*
*            JUN   1998             *
*          VERSION 4.1              *
*                                   *
*  RUN DATE   27JUL00  TIME  14:22:25 *
*                                   *
*************************************
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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

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   UPDATE TO EXISTING CONDITION 24-HR 100-YR MODEL RUN BASED ON RE-ALIGNMENT
 13           ID   OF SUB-BASIN BOUNDARIES FOR SUB-BASINS 385 (REDUCED) & 415 (ENLARGED)
 14           ID   UPDATE BASED ON INFORMATION FROM 2' CONTOUR MAPPING.
 15           ID
 16           ID   ANALYSIS PERFORMED BY WOOD/PATEL; MW;        07/27/00  FILE: S24CE30Z.DAT
 17           ID
 18           ID   DDM MCUHP1 SPOOK HILL AMDP - EXISTING CONDITIONS MODEL - 100YR, 24HR STORM
              *       Original File Name: S24CE30.DAT
              *       Modified File Name: S24CE30Z.DAT
              *       Changes: 1) No. of Hydrograph Ordinates Increased to 2000
              *                2) SE, SV and SQ Cards for the Three (3) FRSs Updated
              *                3) Sediment Volumes Subtracted from Storage Volumes
              *                4) Old Elevation Datum Adjusted to NAVD 1988
              *       Wood/Patel, July 19, 2000.  SZ.
              *
              *
              *DIAGRAM
 19           IT       2                    2000
 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 *****
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1 HEC-1 INPUT PAGE 2

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

 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 *****

 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 *****
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 57          KK     R12
 58          KM   ROUTING OF FLOW FROM R12 TO SUB-BASIN 20
 59          RS       7    FLOW      -1
 60          RC    .045     .03    .045    4500     .01
 61          RX       0       1      45    52.5    72.5      80     124     125
 62          RY       3     2.5     2.5       0       0     2.5     2.5       3
             * DDM   ***** Updated *****

 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   ***** Preserved *****

 76          KK     R20
 77          KM        ROUTE FLOW THROUGH BULLDOG FLOODWAY FROM APACHE JUNCTION FRS
 78          RS       1    FLOW      -1
 79          RC    .016    .016    .016     990    .004
 80          RX       0       5       7    14.5    34.5      42      44      50
 81          RY       4       2       2       0       0       2       2       4
             * DDM   ***** Updated *****
1                                          HEC-1 INPUT                                                    PAGE  3

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

 82          KK      40
 83          KM   SUB-BASIN 40
 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  .987
 86          KM     L = 3.08  Kb = .036  Adj. Slope =  189.0
 87          BA   2.233
 88          LG    .340    .350   4.900    .280   5.000
 89          UC    .496    .264
 90          UA       0       3       5       8      12      20      43      75      90      96
 91          UA     100
             * DDM   ***** Updated *****

 92          KK      60
 93          KM   SUB-BASIN 60
 94          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 95          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .990
 96          KM     L = 4.19  Kb = .038  Adj. Slope =  209.6
 97          BA   1.746
 98          LG    .330    .390   5.800    .190   9.000
 99          UC    .600    .481
100          UA       0       3       5       8      12      20      43      75      90      96
101          UA     100
             * DDM   ***** Preserved *****

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

105          KK    SR60
106          KM   APACHE JUNCTION FRS AS-BUILT PLANS 12/19/88
107          KM   OUTLET PIPE=30"RCP; L=136.6'; INLET INV.=1783.5; OUTLET INV.=1783
108          KM   EMERGENCY SPILLWAY ELEV.=1799.77'; PRINCIPLE SPILLWAY ELEV.=1793.5'
109          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 100 ACRE-FEET
             *  ESE = 1801.92 ft; PSE = 1795.65 ft; Sediment Vol. = 237 Ac-Ft.
110          RS       1    STOR       0
111          SV       0       0      77     242     371     439     563     687    2163
112          SQ       0      12     103     114     120     362    1462    3101   30000
113          SE    95.0    96.0    98.0   100.0   101.6   101.9   103.0   104.0   112.9
             * DDM   ***** Preserved *****

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

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

126          KK      80
127          KM   SUB-BASIN 80
128          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
129          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .991
130          KM     L = 2.69  Kb = .039  Adj. Slope =  229.8
131          BA   1.475
132          LG    .330    .380   5.600    .210   4.000
133          UC    .438    .261
134          UA       0       3       5       8      12      20      43      75      90      96
135          UA     100
             * DDM   ***** Preserved *****

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

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

145          KK     100
146          KM   SUB-BASIN 100
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  .997
149          KM     L = 1.94  Kb = .046  Adj. Slope =  108.0
150          BA    .484
151          LG    .320    .360   5.100    .260   3.000
152          UC    .546    .486
153          UA       0       5      16      30      65      77      84      90      94      97
154          UA     100
             * DDM   ***** Preserved *****

155          KK    100C
156          KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 80 & 100
157          HC       2
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE  5

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

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

164          KK     120
165          KM   SUB-BASIN 120
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  .987
168          KM     L = 3.07  Kb = .037  Adj. Slope =  239.0
169          BA   2.202
170          LG    .330    .360   6.800    .130  11.000
171          UC    .433    .229
172          UA       0       3       5       8      12      20      43      75      90      96
173          UA     100
             * DDM   ***** Preserved *****

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

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

183          KK     140
184          KM   SUB-BASIN 140
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  .996
187          KM     L = 1.61  Kb = .044  Adj. Slope =  149.0
188          BA    .598
189          LG    .310    .350   4.200    .440   5.000
190          UC    .429    .284
191          UA       0       5      16      30      65      77      84      90      94      97
192          UA     100
             * DDM   ***** Updated *****

193          KK     150
194          KM   SUB-BASIN 150
195          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
196          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
197          KM     L = 1.50  Kb = .047  Adj. Slope =  314.6
198          BA    .408
199          LG    .350    .360   5.100    .260   7.000
200          UC    .296    .221
201          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

202          UA     100
             * DDM   ***** Preserved *****

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

209          KK    R152
210          KM   ROUTING OF FLOW FROM R152 TO SUB-BASIN 160
211          RS       4     FLOW      -1
212          RC    .045     .03    .045    5900    .019
213          RX       0       1       2       8      33      39      40      41
214          RY       2       2       2       0       0       2       2       2
             * DDM   ***** Updated *****

215          KK     160
216          KM   SUB-BASIN 160
217          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
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218          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
219          KM     L = 2.10  Kb = .047  Adj. Slope =  129.0
220          BA    .369
221          LG    .340    .350   4.150    .440   1.000
222          UC    .592    .660
223          UA       0       3       5       8      12      20      43      75      90      96
224          UA     100
             * DDM   ***** Updated *****

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

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

238          KK     210
239          KM   SUB-BASIN 210
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  .997
242          KM     L = 1.84  Kb = .045  Adj. Slope =  315.0
243          BA    .583
244          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

245          UC    .321    .232
246          UA       0       3       5       8      12      20      43      75      90      96
247          UA     100
             * DDM   ***** Preserved *****

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

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

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

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

274          KK     220
275          KM   SUB-BASIN 220
276          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
277          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
278          KM     L = 1.92  Kb = .043  Adj. Slope =  315.0
279          BA    .725
280          LG    .350    .350   7.000    .120   4.000
281          UC    .317    .209
282          UA       0       3       5       8      12      20      43      75      90      96
283          UA     100
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                                    PAGE  8

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

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

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

294          KK     190
295          KM   SUB-BASIN 190
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  .994
298          KM     L = 1.91  Kb = .042  Adj. Slope =  315.0
299          BA    .918
300          LG    .350    .390   5.800    .190   8.000
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301          UC    .321    .185
302          UA       0       3       5       8      12      20      43      75      90      96
303          UA     100
             * DDM   ***** Preserved *****

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

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

316          KK     200
317          KM   SUB-BASIN 200
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 = 1.58  Kb = .045  Adj. Slope =  305.6
321          BA    .535
322          LG    .350    .390   5.700    .200  10.000
323          UC    .300    .200
324          UA       0       3       5       8      12      20      43      75      90      96
325          UA     100
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE  9

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

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

329          KK   SR200
330          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
331          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
332          RS       1    STOR       0
333          SA    2.56     3.1     9.4
334          SE       0       3      10
335          SS       3     112       3     1.5
             * DDM   ***** Preserved *****

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

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

346          KK   SR180
347          KM   SIGNAL BUTTE FRS DATED 1/28/85
348          KM   OUTLET PIPE=36"RCP; L= 147';  INLET INV.=1690; OUTLET INV.=1687
349          KM   EMERGENCY SPILLWAY ELEV.=1712.4; PRINCIPLE SPILLWAY ELEV.=1701
350          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 250 ACRE-FEET
             *  ESE = 1714.63 ft; PSE = 1703.23 ft; Sediment Vol. = 247 Ac-Ft.
351          RS       1    STOR       0
352          SV       0      92     226     462     742    1197    1418    1776    1941    3114
353          SQ       0      10    10.5      98     133     149     155    1484    2567    6000
354          SE      99     101   103.0     106     109   113.0   114.6     117     118     120
             * DDM   ***** Preserved *****

355          KK    R180
356          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
357          KM   ROUTE FLOW FROM SIGNAL BUTTE FRS TO SUB-BASIN 260
358          RS       3    FLOW      -1
359          RC    .035    .025    .035    1500    .003
360          RX       0       1       2    22.6    38.6    59.2      60      61
361          RY     9.3     9.3     9.3       0       0     9.3     9.3     9.3
             * DDM   ***** Updated *****
1                                        HEC-1 INPUT                                          PAGE 10

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

362          KK     260
363          KM   SUB-BASIN 260
364          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
365          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
366          KM     L =  .81  Kb = .049  Adj. Slope =   68.0
367          BA    .267
368          LG    .300    .360   6.800    .160  15.000
369          UC    .371    .221
370          UA       0       5      16      30      65      77      84      90      94      97
371          UA     100
             * DDM   ***** Preserved *****

372          KK    260C
373          KM   HYDROGRAPH COMBINATION FOR OUTFLOW OF SIGNAL BUTTE FRS & SUB-BASIN 260
374          HC       2    .267
             * DDM   ***** Preserved *****

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

382          KK     280
383          KM   SUB-BASIN 280
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  .998
386          KM     L =  .77  Kb = .049  Adj. Slope =   84.0
387          BA    .304
388          LG    .300    .370   5.300    .290  15.000
389          UC    .342    .180
390          UA       0       5      16      30      65      77      84      90      94      97
391          UA     100
             * DDM   ***** Preserved *****

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

395          KK    R280
396          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
397          KM   ROUTE FLOW FROM SUB-BASIN 280 TO SUB-BASIN 300
398          RS       2    FLOW      -1
399          RC    .035    .025    .035    2500    .003
400          RX       0       1       2    23.4    43.4    64.8      65      66
401          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Updated *****
1                                        HEC-1 INPUT                                    PAGE 11

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

402          KK     300
403          KM   SUB-BASIN 300
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  .994
406          KM     L = 2.28  Kb = .041  Adj. Slope =  127.0
407          BA    .988
408          LG    .340    .350   4.500    .370   7.000
409          UC    .542    .365
410          UA       0       5      16      30      65      77      84      90      94      97
411          UA     100
             * DDM   ***** Preserved *****

412          KK    300C
413          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 280 & 300
414          HC       2
             * DDM   ***** Preserved *****

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

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

429          KK     350
430          KM   SUB-BASIN 350
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  .994
433          KM     L = 2.22  Kb = .042  Adj. Slope =  315.0
434          BA    .970
435          LG    .350    .350   4.550    .340   4.000
436          UC    .367    .234
437          UA       0       3       5       8      12      20      43      75      90      96
438          UA     100
             * DDM   ***** Preserved *****

439          KK    D350
440          KM   DIVERT FLOW FROM SUB-BASIN 350. FOR MODELING PURPOSES THE SPLIT FLOW WILL
441          KM   BE ROUTED BETWEEN SUB-BASINS 355 & 310. THE MAIN FLOW WILL ROUTED TO 310
442          DT   SF350
443          DI       0    5000
444          DQ       0    2500
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                    PAGE 12

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

445          KK    350R
446          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING
447          KM   ROUTING OF MAIN FLOW FROM DIVERSION OF SUB-BASIN 350 TO SUB-BASIN 310
448          RS       6    FLOW      -1
449          RC    .045    .035    .045    5150    .025
450          RX       0       1      40      46      56      62     102     103
451          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

452          KK     310
453          KM   SUB-BASIN 310
454          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
455          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
456          KM     L = 2.70  Kb = .045  Adj. Slope =  283.5
457          BA    .555
458          LG    .350    .350   3.910    .480    .000
459          UC    .483    .511
460          UA       0       3       5       8      12      20      43      75      90      96
461          UA     100
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            * DDM   ***** Preserved *****

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

465         KK    R310
466         KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
467         KM   ROUTING OF FLOW FROM SUB-BASIN 310 TO 320
468         RS      10    FLOW      -1
469         RC    .045    .035    .045   10050    .022
470         RX       0       1      40      46      56      62     102     103
471         RY       3       2       2       0       0       2       2       3
            * DDM   ***** Updated *****

472         KK     320
473         KM   SUB-BASIN 320
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 = 2.20  Kb = .042  Adj. Slope =  132.0
477         BA    .972
478         LG    .310    .350   4.550    .360  14.000
479         UC    .517    .339
480         UA       0       5      16      30      65      77      84      90      94      97
481         UA     100
            * DDM   ***** Preserved *****

482         KK    D320
483         KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
484         KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
485         KM   SIERRA HEIGHTS        FALCON RIDGE    & MARBLE CREEK
486         KM        MAXIMUM VOLUME DIVERSION = 12.27acre-feet
            *      1
487         DT   BS320   12.27
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

488         DI       0   10000
489         DQ       0   10000
            * DDM   ***** Preserved *****

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

493         KK   SR320
494         KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
495         KM   12.27 ACRE-FEETx43560/36x3600=4.1cfs
            *      1
496         RS       1    STOR       0
497         SV       0     .01    12.3
498         SQ       0     4.2     4.2
            * DDM   ***** Preserved *****

499         KK    C320
500         KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
501         HC       4
            * DDM   ***** Updated *****

502         KK     340
503         KM   SUB-BASIN 340
504         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
505         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .991
506         KM     L = 2.40  Kb = .042  Adj. Slope =  160.0
507         BA   1.449
508         LG    .280    .350   4.150    .520  21.000
509         UC    .525    .295
510         UA       0       5      16      30      65      77      84      90      94      97
511         UA     100
            * DDM   ***** Preserved *****

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

520         KK   RT340
521         KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
522         DR   BS340
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

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

529         KK    C340
530         KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
531         HC       3
            * DDM   ***** Preserved *****

532         KK   RT350
533         KM   RETRIEVE SPLIT FLOW FROM DIVERSION OF SUB-BASIN 350
534         DR   SF350
            * DDM   ***** Preserved *****
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535          KK   RR350
536          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
537          KM   ROUTING OF FLOW FROM SPLIT OF SUB-BASIN 350 TO 355
538          RS       8    FLOW      -1
539          RC    .045    .035    .045    6050    .025
540          RX       0       1      40      46      56      62     102     103
541          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

542          KK     355
543          KM   SUB-BASIN 355
544          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
545          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
546          KM     L = 3.00  Kb = .044  Adj. Slope =  284.0
547          BA    .659
548          LG    .340    .350   4.450    .370   4.000
549          UC    .488    .509
550          UA       0       3       5       8      12      20      43      75      90      96
551          UA     100
             * DDM   ***** Preserved *****

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

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

562          KK     360
563          KM   SUB-BASIN 360
564          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
565          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
566          KM     L = 2.10  Kb = .048  Adj. Slope =  124.0
567          BA    .670
568          LG    .260    .350   4.100    .560  20.000
569          UC    .604    .481
570          UA       0       5      16      30      65      77      84      90      94      97
571          UA     100
             * DDM   ***** Preserved *****

572          KK    D360
573          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
574          KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
575          KM        MAXIMUM VOLUME DIVERSION = 28.6 acre-feet
             *      1
576          DT   BS360    28.6
577          DI       0   10000
578          DQ       0   10000
             * DDM   ***** Preserved *****

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

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

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

591          KK     370
592          KM   SUB-BASIN 370
593          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
594          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
595          KM     L = 2.90  Kb = .044  Adj. Slope =  294.6
596          BA    .667
597          LG    .340    .350   4.650    .330   9.000
598          UC    .458    .459
599          UA       0       3       5       8      12      20      43      75      90      96
600          UA     100
             * DDM   ***** Updated *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

601          KK     395
602          KM   SUB-BASIN 395
603          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
604          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
605          KM     L = 1.60  Kb = .051  Adj. Slope =  215.8
606          BA    .198
607          LG    .330    .350   4.900    .300  10.000
608          UC    .387    .474
609          UA       0       3       5       8      12      20      43      75      90      96
610          UA     100
             * DDM   ***** Preserved *****

611          KK    370C
612          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
613          HC       2
             * DDM   ***** Preserved *****

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

621          KK     380
622          KM   SUB-BASIN 380
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  .994
625          KM     L = 2.20  Kb = .048  Adj. Slope =  114.0
626          BA    .972
627          LG    .300    .350   4.150    .500   7.000
628          UC    .671    .454
629          UA       0       5      16      30      65      77      84      90      94      97
630          UA     100
             * DDM   ***** Preserved *****

631          KK    D380
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   BS380    28.6
636          DI       0   10000
637          DQ       0   10000
             * DDM   ***** Preserved *****

638          KK   RT380
639          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
640          DR   BS380
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

641          KK   SR380
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    380C
648          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
649          HC       4
             * DDM   ***** Updated *****

650          KK     390
651          KM   SUB-BASIN 390
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  .999
654          KM     L =  .70  Kb = .050  Adj. Slope =  299.4
655          BA    .244
656          LG    .300    .350   4.700    .380  18.000
657          UC    .208    .109
658          UA       0       5      16      30      65      77      84      90      94      97
659          UA     100
             * DDM   ***** Preserved *****

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

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

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

676          KK    390C
677          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
678          HC       2
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

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

686          KK     400
687          KM   SUB-BASIN 400
688          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
689          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
690          KM     L = 1.64  Kb = .046  Adj. Slope =  110.0
691          BA    .616
692          LG    .320    .350   3.130    .930   6.000
693          UC    .596    .408
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694          UA       0       5      16      30      65      77      84      90      94      97
695          UA     100
             * DDM   ***** Preserved *****

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

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

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

712          KK    C400
713          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
714          HC       2
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

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

718          KK     385
719          KM   SUB-BASIN 385
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  .997
722          KM     L = 2.30  Kb = .045  Adj. Slope =  303.0
723          BA    .523
724          LG    .340    .380   5.600    .220  13.000
725          UC    .383    .360
726          UA       0       3       5       8      12      20      43      75      90      96
727          UA     100
             * DDM   ***** Preserved *****

728          KK    D385
729          KM   DIVERT FLOW INTO SUB-BASINS 415 & 420
730          DT   SF385
731          DI       0    5000
732          DQ       0    3000
             * DDM   ***** Preserved *****

733          KK    385R
734          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
735          KM   ROUTING OF FLOW DIVERSION FROM SUB-BASIN 385 INTO SUB-BASIN 420
736          RS      12    FLOW      -1
737          RC    .045     .04    .045   10250    .022
738          RX       0       1      40      46      56      62     102     103
739          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

740          KK     420
741          KM   SUB-BASIN 420
742          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
743          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .995
744          KM     L = 1.91  Kb = .042  Adj. Slope =  120.0
745          BA    .849
746          LG    .310    .350   3.880    .580  12.000
747          UC    .529    .336
748          UA       0       5      16      30      65      77      84      90      94      97
749          UA     100
             * DDM   ***** Preserved *****

750          KK    D420
751          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
752          KM   DETENTION/RETENTION BASINS LOCATED WITHIN GRAY FOX SUBDIVISION
753          KM        MAXIMUM VOLUME DIVERSION = 8.65 acre-feet
             *      1
754          DT   BS420    8.65
755          DI       0   10000
756          DQ       0   10000
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

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

760          KK   SR420
761          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
762          KM   38.55 ACRE-FEETx43560/36x3600=13cfs
763          RS       1    STOR       0
764          SV       0     .01   38.55
765          SQ       0      13      13
             * DDM   ***** Preserved *****

766          KK    420C
767          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
768          HC       4   10.87
             * DDM   ***** Updated *****
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769          KK     440
770          KM   SUB-BASIN 440
771          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
772          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
773          KM     L =  .40  Kb = .039  Adj. Slope =  315.0
774          BA    .080
775          LG    .190    .380   6.400    .140  13.000
776          UC    .129    .077
777          UA       0       3       5       8      12      20      43      75      90      96
778          UA     100
             * DDM   ***** Preserved *****

779          KK     R70
780          KM   ROUTE FLOW FROM SUB-BASIN 440 TO C108
781          RS       1    FLOW      -1
782          RC     .05    .035     .05    2250     .08
783          RX    1000    1025    1050    1070    1075    1095    1120    1145
784          RY      30    22.9    15.7      10      10    15.7    22.9      30
             * DDM   ***** Updated *****

785          KK     441
786          KM   SUB-BASIN 441
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 1.000
789          KM     L =  .28  Kb = .069  Adj. Slope =  315.0
790          BA    .010
791          LG    .300    .380   5.600    .220   5.000
792          UC    .150    .225
793          UA       0       5      16      30      65      77      84      90      94      97
794          UA     100
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 21

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

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

798          KK    DIV4
799          KM        SPLIT FLOW WITH TWO 42 INCH PIPES TO WEST AND SOUTH
             *      1
800          DT   SPLIT
801          DI       0      14      40      82     120     154     180
802          DQ       0       7      20      41      60      77      90
             * DDM   ***** Preserved *****

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

809          KK     442
810          KM   SUB-BASIN 442
811          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
812          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
813          KM     L =  .83  Kb = .055  Adj. Slope =  274.2
814          BA    .100
815          LG    .300    .350   3.290    .770   5.000
816          UC    .262    .268
817          UA       0       5      16      30      65      77      84      90      94      97
818          UA     100
             * DDM   ***** Preserved *****

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

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

828          KK  RTDIV6
829          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
830          DR  BASIN4
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 22

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

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

837          KK   CDIV6
838          KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
839          HC       2
             * DDM   ***** Updated *****

840          KK     443
841          KM   SUB-BASIN 443
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 1.000
844          KM     L =  .71  Kb = .050  Adj. Slope =  315.0
845          BA    .080
846          LG    .250    .300   8.000    .080  10.000
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847          UC    .196    .194
848          UA       0       5      16      30      65      77      84      90      94      97
849          UA     100
             * DDM   ***** Preserved *****

850          KK   DIV66
851          KM        DIVERT FLOW INTO 3 NATURAL WASHES WITH ONE 24" PIPE IN EACH WASH.
852          KM        EACH PIPE CAPACITY BASED ON 4 FEET OF HEAD
853          DT   WSH66
854          DI       0      78     100     200
855          DQ       0      78      78      78
             * DDM   ***** Preserved *****

856          KK    R113
857          KM        ROUTE FLOW FROM C113 TO C114
858          RS       1    FLOW      -1
859          RC    .019    .019    .019    1300    .029
860          RX    1000    1004    1008    1012    1018    1022    1026    1030
861          RY      17   15.33   12.67      10      10   12.67   15.33      17
             * DDM   ***** Preserved *****

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

865          KK     444
866          KM   SUB-BASIN 444
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 =  .33  Kb = .034  Adj. Slope =  315.0
870          BA    .040
871          LG    .130    .350   4.450    .320   1.000
1                                   HEC-1 INPUT                                          PAGE 23

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

872          UC    .112    .084
873          UA       0       3       5       8      12      20      43      75      90      96
874          UA     100
             * DDM   ***** Preserved *****

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

881          KK     445
882          KM   SUB-BASIN 445
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  .999
885          KM     L =  .82  Kb = .036  Adj. Slope =  315.0
886          BA    .190
887          LG    .170    .350   3.470    .590   3.000
888          UC    .192    .130
889          UA       0       5      16      30      65      77      84      90      94      97
890          UA     100
             * DDM   ***** Preserved *****

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

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

900          KK    RTB2
901          KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
             *      1
902          DR   SPLIT
             * DDM   ***** Preserved *****

903          KK  RSPLIT
904          KM        ROUTE FLOW FROM SPLIT TO C109
905          RS       1    FLOW      -1
906          RC     .05    .035     .05     800     .05
907          RX    1000    1025    1050    1070    1075    1095    1120    1145
908          RY      30    22.9    15.7      10      10    15.7    22.9      30
             * DDM   ***** Updated *****
1                                   HEC-1 INPUT                                          PAGE 24

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

909          KK     446
910          KM   SUB-BASIN 446
911          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
912          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
913          KM     L =  .46  Kb = .061  Adj. Slope =  303.9
914          BA    .040
915          LG    .270    .350   4.500    .400  19.000
916          UC    .183    .189
917          UA       0       5      16      30      65      77      84      90      94      97
918          UA     100
             * DDM   ***** Preserved *****

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

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

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

934         KK     447
935         KM   SUB-BASIN 447
936         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
937         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
938         KM     L =  .49  Kb = .056  Adj. Slope =  221.0
939         BA    .090
940         LG    .250    .350   3.350    .870  30.000
941         UC    .208    .145
942         UA       0       5      16      30      65      77      84      90      94      97
943         UA     100
            * DDM   ***** Preserved *****

944         KK   RT404
945         KM        RETRIEVE DIVERTED FLOW FOR WASH 109
946         DR  WSH404
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 25

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

947         KK    R404
948         KM        ROUTE FLOW FROM C110 TO C110
949         RS       6    FLOW      -1
950         RC    .019    .019    .019    3540     .03
951         RX    1000    1012    1016    1020    1025    1029    1033    1045
952         RY      15      12      11      10      10      11      12      15
            * DDM   ***** Preserved *****

953         KK    C110
954         KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 447 AND R404
955         HC       3
            * DDM   ***** Preserved *****

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

962         KK    C115
963         KM        COMBINE HYDROGRAPHS FROM C114 AND C110
964         HC       2
            * DDM   ***** Preserved *****

965         KK    R115
            * ******OUTFLOW FROM THIS ROUTING IS GREATER THAN INFLOW TO THE
            * ******ROUTING BY 2cfs.  THIS IS NOTED BUT LEFT UNCHANGED WITHIN THE MODEL
966         KM        ROUTE FLOW FROM C115 TO C119
967         RS       1    FLOW      -1
968         RC    .019    .019    .019    2125    .029
969         RC    .019    .019    .019     580   .0291
970         RX    1000    1012    1016    1020    1035    1039    1043    1055
971         RY      15      12      11      10      10      11      12      15
            * DDM   ***** Updated *****

972         KK     448
973         KM   SUB-BASIN 448
974         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
975         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
976         KM     L =  .36  Kb = .042  Adj. Slope =  315.0
977         BA    .045
978         LG    .170    .350   4.200    .390  11.000
979         UC    .133    .102
980         UA       0       5      16      30      65      77      84      90      94      97
981         UA     100
            * DDM   ***** Updated *****
1                                   HEC-1 INPUT                                          PAGE 26

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

982         KK     449
983         KM   SUB-BASIN 449
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 1.000
986         KM     L =  .40  Kb = .054  Adj. Slope =  315.0
987         BA    .050
988         LG    .260    .350   3.500    .640   6.000
989         UC    .167    .134
990         UA       0       5      16      30      65      77      84      90      94      97
991         UA     100
            * DDM   ***** Preserved *****

992         KK   C6364
993         KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 448 & 449
994         HC       2
            * DDM   ***** Preserved *****

995         KK   R6364
996         KM   ROUTE FLOW FROM C116 AND SUB-BASINS 448 AND 449
997         RS       4    FLOW      -1
998         RC     .05    .035     .05    4375   .0333
999         RX    1000    1027    1053    1080    1090    1117    1143    1170
1000        RY      15   13.33   11.67      10      10   11.67   13.33      15
            * DDM   ***** Updated *****
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1001        KK     450
1002        KM   SUB-BASIN 450
1003        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1004        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1005        KM     L =  .85  Kb = .057  Adj. Slope =  210.5
1006        BA    .070
1007        LG    .340    .350   3.630    .570   4.000
1008        UC    .296    .383
1009        UA       0       3       5       8      12      20      43      75      90      96
1010        UA     100
            * DDM   ***** Updated *****

1011        KK     451
1012        KM   SUB-BASIN 451
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 =  .57  Kb = .063  Adj. Slope =  175.0
1016        BA    .025
1017        LG    .340    .350   3.290    .750   3.000
1018        UC    .271    .453
1019        UA       0       3       5       8      12      20      43      75      90      96
1020        UA     100
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1021        KK    RT66
1022        KM        RETRIEVE DIVERTED FLOW FROM SUB-BASIN 66
1023        DR   WSH66
            * DDM   ***** Updated *****

1024        KK     452
1025        KM   SUB-BASIN 452
1026        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1027        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1028        KM     L =  .43  Kb = .055  Adj. Slope =  315.0
1029        BA    .040
1030        LG    .260    .350   3.700    .550   9.000
1031        UC    .171    .166
1032        UA       0       5      16      30      65      77      84      90      94      97
1033        UA     100
            * DDM   ***** Preserved *****

1034        KK   C6465
1035        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 443 AND 452
1036        HC       2
            * DDM   ***** Preserved *****

1037        KK   R6566
1038        KM        ROUTE FLOW FROM DIVERSIONS 65 AND 66 TO C116
1039        RS       2    FLOW      -1
1040        RC     .05    .035     .05    2435   .0282
1041        RX    1000    1045    1090    1150    1160    1220    1265    1310
1042        RY      25      23      20      10      10      20      23      25
            * DDM   ***** Preserved *****

1043        KK    C116
1044        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 450 & 451 AND R6364 & R6465
1045        HC       4
            * DDM   ***** Preserved *****

1046        KK  BASIN5
1047        KM        RESERVOIR WITHIN PARCEL 31      2-48 INCH PIPES AT OUTFALL
1048        KM        BASIN 5 FEET DEEP
1049        RS       1    ELEV       0
1050        SV       0     4.5     9.9
1051        SQ       0      69     190
1052        SE       0     2.5       5
            * DDM   ***** Preserved *****

1053        KK    R116
1054        KM   ROUTE FLOW FROM C116 TO C117
1055        RS       2    FLOW      -1
1056        RC     .05    .035     .05    1300   .0333
1057        RX    1000    1100    1200    1300    1320    1420    1520    1620
1058        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

1059        KK     453
1060        KM   SUB-BASIN 453
1061        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1062        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1063        KM     L =  .58  Kb = .058  Adj. Slope =  138.0
1064        BA    .060
1065        LG    .290    .350   3.290    .820  18.000
1066        UC    .279    .289
1067        UA       0       5      16      30      65      77      84      90      94      97
1068        UA     100
            * DDM   ***** Preserved *****

1069        KK    C117
1070        KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 453 AND R116
1071        HC       2
            * DDM   ***** Preserved *****

1072        KK    C118
1073        KM   COMBINE HYDROGRAPHS FROM R115 AND C117
1074        HC       2
            * DDM   ***** Preserved *****

1075        KK    R118
1076        KM        ROUTE FLOW FROM C118 TO  DIV7
1077        RS       1    FLOW      -1
1078        RC     .019    .019    .019    1500    .024
1079        RX    1000    1012    1016    1020    1035    1039    1043    1055
1080        RY      15      12      11      10      10      11      12      15
            * DDM   ***** Preserved *****
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1081        KK    DIV7
1082        KM        OFFLINE BASIN AT NORTH MOUNTAIN RIDGE   FLOWS ENTER BASIN OVER
1083        KM        30' WEIR SET AT 5.3' ABOVE THE CHANNEL BOTTOM
            *      1
1084        DT  BASIN6
1085        DI       0      363      487      563      645      844
1086        DQ       0        3       47       83      125      244
            * DDM   ***** Preserved *****

1087        KK  RTDIV7
1088        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1089        DR  BASIN6
            * DDM   ***** Preserved *****

1090        KK  RFDIV7
1091        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1092        KM     3.6 ACRE-FEETx43560/36x3600=1.2cfs
1093        RS       1    STOR       0
1094        SV       0     .01     3.6
1095        SQ       0     1.2     1.2
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 29

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


1096        KK   CDIV7
1097        KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1098        HC       2
            * DDM   ***** Updated *****

1099        KK     454
1100        KM   SUB-BASIN 454
1101        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1102        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1103        KM     L = 1.23  Kb = .051  Adj. Slope =  163.0
1104        BA    .180
1105        LG    .300    .350   3.780    .560  14.000
1106        UC    .383    .400
1107        UA       0       5      16      30      65      77      84      90      94      97
1108        UA     100
            * DDM   ***** Preserved *****

1109        KK    C119
1110        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 454 AND C119
            *      1       2
1111        HC       2
            * DDM   ***** Preserved *****

1112        KK    R454
1113        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1114        KM   ROUTE FLOW FROM C119 TO 415C
1115        RS       2    FLOW      -1
1116        RC    .045    .035    .045    2200    .009
1117        RX       0      .5       1      33      42      67    67.5      68
1118        RY       5       4       4       0       0       6       6       6
            * DDM   ***** Updated *****

1119        KK     415
1120        KM   SUB-BASIN 415
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  .996
1123        KM     L = 2.58  Kb = .044  Adj. Slope =  298.5
1124        BA    .606
1125        LG    .320    .350   4.500    .400  15.000
1126        UC    .429    .411
1127        UA       0       5      16      30      65      77      84      90      94      97
1128        UA     100
            * DDM   ***** Preserved *****

1129        KK   RT385
1130        KM   RETRIEVE FLOW FROM DIVERSION OF SUB-BASIN 385 INTO SUB-BASIN 415
1131        DR   SF385
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 30

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


1132        KK   RR385
1133        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1134        KM   ROUTING OF SPLIT FLOW FROM SUB-BASIN 385 TO SUB-BASIN 415
1135        RS      11    FLOW      -1
1136        RC    .045     .04    .045    5878    .024
1137        RX       0       1      40      46      56      62     102     103
1138        RY       3       2       2       0       0       2       2       3
            * DDM   ***** Preserved *****

1139        KK    415C
1140        KM   HYDROGRAPH COMBINATION OF SUB-BASINS 415, R454 & SPLIT FLOW FROM 385
1141        HC       3    1.71
            * DDM   ***** Preserved *****

1142        KK    R415
1143        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1144        KM   ROUTING OF FLOW FROM 415C TO 455C
1145        RS       2    FLOW      -1
1146        RC    .045     .03    .045    4100    .024
1147        RX       0      .5       1       8      16      23    23.5      24
1148        RY       8       8       8       0       0       8       8       8
            * DDM   ***** Updated *****

1149        KK     455
1150        KM   SUB-BASIN 455
1151        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1152        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
1153        KM     L = 1.70  Kb = .041  Adj. Slope =  146.0
1154        BA   1.111
1155        LG    .270    .350   3.700    .640  24.000
1156        UC    .429    .208
1157        UA       0       5      16      30      65      77      84      90      94      97
1158        UA     100
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            * DDM   ***** Preserved *****

1159        KK    D455
1160        KM         DIVERT FLOW INTO ONLINE  DETENTION BASIN
1161        KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1162        KM   FOR BASIN #: 30      34      43      47&58
1163        KM        MAXIMUM VOLUME DIVERSION = 74.1 acre-feet
            *      1
1164        DT   BS455    74.1
1165        DI       0   10000
1166        DQ       0   10000
            * DDM   ***** Preserved *****

1167        KK   RT455
1168        KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1169        DR   BS455
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 31

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

1170        KK   SR455
1171        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1172        KM    74.1 ACRE-FEETx43560/36x3600=25cfs
1173        RS       1    STOR       0
1174        SV       0     .01    74.1
1175        SQ       0      25      25
            * DDM   ***** Preserved *****

1176        KK    C455
1177        KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 455 AND DIVERTED BASIN STORAGE OF 455
1178        HC       2
            * DDM   ***** Preserved *****

1179        KK    455C
1180        KM  HYDROGRAPH COMBINATION OF 420C, R415 AND C455
            *      1       2
1181        HC       3
            * DDM   ***** Preserved *****

1182        KK   SR440
1183        KM   SPOOK HILL FRS PLANS DATED 6/15/77
1184        KM   OUTLET PIPE=7'x7.5'RCBC; L=70 INLET INV.=1566; OUTLET INV.=1566
1185        KM   EMERGENCY SPILLWAY ELEV.=1582; PRINCIPLE SPILLWAY ELEV.=1577.5
1186        KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 200 ACRE-FEET
            *   ESE = 1583.86 ft; PSE = 1579.36 ft; Sediment Vol. = 271 Ac-Ft.
1187        RS       1    STOR       0
1188        SV       0      81     363     533     719     925    1120    1399    1668    4051
1189        SQ       0       0      10     180     367     595     800    1231    2625   24500
1190        SE      76      78      80      81      82      83    83.9      85      86      92
            * DDM   ***** Preserved *****

1191        KK   RR455
1192        KM   ROUTE FLOW FROM SPOOK HILL FRS TO SUB-BASIN 462
1193        RS      14    FLOW      -1
1194        RC    .035    .025    .035    9200    .002
1195        RX       0       1       2      28      58      84      85      86
1196        RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
            * DDM   ***** Updated *****

1197        KK     456
1198        KM   SUB-BASIN 456
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  .998
1201        KM     L =  .94  Kb = .045  Adj. Slope =  315.0
1202        BA    .260
1203        LG    .300    .380   5.600    .200  12.000
1204        UC    .217    .139
1205        UA       0       5      16      30      65      77      84      90      94      97
1206        UA     100
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 32

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

1207        KK    DIV1
1208        KM         DIVERT FLOW INTO OFFLINE DETENTION BASIN
1209        KM         WEIR FOR BASIN SET AT 4 FEET ABOVE CHANNEL BOTTOM
            *      1
1210        DT  BASIN1
1211        DI       0    11.1   127.9   234.4   577.7   789.9  1025.5  1280.9  1555.7
1212        DQ       0       0       0    47.7     248   381.8   533.6   701.5     884
            * DDM   ***** Preserved *****

1213        KK    DIV2
1214        KM         SPLIT OUT FLOW FOR WASHES THAT FLOW TO THE SOUTH FROM
1215        KM         WASHES THAT DRAIN TO THE WES, SOUTHERN WASHES FED BY 30" & 24" PIPE
1216        DT    WA30
1217        DI       0    11.1   127.9   189.6   329.7     408   491.9   579.4   671.7
1218        DQ       0    11.1    38.4    48.2      63    69.5      76      81      86
            * DDM   ***** Preserved *****

1219        KK    R456
1220        KM         ROUTE FLOW FROM SUB-BASIN 51 TO C101
1221        RS       2    FLOW      -1
1222        RC     .05    .035     .05    3800    .044
1223        RX    1000    1010    1020    1036    1041    1057    1067    1077
1224        RY   14.88   14.44      14      10      10      14   14.44   14.88
            * DDM   ***** Updated *****

1225        KK     457
1226        KM   SUB-BASIN 457
1227        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1228        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1229        KM     L = 1.01  Kb = .045  Adj. Slope =  308.8
1230        BA    .190
1231        LG    .270    .350   3.950    .460   6.000
1232        UC    .237    .195
1233        UA       0       5      16      30      65      77      84      90      94      97
1234        UA     100
            * DDM   ***** Preserved *****
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1235        KK    C101
1236        KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 50 AND 51
1237        HC       2
            * DDM   ***** Preserved *****

1238        KK    DIV3
1239        KM        RESERVOIR AT THE EDGE OF THE PROPERTY   FLOW FROM CHANNEL
1240        KM        DIVERTED  INTO OFFLINE BASIN A 25' WEIR SET AT ELEVATION 1808 FT
            *      1
1241        DT  BASIN2
1242        DI       0      36      70     110     180   313.5     402   500.9
1243        DQ       0       0       0       0       0    67.5     124   190.9
            * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                                    PAGE 33

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

1244        KK  RTDIV3
1245        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1246        DR  BASIN2
            * DDM   ***** Preserved *****

1247        KK  RFDIV3
1248        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1249        KM     5.0 ACRE-FEETx43560/36x3600=1.7cfs
1250        RS       1    STOR       0
1251        SV       0     .01       5
1252        SQ       0     1.7     1.7
            * DDM   ***** Preserved *****

1253        KK   CDIV3
1254        KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1255        HC       2
            * DDM   ***** Preserved *****

1256        KK    R101
1257        KM        ROUTE FLOW FROM SUBBASIN C101 TO C103
1258        RS       1    FLOW      -1
1259        RC     .05    .035     .05    1450     .05
1260        RX    1000    1010    1020    1036    1041    1057    1067    1077
1261        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Updated *****

1262        KK     458
1263        KM   SUB-BASIN 458
1264        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1265        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1266        KM     L =  .76  Kb = .048  Adj. Slope =  299.0
1267        BA    .190
1268        LG    .290    .390   5.800    .190   6.000
1269        UC    .208    .134
1270        UA       0       5      16      30      65      77      84      90      94      97
1271        UA     100
            * DDM   ***** Preserved *****

1272        KK    C103
1273        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 55 AND C101
1274        HC       2
            * DDM   ***** Preserved *****

1275        KK    R103
1276        KM        ROUTE FLOW FROM SUBBASIN C103 TO C106
1277        RS       1    FLOW      -1
1278        RC     .05    .035     .05     900     .03
1279        RX    1000    1010    1020    1030    1050    1060    1070    1080
1280        RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
            * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                                    PAGE 34

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

1281        KK    RT30
1282        KM        RETRIEVE DIVERTED FLOW FOR WASH BELOW 30 INCH PIPE
1283        DR    WA30
            * DDM   ***** Preserved *****

1284        KK     R30
1285        KM        ROUTE FLOW FROM WASH DIVERSION TO COMBINE C52
1286        RS       1    FLOW      -1
1287        RC     .05    .035     .05    1630     .05
1288        RX    1000    1010    1020    1036    1041    1057    1067    1077
1289        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Preserved *****

1290        KK    RTB1
1291        KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
            *      1       2
1292        DR  BASIN1
            * DDM   ***** Preserved *****

1293        KK      B1
1294        KM        ROUTE FLOW THROUGH OFFLINE DETENTION BASIN
1295        KM        FLOW OUTLETS THROUGH A 30 INCH OUTLET PIPE
            *      1       2
1296        RS       1    ELEV       0
1297        SV              .7     1.4     2.3     2.7     3.2
1298        SQ       0       5      16      28    32.5      37
1299        SE       0       1       2       3     3.5       4
            * DDM   ***** Preserved *****

1300        KK     RB1
1301        KM        ROUTE FLOW FROM BASIN DIVERSION TO COMBINE C52
1302        RS       2    FLOW      -1
1303        RC     .05    .035     .05    1720     .05
1304        RX    1000    1010    1020    1036    1041    1057    1067    1077
1305        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Preserved *****

1306        KK    CDIV
1307        KM        COMBINE FLOWS FROM WA30 AND BASIN 1
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1308        HC       2     .12
            * DDM   ***** Updated *****

1309        KK     459
1310        KM   SUB-BASIN 459
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 1.000
1313        KM     L =  .35  Kb = .052  Adj. Slope =  251.6
1314        BA    .030
1315        LG    .220    .350   3.330    .710   8.000
1316        UC    .162    .157
1317        UA       0       5      16      30      65      77      84      90      94      97
1318        UA     100
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 35

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


1319        KK     C52
1320        KM        COMBINE FLOWS FROM SUB-BASIN 52 WA30 AND BASIN 1
1321        HC       2
            * DDM   ***** Preserved *****

1322        KK     R52
1323        KM        ROUTE FLOW FROM SUBBASIN 52 TO C102
1324        RS       2    FLOW      -1
1325        RC     .05    .035     .05    2000     .05
1326        RX    1000    1010    1020    1036    1041    1057    1067    1077
1327        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Updated *****

1328        KK     460
1329        KM   SUB-BASIN 460
1330        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1331        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1332        KM     L =  .62  Kb = .058  Adj. Slope =  194.0
1333        BA    .140
1334        LG    .250    .350   3.740    .690  27.000
1335        UC    .246    .163
1336        UA       0       5      16      30      65      77      84      90      94      97
1337        UA     100
            * DDM   ***** Preserved *****

1338        KK    C102
1339        KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 52 AND 53
1340        HC       2
            * DDM   ***** Preserved *****

1341        KK  BASIN3
1342        KM        RESERVOIR AT CLUBHOUSE LOCATION 1-30 INCH PIPE AT OUTFALL
1343        KM        BOTTOM OF BASIN AT 6 FEET ABOVE 1795 ELEVATION
1344        RS       1    ELEV       0
1345        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
1346        SQ       0      22      45    47.4      48      51      57      62      67      73
1347        SE    1795  1797.5    1800  1800.4  1800.5    1801    1802    1803    1804  1805.5
            * DDM   ***** Preserved *****

1348        KK      R3
1349        KM        ROUTE FLOW FROM C102 to C106
1350        RS       4    FLOW      -1
1351        RC     .05     .03     .05    2750   .0375
1352        RX    1000    1010    1020    1052    1086    1118    1128    1138
1353        RY    19.2    18.4      18      10      10      18    18.4    19.2
            * DDM   ***** Updated *****

1354        KK     461
1355        KM   SUB-BASIN 461
1356        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1357        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1358        KM     L =  .83  Kb = .052  Adj. Slope =  181.0
1359        BA    .120
1                                   HEC-1 INPUT                                          PAGE 36

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

1360        LG    .270    .350   4.250    .450  21.000
1361        UC    .275    .255
1362        UA       0       5      16      30      65      77      84      90      94      97
1363        UA     100
            * DDM   ***** Preserved *****

1364        KK    C104
1365        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 54 AND R102
1366        HC       2
            * DDM   ***** Preserved *****

1367        KK    C106
1368        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN C103 AND C104
1369        HC       2
            * DDM   ***** Preserved *****

1370        KK    R106
1371        KM        ROUTE FLOW FROM C106 TO C49
1372        RS       2    FLOW      -1
1373        RC     .05    .035     .05    3950    .033
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   ***** Updated *****

1376        KK     462
1377        KM   SUB-BASIN 462
1378        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1379        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1380        KM     L =  .97  Kb = .045  Adj. Slope =  297.7
1381        BA    .301
1382        LG    .300    .370   5.300    .240  12.000
1383        UC    .225    .137
1384        UA       0       5      16      30      65      77      84      90      94      97
1385        UA     100
            * DDM   ***** Preserved *****
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1386        KK     C56
1387        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 56 AND C106
            *      1       2
1388        HC       2
            * DDM   ***** Updated *****

1389        KK     480
1390        KM   SUB-BASIN 480
1391        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1392        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
1393        KM     L = 1.21  Kb = .042  Adj. Slope =  165.0
1394        BA    .731
1395        LG    .270    .350   3.580    .730  27.000
1396        UC    .333    .152
1397        UA       0       5      16      30      65      77      84      90      94      97
1398        UA     100
            * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 37

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


1399        KK    D480
1400        KM         DIVERT FLOW INTO ONLINE  DETENTION BASIN
1401        KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1402        KM   FOR BASIN #: 18 & 26
1403        KM        MAXIMUM VOLUME DIVERSION = 16.5 acre-feet
            *      1
1404        DT   BS480    16.5
1405        DI       0   10000
1406        DQ       0   10000
            * DDM   ***** Preserved *****

1407        KK   RT480
1408        KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1409        DR   BS480
            * DDM   ***** Preserved *****

1410        KK   SR480
1411        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1412        KM    16.5 ACRE-FEETx43560/36x3600=5.5cfs
1413        RS       1    STOR       0
1414        SV       0     .01    16.5
1415        SQ       0     5.6     5.6
            * DDM   ***** Preserved *****

1416        KK    C480
1417        KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1418        HC       2
            * DDM   ***** Preserved *****

1419        KK    480C
1420        KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1421        HC       3    2.09
            * DDM   ***** Preserved *****

1422        KK    R480
1423        KM   ROUTE FLOW FROM SUB-BASIN 480 TO RR480
1424        RS       1    FLOW      -1
1425        RC    .025    .025    .025    1800     .05
1426        RX       0       1      20      32      62      74      93      94
1427        RY      13      12      12       0       0      12      12      13
            * DDM   ***** Preserved *****

1428        KK   RR480
1429        KM   ROUTE FLOW FROM SUB-BASIN 480 TO SUB-BASIN 500
1430        RS       3    FLOW      -1
1431        RC    .055     .05    .055    6500     .05
1432        RX       0       1       2      28      58      84      85      86
1433        RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
            * DDM   ***** Updated *****
1                                        HEC-1 INPUT                                          PAGE 38

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


1434        KK     500
1435        KM   SUB-BASIN 500
1436        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1437        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
1438        KM     L = 2.77  Kb = .042  Adj. Slope =  286.8
1439        BA    .930
1440        LG    .350    .400   6.000    .170   9.000
1441        UC    .421    .333
1442        UA       0       3       5       8      12      20      43      75      90      96
1443        UA     100
            * DDM   ***** Preserved *****

1444        KK    500C
1445        KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1446        HC       2    3.02
1447        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............
               V
               V
  76         R20
               .
               .
  82           .          40
               .           .
               .           .
  92           .           .          60
               .           .           .
               .           .           .
 102         60C........................
               V
               V
 105        SR60
               V
               V
 114         R60
               V
               V
 120        RR60
               .
               .
 126           .          80
               .           .
               .           .
 136         80C............
               V
               V
 139         R80
               .
               .
 145           .         100
               .           .
               .           .
 155        100C............
               V
               V
 158        R100
               .
               .
 164           .         120
               .           .
               .           .
 174        120C............
               V
               V
 177        R120
               .
               .
 183           .         140
               .           .
               .           .
 193           .           .         150
               .           .           V
               .           .           V
 203           .           .        R150
               .           .           V
               .           .           V
 209           .           .        R152
               .           .           .
               .           .           .
 215           .           .           .         160
               .           .           .           .
               .           .           .           .
 225           .           .           .           .         180
               .           .           .           .           .
               .           .           .           .           .
 235        180C...............................................
               .
               .
 238           .         210
               .           V
               .           V
 248           .        R210
               .           .
               .           .
 254           .           .         240
               .           .           .
               .           .           .
 264           .        240C............
               .           V
               .           V
 267           .       SR240
               .           .
               .           .
 274           .           .         220
               .           .           .
               .           .           .
 284           .        220C............
               .           V
               .           V
 287           .       SR220
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                .          .
                .          .
294             .          .        190
                .          .          V
                .          .          V
304             .          .       R190
                .          .          V
                .          .          V
310             .          .       R192
                .          .          .
                .          .          .
316             .          .          .        200
                .          .          .          .
                .          .          .          .
326             .       200C.......................
                .          V
                .          V
329             .      SR200
                .          V
                .          V
336             .      200SR
                .          .
                .          .
343          C180............
                V
                V
346         SR180
                V
                V
355          R180
                .
                .
362             .        260
                .          .
                .          .
372          260C............
                V
                V
375          R260
                .
                .
382             .        280
                .          .
                .          .
392          280C............
                V
                V
395          R280
                .
                .
402             .        300
                .          .
                .          .
412          300C............
                V
                V
415          R300
                V
                V
422         RR300
                .
                .
429             .        350
                .          .
                .          .
442             .          .-------->   SF350
439             .       D350
                .          V
                .          V
445             .       350R
                .          .
                .          .
452             .          .        310
                .          .          .
                .          .          .
462             .       C310............
                .          V
                .          V
465             .       R310
                .          .
                .          .
472             .          .        320
                .          .          .
                .          .          .
487             .          .          .-------->   BS320
482             .          .       D320
                .          .          .
                .          .          .
492             .          .          .          .<--------   BS320
490             .          .          .      RT320
                .          .          .          V
                .          .          .          V
493             .          .          .      SR320
                .          .          .          .
                .          .          .          .
499          C320.................................
                .
                .
502             .        340
                .          .
                .          .
517             .          .-------->   BS340
512             .       D340
                .          .
                .          .
522             .          .          .<--------   BS340
520             .          .      RT340
                .          .          V
                .          .          V
523             .          .      SR340
                .          .          .
                .          .          .
529          C340........................
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534          .<-------   SF350
532          .      RT350
             .         V
             .         V
535          .      RR350
             .
             .
542          .         .         355
             .         .           .
             .         .           .
552          .       C355............
             .         V
             .         V
555          .       R355
             .
             .
562          .         .         360
             .         .           .
             .         .           .
576          .         .           .-------->   BS360
572          .         .       D360
             .         .           .
             .         .           .
581          .         .           .           .<-------   BS360
579          .         .           .      RT360
             .         .           .         V
             .         .           .         V
582          .         .           .      SR360
             .         .           .           .
             .         .           .           .
588       360C...................................
             .
             .
591          .        370
             .         .
             .         .
601          .         .         395
             .         .           .
             .         .           .
611          .       370C............
             .         V
             .         V
614          .       R370
             .         .
             .         .
621          .         .         380
             .         .           .
             .         .           .
635          .         .           .-------->   BS380
631          .         .       D380
             .         .           .
             .         .           .
640          .         .           .           .<-------   BS380
638          .         .           .      RT380
             .         .           .         V
             .         .           .         V
641          .         .           .      SR380
             .         .           .           .
             .         .           .           .
647       380C...................................
             .
             .
650          .        390
             .         .
             .         .
664          .         .-------->   BS390
660          .       D390
             .         .
             .         .
669          .         .           .<-------   BS390
667          .         .       RT390
             .         .           V
             .         .           V
670          .         .       SR390
             .         .           .
             .         .           .
676          .       390C............
             .         V
             .         V
679          .      RR390
             .         .
             .         .
686          .         .         400
             .         .           .
             .         .           .
700          .         .           .-------->   BS400
696          .         .       D400
             .         .           .
             .         .           .
705          .         .           .           .<-------   BS400
703          .         .           .      RT400
             .         .           .         V
             .         .           .         V
706          .         .           .      SR400
             .         .           .           .
             .         .           .           .
712          .         .       C400............
             .         .           .
             .         .           .
715       400C......................
             .
             .
718          .        385
             .         .
             .         .
730          .         .-------->   SF385
728          .       D385
             .         V
             .         V
733          .       385R
             .         .
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740                 420
                      .
                      .
754                   .-------> BS420
750               D420
                      .
                      .
759                   .          .<------- BS420
757                   .      RT420
                      .          V
                      .          V
760                   .      SR420
                      .          .
                      .          .
766        420C.................................
                 .
                 .
769            440
                 V
                 V
779            R70
                 .
                 .
785              .         441
                 .           .
                 .           .
795           C108............
                 .
                 .
800              .-------> SPLIT
798           DIV4
                 V
                 V
803           R108
                 .
                 .
809              .         442
                 .           .
                 .           .
819            C67............
                 .
                 .
825              .-------> BASIN4
822           DIV6
                 .
                 .
830              .           .<------- BASIN4
828              .      RTDIV6
                 .           V
                 .           V
831              .      RFDIV6
                 .           .
                 .           .
837           CDIV6...........
                 .
                 .
840              .         443
                 .           .
                 .           .
853              .           .-------> WSH66
850              .       DIV66
                 .           V
                 .           V
856              .       R113
                 .           .
                 .           .
862           C114...........
                 .
                 .
865              .         444
                 .           V
                 .           V
875              .         R58
                 .           .
                 .           .
881              .           .         445
                 .           .           .
                 .           .           .
891              .       C107...........
                 .           V
                 .           V
894              .       R107
                 .           .
                 .           .
902              .           .          .<------- SPLIT
900              .           .       RTB2
                 .           .          V
                 .           .          V
903              .           .      RSPLIT
                 .           .           .
                 .           .           .
909              .           .           .         446
                 .           .           .           .
                 .           .           .           .
919              .       C109........................
                 .           .
                 .           .
925              .           .-------> WSH404
922              .       DIV5
                 .           V
                 .           V
928              .       R109
                 .           .
                 .           .
934              .           .         447
                 .           .           .
                 .           .           .
946              .           .           .          .<------- WSH404
944              .           .           .      RT404
                 .           .           .          V
                 .           .           .          V
947              .           .           .       R404
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953          C110.......................
                V
                V
956          R110
                .
                .
962       C115............
             V
             V
965       R115
             .
             .
972          448
                .
                .
982                   449
                        .
                        .
992          C6364............
                V
                V
995          R6364
                .
                .
1001                  450
                        .
                        .
1011                            451
                                  .
                                  .
1023                                          .<-------   WSH66
1021                                     RT66
                                            .
                                            .
1024                                        .         452
                                            .           .
                                            .           .
1034                                     C6465............
                                            V
                                            V
1037                                     R6566
                                            .
                                            .
1043         C116.................................
                V
                V
1046       BASIN5
                V
                V
1053         R116
                .
                .
1059                  453
                        .
                        .
1069         C117............
                .
                .
1072      C118............
             V
             V
1075      R118
             .
             .
1084         .-------> BASIN6
1081      DIV7
             .
             .
1089                .<-------  BASIN6
1087       RTDIV7
                V
                V
1090       RFDIV7
                .
                .
1096     CDIV7............
             .
             .
1099         454
                .
                .
1109      C119............
             V
             V
1112      R454
             .
             .
1119         415
                .
                .
1131                      .<-------   SF385
1129                RT385
                        V
                        V
1132                RR385
                        .
                        .
1139      415C........................
             V
             V
1142      R415
             .
             .
1149         455
                .
                .
1164                .-------->   BS455
1159         D455
                .
                .
1169                      .<-------   BS455
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1167          .           .           .       RT455
              .           .           .           V
              .           .           .           V
1170          .           .           .       SR455
              .           .           .           .
              .           .           .           .
1176          .           .       C455............
              .           .           .
              .           .           .
1179       455C......................
              V
              V
1182      SR440
              V
              V
1191      RR455
              .
              .
1197          .        456
              .           .
              .           .
1210          .           .-------> BASIN1
1207          .       DIV1
              .           .
              .           .
1216          .           .------->   WA30
1213          .       DIV2
              .           V
              .           V
1219          .       R456
              .           .
              .           .
1225          .           .        457
              .           .           .
              .           .           .
1235          .       C101............
              .           .
              .           .
1241          .           .-------> BASIN2
1238          .       DIV3
              .           .
              .           .
1246          .           .           .<------- BASIN2
1244          .           .     RTDIV3
              .           .           V
              .           .           V
1247          .           .     RFDIV3
              .           .           .
              .           .           .
1253          .      CDIV3............
              .           V
              .           V
1256          .       R101
              .           .
              .           .
1262          .           .        458
              .           .           .
              .           .           .
1272          .       C103............
              .           V
              .           V
1275          .       R103
              .           .
              .           .
1283          .           .           .<-------   WA30
1281          .           .       RT30
              .           .           V
              .           .           V
1284          .           .        R30
              .           .           .
              .           .           .
1292          .           .           .           .<------- BASIN1
1290          .           .           .       RTB1
              .           .           .           V
              .           .           .           V
1293          .           .           .         B1
              .           .           .           V
              .           .           .           V
1300          .           .           .        RB1
              .           .           .           .
              .           .           .           .
1306          .           .       CDIV............
              .           .           .
              .           .           .
1309          .           .           .        459
              .           .           .           .
              .           .           .           .
1319          .           .        C52............
              .           .           V
              .           .           V
1322          .           .        R52
              .           .           .
              .           .           .
1328          .           .           .        460
              .           .           .           .
              .           .           .           .
1338          .           .       C102............
              .           .           V
              .           .           V
1341          .           .     BASIN3
              .           .           V
              .           .           V
1348          .           .         R3
              .           .           .
              .           .           .
1354          .           .           .        461
              .           .           .           .
              .           .           .           .
1364          .           .       C104............
              .           .           .
              .           .           .
1367          .       C106............
              .           V
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                .          V
1370            .       R106
                .          .
                .          .
1376            .          .        462
                .          .          .
                .          .          .
1386            .       C56............
                .          .
                .          .
1389            .          .        480
                .          .          .
                .          .          .
1404            .          .          .-------->   BS480
1399            .          .       D480
                .          .          .
                .          .          .
1409            .          .          .          .<-------   BS480
1407            .          .          .      RT480
                .          .          .          V
                .          .          .          V
1410            .          .          .      SR480
                .          .          .          .
                .          .          .          .
1416            .          .       C480............
                .          .          .
                .          .          .
1419        480C........................
               V
               V
1422        R480
               V
               V
1428       RR480
                .
                .
1434            .       500
                .          .
                .          .
1444        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.	11.	.70		
+	ROUTED TO	R10	882.	12.40	114.	31.	11.	.70		
+	ROUTED TO	R12	824.	12.63	114.	31.	11.	.70		
+	HYDROGRAPH AT	20	959.	12.43	128.	32.	12.	1.12		
+	2 COMBINED AT	C20	1606.	12.57	240.	63.	23.	1.82		
+	ROUTED TO	R20	1604.	12.57	240.	63.	23.	1.82		
+	HYDROGRAPH AT	40	2569.	12.30	251.	66.	24.	2.23		
+	HYDROGRAPH AT	60	1516.	12.40	223.	60.	22.	1.75		
+	3 COMBINED AT	60C	5156.	12.37	701.	186.	67.	5.80		
+	ROUTED TO	SR60	118.	14.23	117.	113.	67.	5.80		
+	ROUTED TO	R60	118.	14.30	117.	113.	67.	5.80		
+	ROUTED TO	RR60	118.	14.40	117.	113.	67.	5.80		
+	HYDROGRAPH AT	80	1817.	12.27	173.	45.	16.	1.48		
+	2 COMBINED AT	80C	1866.	12.27	278.	155.	85.	1.48		
+	ROUTED TO	R80	1843.	12.30	278.	155.	85.	1.48		
+	HYDROGRAPH AT	100	379.	12.23	55.	14.	5.	.48		
+	2 COMBINED AT	100C	2196.	12.27	330.	168.	89.	1.96		
+	ROUTED TO	R100	2198.	12.30	330.	168.	89.	1.96		
+	HYDROGRAPH AT	120	3135.	12.27	312.	85.	31.	2.20		
+	2 COMBINED AT	120C	5262.	12.27	630.	245.	119.	4.16		
+	ROUTED TO	R120	5197.	12.30	630.	245.	119.	4.16		
+	HYDROGRAPH AT	140	594.	12.17	60.	16.	6.	.60		
+	HYDROGRAPH AT	150	572.	12.17	49.	13.	5.	.41		
+	ROUTED TO	R150	546.	12.23	49.	13.	5.	.41		
+	ROUTED TO	R152	504.	12.37	49.	13.	5.	.41		
+	HYDROGRAPH AT	160	212.	12.40	34.	9.	3.	.37		
+	HYDROGRAPH AT	180	785.	12.37	90.	23.	8.	1.00		
+	5 COMBINED AT	180C	6937.	12.30	849.	300.	139.	6.54		
+	HYDROGRAPH AT	210	870.	12.20	80.	21.	8.	.58		
+	ROUTED TO	R210	815.	12.27	80.	21.	8.	.58		
+	HYDROGRAPH AT	240	1405.	12.30	155.	39.	14.	1.40		
+	2 COMBINED AT	240C	2185.	12.30	233.	60.	22.	1.98		
+	ROUTED TO	SR240	634.	12.77	186.	49.	18.	1.98		
+	HYDROGRAPH AT	220	1126.	12.17	98.	25.	9.	.73		
+	2 COMBINED AT	220C	1138.	12.20	279.	73.	26.	2.71		

+	ROUTED TO	SR220	914.	12.43	272.	71.	26.	2.71
+	HYDROGRAPH AT	190	1403.	12.17	116.	31.	11.	.92
+	ROUTED TO	R190	1348.	12.23	116.	31.	11.	.92
+	ROUTED TO	R192	1267.	12.30	116.	31.	11.	.92
+	HYDROGRAPH AT	200	806.	12.17	69.	19.	7.	.54
+	3 COMBINED AT	200C	2624.	12.27	447.	119.	43.	4.16
+	ROUTED TO	SR200	2493.	12.37	442.	115.	41.	4.16
+	ROUTED TO	200SR	1725.	12.60	320.	85.	31.	4.16
+	2 COMBINED AT	C180	6937.	12.30	1162.	384.	169.	10.69
+	ROUTED TO	SR180	112.	29.43	112.	112.	87.	10.69
+	ROUTED TO	R180	112.	29.50	112.	112.	87.	10.69
+	HYDROGRAPH AT	260	386.	12.13	39.	11.	4.	.27
+	2 COMBINED AT	260C	391.	12.13	129.	119.	95.	.27
+	ROUTED TO	R260	376.	12.20	129.	119.	95.	.27
+	HYDROGRAPH AT	280	447.	12.10	39.	11.	4.	.30
+	2 COMBINED AT	280C	772.	12.13	163.	128.	98.	.57
+	ROUTED TO	R280	732.	12.23	162.	127.	97.	.57
+	HYDROGRAPH AT	300	853.	12.20	107.	29.	10.	.99
+	2 COMBINED AT	300C	1568.	12.20	263.	152.	107.	1.56
+	ROUTED TO	R300	1535.	12.27	262.	152.	106.	1.56
+	ROUTED TO	RR300	1506.	12.33	261.	152.	106.	1.56
+	HYDROGRAPH AT	350	1192.	12.20	103.	27.	10.	.97
+	DIVERSION TO	SF350	596.	12.20	51.	13.	5.	.97
+	HYDROGRAPH AT	D350	596.	12.20	51.	13.	5.	.97
+	ROUTED TO	350R	522.	12.40	51.	13.	5.	.97
+	HYDROGRAPH AT	310	376.	12.33	49.	12.	4.	.56
+	2 COMBINED AT	C310	871.	12.40	99.	25.	9.	.94
+	ROUTED TO	R310	767.	12.73	99.	25.	9.	.94
+	HYDROGRAPH AT	320	928.	12.20	119.	34.	12.	.97
+	DIVERSION TO	BS320	410.	11.97	21.	6.	2.	.97
+	HYDROGRAPH AT	D320	928.	12.20	105.	27.	10.	.97
+	HYDROGRAPH AT	RT320	410.	11.97	21.	6.	2.	.97
+	ROUTED TO	SR320	4.	4.17	4.	4.	2.	.97
+	4 COMBINED AT	C320	2421.	12.33	463.	206.	126.	3.47
+	HYDROGRAPH AT	340	1385.	12.20	178.	53.	19.	1.45
+	DIVERSION TO	BS340	1385.	12.20	104.	28.	10.	1.45
+	HYDROGRAPH AT	D340	1082.	12.37	90.	25.	9.	1.45
+	HYDROGRAPH AT	RT340	1385.	12.20	104.	28.	10.	1.45

+	ROUTED TO	SR340	19.	9.00	19.	19.	10.	1.45
+	3 COMBINED AT	C340	3474.	12.37	565.	248.	144.	4.92
	HYDROGRAPH AT	RT350	596.	12.20	51.	13.	5.	.97
+	ROUTED TO	RR350	519.	12.47	51.	13.	5.	.97
+	HYDROGRAPH AT	355	497.	12.33	68.	18.	6.	.66
+	2 COMBINED AT	C355	954.	12.43	119.	31.	11.	1.24
+	ROUTED TO	R355	867.	12.73	119.	31.	11.	1.24
+	HYDROGRAPH AT	360	464.	12.23	80.	24.	9.	.67
+	DIVERSION TO	BS360	464.	12.23	53.	14.	5.	.67
+	HYDROGRAPH AT	D360	247.	12.73	34.	9.	3.	.67
+	HYDROGRAPH AT	RT360	464.	12.23	53.	14.	5.	.67
+	ROUTED TO	SR360	10.	9.83	10.	10.	5.	.67
+	4 COMBINED AT	360C	3720.	12.37	716.	295.	163.	6.83
+	HYDROGRAPH AT	370	575.	12.30	78.	21.	8.	.67
+	HYDROGRAPH AT	395	178.	12.27	24.	7.	2.	.20
+	2 COMBINED AT	370C	742.	12.30	101.	28.	10.	.87
+	ROUTED TO	R370	638.	12.70	101.	28.	10.	.87
+	HYDROGRAPH AT	380	633.	12.27	95.	26.	9.	.97
	DIVERSION TO	BS380	633.	12.27	56.	14.	5.	.97
+	HYDROGRAPH AT	D380	435.	12.60	43.	11.	4.	.97
+	HYDROGRAPH AT	RT380	633.	12.27	56.	14.	5.	.97
+	ROUTED TO	SR380	10.	11.33	10.	10.	5.	.97
+	4 COMBINED AT	380C	4233.	12.70	859.	339.	181.	8.67
+	HYDROGRAPH AT	390	442.	12.03	32.	9.	3.	.24
+	DIVERSION TO	BS390	86.	11.77	6.	2.	1.	.24
+	HYDROGRAPH AT	D390	442.	12.03	28.	7.	3.	.24
+	HYDROGRAPH AT	RT390	86.	11.77	6.	2.	1.	.24
+	ROUTED TO	SR390	1.	.90	1.	1.	1.	.24
+	2 COMBINED AT	390C	443.	12.03	29.	9.	3.	.24
+	ROUTED TO	RR390	305.	12.53	29.	9.	3.	.24
+	HYDROGRAPH AT	400	340.	12.23	46.	13.	5.	.62
+	DIVERSION TO	BS400	252.	12.10	10.	3.	1.	.62
+	HYDROGRAPH AT	D400	340.	12.23	38.	10.	4.	.62
+	HYDROGRAPH AT	RT400	252.	12.10	10.	3.	1.	.62
	ROUTED TO	SR400	2.	8.70	2.	2.	1.	.62
+	2 COMBINED AT	C400	342.	12.23	40.	12.	5.	.62
+	3 COMBINED AT	400C	4578.	12.70	922.	358.	188.	9.53
+	HYDROGRAPH AT	385	577.	12.23	69.	19.	7.	.52

+	ROUTED TO SR220	914.	12.43	272.	71.	26.	2.71
+	HYDROGRAPH AT 190	1403.	12.17	116.	31.	11.	.92
	ROUTED TO R190	1348.	12.23	116.	31.	11.	.92
+	ROUTED TO R192	1267.	12.30	116.	31.	11.	.92
+	HYDROGRAPH AT 200	806.	12.17	69.	19.	7.	.54
+	3 COMBINED AT 200C	2624.	12.27	447.	119.	43.	4.16
+	ROUTED TO SR200	2493.	12.37	442.	115.	41.	4.16
+	ROUTED TO 200SR	1725.	12.60	320.	85.	31.	4.16
+	2 COMBINED AT C180	6937.	12.30	1162.	384.	169.	10.69
+	ROUTED TO SR180	112.	29.43	112.	112.	87.	10.69
+	ROUTED TO R180	112.	29.50	112.	112.	87.	10.69
+	HYDROGRAPH AT 260	386.	12.13	39.	11.	4.	.27
+	2 COMBINED AT 260C	391.	12.13	129.	119.	95.	.27
+	ROUTED TO R260	376.	12.20	129.	119.	95.	.27
+	HYDROGRAPH AT 280	447.	12.10	39.	11.	4.	.30
+	2 COMBINED AT 280C	772.	12.13	163.	128.	98.	.57
+	ROUTED TO R280	732.	12.23	162.	127.	97.	.57
+	HYDROGRAPH AT 300	853.	12.20	107.	29.	10.	.99
	2 COMBINED AT 300C	1568.	12.20	263.	152.	107.	1.56
+	ROUTED TO R300	1535.	12.27	262.	152.	106.	1.56
+	ROUTED TO RR300	1506.	12.33	261.	152.	106.	1.56
+	HYDROGRAPH AT 350	1192.	12.20	103.	27.	10.	.97
+	DIVERSION TO SF350	596.	12.20	51.	13.	5.	.97
+	HYDROGRAPH AT D350	596.	12.20	51.	13.	5.	.97
+	ROUTED TO 350R	522.	12.40	51.	13.	5.	.97
+	HYDROGRAPH AT 310	376.	12.33	49.	12.	4.	.56
+	2 COMBINED AT C310	871.	12.40	99.	25.	9.	.94
+	ROUTED TO R310	767.	12.73	99.	25.	9.	.94
+	HYDROGRAPH AT 320	928.	12.20	119.	34.	12.	.97
+	DIVERSION TO BS320	410.	11.97	21.	6.	2.	.97
+	HYDROGRAPH AT D320	928.	12.20	105.	27.	10.	.97
+	HYDROGRAPH AT RT320	410.	11.97	21.	6.	2.	.97
+	ROUTED TO SR320	4.	4.17	4.	4.	2.	.97
+	4 COMBINED AT C320	2421.	12.33	463.	206.	126.	3.47
	HYDROGRAPH AT 340	1385.	12.20	178.	53.	19.	1.45
+	DIVERSION TO BS340	1385.	12.20	104.	28.	10.	1.45
+	HYDROGRAPH AT D340	1082.	12.37	90.	25.	9.	1.45
+	HYDROGRAPH AT RT340	1385.	12.20	104.	28.	10.	1.45

+	ROUTED TO	SR340	19.	9.00	19.	19.	10.	1.45
+	3 COMBINED AT	C340	3474.	12.37	565.	248.	144.	4.92
	HYDROGRAPH AT	RT350	596.	12.20	51.	13.	5.	.97
+	ROUTED TO	RR350	519.	12.47	51.	13.	5.	.97
+	HYDROGRAPH AT	355	497.	12.33	68.	18.	6.	.66
+	2 COMBINED AT	C355	954.	12.43	119.	31.	11.	1.24
+	ROUTED TO	R355	867.	12.73	119.	31.	11.	1.24
+	HYDROGRAPH AT	360	464.	12.23	80.	24.	9.	.67
+	DIVERSION TO	BS360	464.	12.23	53.	14.	5.	.67
+	HYDROGRAPH AT	D360	247.	12.73	34.	9.	3.	.67
+	HYDROGRAPH AT	RT360	464.	12.23	53.	14.	5.	.67
+	ROUTED TO	SR360	10.	9.83	10.	10.	5.	.67
+	4 COMBINED AT	360C	3720.	12.37	716.	295.	163.	6.83
+	HYDROGRAPH AT	370	575.	12.30	78.	21.	8.	.67
+	HYDROGRAPH AT	395	178.	12.27	24.	7.	2.	.20
+	2 COMBINED AT	370C	742.	12.30	101.	28.	10.	.87
+	ROUTED TO	R370	638.	12.70	101.	28.	10.	.87
+	HYDROGRAPH AT	380	633.	12.27	95.	26.	9.	.97
	DIVERSION TO	BS380	633.	12.27	56.	14.	5.	.97
+	HYDROGRAPH AT	D380	435.	12.60	43.	11.	4.	.97
+	HYDROGRAPH AT	RT380	633.	12.27	56.	14.	5.	.97
+	ROUTED TO	SR380	10.	11.33	10.	10.	5.	.97
+	4 COMBINED AT	380C	4233.	12.70	859.	339.	181.	8.67
+	HYDROGRAPH AT	390	442.	12.03	32.	9.	3.	.24
+	DIVERSION TO	BS390	86.	11.77	6.	2.	1.	.24
+	HYDROGRAPH AT	D390	442.	12.03	28.	7.	3.	.24
+	HYDROGRAPH AT	RT390	86.	11.77	6.	2.	1.	.24
+	ROUTED TO	SR390	1.	.90	1.	1.	1.	.24
+	2 COMBINED AT	390C	443.	12.03	29.	9.	3.	.24
+	ROUTED TO	RR390	305.	12.53	29.	9.	3.	.24
+	HYDROGRAPH AT	400	340.	12.23	46.	13.	5.	.62
+	DIVERSION TO	BS400	252.	12.10	10.	3.	1.	.62
+	HYDROGRAPH AT	D400	340.	12.23	38.	10.	4.	.62
+	HYDROGRAPH AT	RT400	252.	12.10	10.	3.	1.	.62
	ROUTED TO	SR400	2.	8.70	2.	2.	1.	.62
+	2 COMBINED AT	C400	342.	12.23	40.	12.	5.	.62
+	3 COMBINED AT	400C	4578.	12.70	922.	358.	188.	9.53
+	HYDROGRAPH AT	385	577.	12.23	69.	19.	7.	.52

+	DIVERSION TO	SF385	346.	12.23	41.	12.	4.	.52
+	HYDROGRAPH AT	D385	231.	12.23	28.	8.	3.	.52
	ROUTED TO	385R	199.	12.60	28.	8.	3.	.52
+	HYDROGRAPH AT	420	691.	12.20	87.	25.	9.	.85
+	DIVERSION TO	BS420	280.	12.00	15.	4.	2.	.85
+	HYDROGRAPH AT	D420	691.	12.20	77.	20.	7.	.85
+	HYDROGRAPH AT	RT420	280.	12.00	15.	4.	2.	.85
+	ROUTED TO	SR420	13.	11.03	12.	4.	2.	.85
+	4 COMBINED AT	420C	4989.	12.37	1022.	384.	198.	10.87
+	HYDROGRAPH AT	440	180.	12.03	12.	3.	1.	.08
+	ROUTED TO	R70	176.	12.07	12.	3.	1.	.08
+	HYDROGRAPH AT	441	16.	12.03	1.	0.	0.	.01
+	2 COMBINED AT	C108	190.	12.07	13.	4.	1.	.09
+	DIVERSION TO	SPLIT	95.	12.07	7.	2.	1.	.09
+	HYDROGRAPH AT	DIV4	95.	12.07	7.	2.	1.	.09
+	ROUTED TO	R108	88.	12.13	7.	2.	1.	.09
+	HYDROGRAPH AT	442	95.	12.10	8.	2.	1.	.10
+	2 COMBINED AT	C67	180.	12.10	15.	4.	1.	.19
	DIVERSION TO	BASIN4	108.	12.10	5.	1.	0.	.19
+	HYDROGRAPH AT	DIV6	72.	12.10	9.	3.	1.	.19
+	HYDROGRAPH AT	RTDIV6	108.	12.10	5.	1.	0.	.19
+	ROUTED TO	RFDIV6	1.	11.90	1.	1.	0.	.19
+	2 COMBINED AT	CDIV6	73.	12.10	10.	3.	1.	.19
+	HYDROGRAPH AT	443	145.	12.07	13.	4.	1.	.08
+	DIVERSION TO	WSH66	78.	11.90	11.	3.	1.	.08
+	HYDROGRAPH AT	DIV66	67.	12.07	2.	1.	0.	.08
+	ROUTED TO	R113	65.	12.07	2.	1.	0.	.08
+	2 COMBINED AT	C114	135.	12.07	13.	4.	2.	.27
+	HYDROGRAPH AT	444	82.	12.03	5.	1.	0.	.04
+	ROUTED TO	R58	75.	12.07	5.	1.	0.	.04
+	HYDROGRAPH AT	445	292.	12.03	18.	5.	2.	.19
+	2 COMBINED AT	C107	361.	12.03	22.	6.	2.	.23
+	ROUTED TO	R107	360.	12.07	22.	6.	2.	.23
+	HYDROGRAPH AT	RTB2	95.	12.07	7.	2.	1.	.09
	ROUTED TO	RSPLIT	94.	12.07	7.	2.	1.	.09
+	HYDROGRAPH AT	446	62.	12.03	5.	2.	1.	.04
+	3 COMBINED AT	C109	513.	12.07	34.	9.	3.	.27
+	DIVERSION TO	WSH404	35.	11.73	7.	2.	1.	.27

+	HYDROGRAPH AT	DIV5	478.	12.07	26.	7.	2.	.27
+	ROUTED TO	R109	462.	12.10	26.	7.	2.	.27
	HYDROGRAPH AT	447	133.	12.07	12.	4.	1.	.09
+	HYDROGRAPH AT	RT404	35.	11.73	7.	2.	1.	.27
+	ROUTED TO	R404	35.	11.87	7.	2.	1.	.27
+	3 COMBINED AT	C110	622.	12.07	45.	13.	5.	.36
+	ROUTED TO	R110	620.	12.10	45.	13.	5.	.36
+	2 COMBINED AT	C115	748.	12.10	57.	16.	6.	.63
+	ROUTED TO	R115	751.	12.10	57.	16.	6.	.63
+	HYDROGRAPH AT	448	87.	12.03	6.	2.	1.	.05
+	HYDROGRAPH AT	449	77.	12.03	5.	1.	0.	.05
+	2 COMBINED AT	C6364	162.	12.03	10.	3.	1.	.09
+	ROUTED TO	R6364	133.	12.17	10.	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	11.	3.	1.	.08
+	HYDROGRAPH AT	452	60.	12.03	4.	1.	0.	.04
+	2 COMBINED AT	C6465	138.	12.03	15.	4.	1.	.04
	ROUTED TO	R6566	133.	12.10	15.	4.	1.	.04
+	4 COMBINED AT	C116	334.	12.17	33.	9.	3.	.23
+	ROUTED TO	BASIN5	146.	12.47	33.	9.	3.	.23
+	ROUTED TO	R116	145.	12.53	33.	9.	3.	.23
+	HYDROGRAPH AT	453	59.	12.10	7.	2.	1.	.06
+	2 COMBINED AT	C117	164.	12.50	39.	11.	4.	.29
+	2 COMBINED AT	C118	830.	12.10	95.	27.	10.	.92
+	ROUTED TO	R118	819.	12.10	95.	27.	10.	.92
+	DIVERSION TO	BASIN6	229.	12.10	9.	2.	1.	.92
+	HYDROGRAPH AT	DIV7	590.	12.10	87.	25.	9.	.92
+	HYDROGRAPH AT	RTDIV7	229.	12.10	9.	2.	1.	.92
+	ROUTED TO	RFDIV7	1.	11.97	1.	1.	1.	.92
+	2 COMBINED AT	CDIV7	591.	12.10	88.	25.	10.	.92
+	HYDROGRAPH AT	454	151.	12.17	20.	6.	2.	.18
+	2 COMBINED AT	C119	734.	12.13	107.	31.	12.	1.10
+	ROUTED TO	R454	707.	12.20	107.	31.	12.	1.10
	HYDROGRAPH AT	415	530.	12.17	73.	21.	8.	.61
+	HYDROGRAPH AT	RT385	346.	12.23	41.	12.	4.	.52
+	ROUTED TO	RR385	303.	12.60	41.	12.	4.	.52
+	3 COMBINED AT	415C	1380.	12.23	219.	63.	23.	1.71

+	ROUTED TO	R415	1363.	12.27	219.	63.	23.	1.71
+	HYDROGRAPH AT	455	1276.	12.13	137.	42.	15.	1.11
	DIVERSION TO	BS455	1276.	12.13	134.	37.	13.	1.11
+	HYDROGRAPH AT	D455	27.	13.03	11.	5.	2.	1.11
+	HYDROGRAPH AT	RT455	1276.	12.13	134.	37.	13.	1.11
+	ROUTED TO	SR455	25.	10.47	25.	25.	13.	1.11
+	2 COMBINED AT	C455	52.	13.03	36.	30.	15.	1.11
+	3 COMBINED AT	455C	6019.	12.40	1237.	461.	232.	13.69
+	ROUTED TO	SR440	239.	19.97	238.	224.	148.	13.69
+	ROUTED TO	RR455	239.	20.37	238.	224.	147.	13.69
+	HYDROGRAPH AT	456	468.	12.07	35.	10.	4.	.26
+	DIVERSION TO	BASIN1	184.	12.07	8.	2.	1.	.26
+	HYDROGRAPH AT	DIV1	284.	12.07	27.	8.	3.	.26
+	DIVERSION TO	WA30	58.	12.07	10.	3.	1.	.26
+	HYDROGRAPH AT	DIV2	226.	12.07	18.	4.	2.	.26
+	ROUTED TO	R456	213.	12.13	18.	4.	2.	.26
+	HYDROGRAPH AT	457	261.	12.07	20.	5.	2.	.19
+	2 COMBINED AT	C101	459.	12.10	37.	10.	3.	.45
	DIVERSION TO	BASIN2	163.	12.10	7.	2.	1.	.45
+	HYDROGRAPH AT	DIV3	297.	12.10	30.	8.	3.	.45
+	HYDROGRAPH AT	RTDIV3	163.	12.10	7.	2.	1.	.45
+	ROUTED TO	RFDIV3	2.	11.90	2.	2.	1.	.45
+	2 COMBINED AT	CDIV3	298.	12.10	32.	9.	3.	.45
+	ROUTED TO	R101	296.	12.10	32.	9.	3.	.45
+	HYDROGRAPH AT	458	346.	12.03	24.	6.	2.	.19
+	2 COMBINED AT	C103	626.	12.07	55.	15.	6.	.64
+	ROUTED TO	R103	620.	12.07	55.	15.	6.	.64
+	HYDROGRAPH AT	RT30	58.	12.07	10.	3.	1.	.26
+	ROUTED TO	R30	57.	12.10	10.	3.	1.	.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.	2.	.12
+	HYDROGRAPH AT	459	43.	12.03	3.	1.	0.	.03
	2 COMBINED AT	C52	112.	12.13	20.	6.	2.	.15
+	ROUTED TO	R52	111.	12.17	20.	6.	2.	.15
+	HYDROGRAPH AT	460	203.	12.07	18.	6.	2.	.14
+	2 COMBINED AT	C102	300.	12.07	38.	12.	4.	.29

+	ROUTED TO	BASIN3	70.	12.63	38.	12.	4.	.29
+	ROUTED TO	R3	70.	12.77	38.	12.	4.	.29
	HYDROGRAPH AT	461	152.	12.10	16.	5.	2.	.12
+	2 COMBINED AT	C104	203.	12.10	53.	16.	6.	.41
+	2 COMBINED AT	C106	815.	12.07	107.	31.	11.	1.05
+	ROUTED TO	R106	777.	12.17	107.	31.	11.	1.05
+	HYDROGRAPH AT	462	531.	12.07	40.	11.	4.	.30
+	2 COMBINED AT	C56	1224.	12.10	146.	42.	15.	1.35
+	HYDROGRAPH AT	480	1000.	12.10	93.	29.	10.	.73
+	DIVERSION TO	BS480	504.	11.93	27.	8.	3.	.73
+	HYDROGRAPH AT	D480	1000.	12.10	75.	20.	7.	.73
+	HYDROGRAPH AT	RT480	504.	11.93	27.	8.	3.	.73
+	ROUTED TO	SR480	6.	3.90	6.	6.	3.	.73
+	2 COMBINED AT	C480	1005.	12.10	81.	26.	10.	.73
+	3 COMBINED AT	480C	2209.	12.10	391.	288.	180.	2.09
+	ROUTED TO	R480	2190.	12.10	391.	288.	180.	2.09
+	ROUTED TO	RR480	2052.	12.20	388.	287.	180.	2.09
+	HYDROGRAPH AT	500	1073.	12.27	122.	33.	12.	.93
	2 COMBINED AT	500C	3053.	12.23	497.	314.	190.	3.02

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

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*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*            JUN   1998                *
*          VERSION 4.1                 *
*                                      *
*  RUN DATE   27JUL00  TIME  11:29:32  *
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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  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   UPDATE TO EXISTING CONDITION 24-HR 100-YR MODEL RUN BASED ON RE-ALIGNMENT
 13           ID   OF SUB-BASIN BOUNDARIES FOR SUB-BASINS 385 (REDUCED) & 415 (ENLARGED)
 14           ID   UPDATE BASED ON INFORMATION FROM 2' CONTOUR MAPPING.
 15           ID
 16           ID   ANALYSIS PERFORMED BY WOOD/PATEL; MW;        07/27/00  FILE: S24CE30A.DAT
 17           ID
 18           ID   DDM MCUHP1 SPOOK HILL AMDP - EXISTING CONDITIONS MODEL - 100YR, 24HR STORM
              *       Original File Name: S24CE30.DAT
              *       Modified File Name: S24CE30A.DAT
              *       Changes: 1) No. of Hydrograph Ordinates Increased to 2000
              *                2) SE, SV and SQ Cards for the Three (3) FRSs Updated
              *                3) Sediment Volumes Subtracted from Storage Volumes
              *                4) Old Elevation Datum Adjusted to NAVD 1988
              *       Wood/Patel, July 19, 2000.  SZ.
              *
              *       Changes: 5) d-theta changed for all sub-basins to dry
              *       Wood/Patel, July 27, 2000.  MW.
              *
              *DIAGRAM
 19           IT       2                    2000
 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    3.68    5.80
 34           JD    3.58   10.00
 35           JD    3.57   10.69
 36           JD    3.54   13.69
 37           JD    3.43   30.00
 38           JD    3.28   60.00
              * DDM   ***** Updated *****
1                                    HEC-1 INPUT                                                    PAGE  2

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

 39           KK      10
 40           KM   SUB-BASIN 10
 41           KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 42           KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
 43           KM     L = 2.00  Kb = .044  Adj. Slope =  165.0
 44           BA    .702
 45           LG    .350    .320   7.600    .090  15.000
 46           UC    .421    .302
 47           UA       0       3       5       8      12      20      43      75      90      96
 48           UA     100
              * DDM   ***** Preserved *****

 49           KK     R10
 50           KM   ROUTING OF FLOW FROM SUB-BASIN 10 TO R12
 51           RS       4    FLOW      -1
 52           RC    .045     .03    .045    8700    .021
 53           RX       0       1       2      17      27      42      43      44
 54           RY       5       5       5       0       0       5       5       5
              * DDM   ***** Preserved *****
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 55          KK     R12
 56          KM   ROUTING OF FLOW FROM R12 TO SUB-BASIN 20
 57          RS       7    FLOW      -1
 58          RC    .045     .03    .045    4500     .01
 59          RX       0       1      45    52.5    72.5      80     124     125
 60          RY       3     2.5     2.5       0       0     2.5     2.5       3
             * DDM   ***** Updated *****

 61          KK      20
 62          KM   SUB-BASIN 20
 63          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 64          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
 65          KM     L = 2.50  Kb = .041  Adj. Slope =   88.0
 66          BA   1.120
 67          LG    .350    .390   5.800    .190   1.000
 68          UC    .658    .454
 69          UA       0       3       5       8      12      20      43      75      90      96
 70          UA     100
             * DDM   ***** Preserved *****

 71          KK     C20
 72          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 10 AND 20
 73          HC       2
             * DDM   ***** Preserved *****

 74          KK     R20
 75          KM        ROUTE FLOW THROUGH BULLDOG FLOODWAY FROM APACHE JUNCTION FRS
 76          RS       1    FLOW      -1
 77          RC    .016    .016    .016     990    .004
 78          RX       0       5       7    14.5    34.5      42      44      50
 79          RY       4       2       2       0       0       2       2       4
             * DDM   ***** Updated *****
1                                          HEC-1 INPUT                                          PAGE  3

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

 80          KK      40
 81          KM   SUB-BASIN 40
 82          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 83          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
 84          KM     L = 3.08  Kb = .036  Adj. Slope =  189.0
 85          BA   2.233
 86          LG    .340    .350   4.900    .280   5.000
 87          UC    .496    .264
 88          UA       0       3       5       8      12      20      43      75      90      96
 89          UA     100
             * DDM   ***** Updated *****

 90          KK      60
 91          KM   SUB-BASIN 60
 92          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 93          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .990
 94          KM     L = 4.19  Kb = .038  Adj. Slope =  209.6
 95          BA   1.746
 96          LG    .330    .390   5.800    .190   9.000
 97          UC    .600    .481
 98          UA       0       3       5       8      12      20      43      75      90      96
 99          UA     100
             * DDM   ***** Preserved *****

100          KK     60C
101          KM   HYDROGRAPH COMBINATION FOR APACHE JUNCTION FRS
             *      1       2
102          HC       3
             * DDM   ***** Preserved *****

103          KK    SR60
104          KM   APACHE JUNCTION FRS AS-BUILT PLANS 12/19/88
105          KM   OUTLET PIPE=30"RCP; L=136.6'; INLET INV.=1783.5; OUTLET INV.=1783
106          KM   EMERGENCY SPILLWAY ELEV.=1799.77'; PRINCIPLE SPILLWAY ELEV.=1793.5'
107          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 100 ACRE-FEET
             *  ESE = 1801.92 ft; PSE = 1795.65 ft; Sediment Vol. = 237 Ac-Ft.
108          RS       1    STOR       0
109          SV       0       0      77     242     371     439     563     687    2163
110          SQ       0      12     103     114     120     362    1462    3101   30000
111          SE    95.0    96.0    98.0   100.0   101.6   101.9   103.0   104.0   112.9
             * DDM   ***** Preserved *****

112          KK     R60
113          KM        ROUTE FLOW THROUGH BULLDOG FLOODWAY FROM APACHE JUNCTION FRS
114          RS       2    FLOW      -1
115          RC    .016    .016    .016    2850    .012
116          RX       0       1       2     2.1     5.6     5.7       6       7
117          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

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

124          KK      80
125          KM   SUB-BASIN 80
126          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
127          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .991
128          KM     L = 2.69  Kb = .039  Adj. Slope =  229.8
129          BA   1.475
130          LG    .330    .380   5.600    .210   4.000
131          UC    .438    .261
132          UA       0       3       5       8      12      20      43      75      90      96
133          UA     100
             * DDM   ***** Preserved *****

134          KK     80C
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 135          KM   HYDROGRAPH COMBINATION FOR FLOW FROM APACHE JUNCTION FRS & SUB-BASIN 80
 136          HC       2   1.475
              * DDM   ***** Preserved *****

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

 143          KK     100
 144          KM   SUB-BASIN 100
 145          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 146          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
 147          KM     L = 1.94  Kb = .046  Adj. Slope =  108.0
 148          BA    .484
 149          LG    .320    .360   5.100    .260   3.000
 150          UC    .546    .486
 151          UA       0       5      16      30      65      77      84      90      94      97
 152          UA     100
              * DDM   ***** Preserved *****

 153          KK    100C
 154          KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 80 & 100
 155          HC       2
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE  5

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


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

 162          KK     120
 163          KM   SUB-BASIN 120
 164          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 165          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
 166          KM     L = 3.07  Kb = .037  Adj. Slope =  239.0
 167          BA   2.202
 168          LG    .330    .360   6.800    .130  11.000
 169          UC    .433    .229
 170          UA       0       3       5       8      12      20      43      75      90      96
 171          UA     100
              * DDM   ***** Preserved *****

 172          KK    120C
 173          KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 100 & 120
 174          HC       2
              * DDM   ***** Preserved *****

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

 181          KK     140
 182          KM   SUB-BASIN 140
 183          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 184          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
 185          KM     L = 1.61  Kb = .044  Adj. Slope =  149.0
 186          BA    .598
 187          LG    .310    .350   4.200    .440   5.000
 188          UC    .429    .284
 189          UA       0       5      16      30      65      77      84      90      94      97
 190          UA     100
              * DDM   ***** Updated *****

 191          KK     150
 192          KM   SUB-BASIN 150
 193          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 194          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
 195          KM     L = 1.50  Kb = .047  Adj. Slope =  314.6
 196          BA    .408
 197          LG    .350    .360   5.100    .260   7.000
 198          UC    .296    .221
 199          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

 200          UA     100
              * DDM   ***** Preserved *****

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

 207          KK    R152
 208          KM   ROUTING OF FLOW FROM R152 TO SUB-BASIN 160
 209          RS       4    FLOW      -1
 210          RC    .045     .03    .045    5900    .019
 211          RX       0       1       2       8      33      39      40      41
 212          RY       2       2       2       0       0       2       2       2
              * DDM   ***** Updated *****

 213          KK     160
 214          KM   SUB-BASIN 160
 215          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
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216          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
217          KM     L = 2.10  Kb = .047  Adj. Slope =  129.0
218          BA    .369
219          LG    .340    .350   4.150    .440   1.000
220          UC    .592    .660
221          UA       0       3       5       8      12      20      43      75      90      96
222          UA     100
             * DDM   ***** Updated *****

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

233          KK    180C
234          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
235          HC       5
             * DDM   ***** Updated *****

236          KK     210
237          KM   SUB-BASIN 210
238          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
239          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
240          KM     L = 1.84  Kb = .045  Adj. Slope =  315.0
241          BA    .583
242          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

243          UC    .321    .232
244          UA       0       3       5       8      12      20      43      75      90      96
245          UA     100
             * DDM   ***** Preserved *****

246          KK    R210
247          KM   ROUTING OF FLOW FROM SUB-BASIN 210 TO SUB-BASIN 220
248          RS       2    FLOW      -1
249          RC    .045     .03    .045    5100    .022
250          RX       0       1       2      14      34      46      47      48
251          RY       4       4       4       0       0       4       4       4
             * DDM   ***** Updated *****

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

262          KK    240C
263          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
264          HC       2
             * DDM   ***** Preserved *****

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

272          KK     220
273          KM   SUB-BASIN 220
274          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
275          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
276          KM     L = 1.92  Kb = .043  Adj. Slope =  315.0
277          BA    .725
278          LG    .350    .350   7.000    .120   4.000
279          UC    .317    .209
280          UA       0       3       5       8      12      20      43      75      90      96
281          UA     100
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                                    PAGE  8

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

282          KK    220C
283          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
284          HC       2
             * DDM   ***** Preserved *****

285          KK   SR220
286          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
287          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
288          RS       1    STOR       0
289          SA     .78     4.1    13.7
290          SE       1       3      10
291          SS       3      65       3     1.5
             * DDM   ***** Updated *****

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

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

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

314          KK     200
315          KM   SUB-BASIN 200
316          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
317          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
318          KM     L = 1.58  Kb = .045  Adj. Slope =  305.6
319          BA    .535
320          LG    .350    .390   5.700    .200  10.000
321          UC    .300    .200
322          UA      0       3       5       8      12      20      43      75      90      96
323          UA    100
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

324          KK    200C
325          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 220 & 200
326          HC       3
             * DDM   ***** Preserved *****

327          KK   SR200
328          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
329          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
330          RS       1    STOR       0
331          SA    2.56     3.1     9.4
332          SE       0       3      10
333          SS       3     112       3     1.5
             * DDM   ***** Preserved *****

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

341          KK    C180
342          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
             *      1       2
343          HC       2
             * DDM   ***** Preserved *****

344          KK   SR180
345          KM   SIGNAL BUTTE FRS DATED 1/28/85
346          KM   OUTLET PIPE=36"RCP; L= 147';  INLET INV.=1690; OUTLET INV.=1687
347          KM   EMERGENCY SPILLWAY ELEV.=1712.4; PRINCIPLE SPILLWAY ELEV.=1701
348          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 250 ACRE-FEET
             *  ESE = 1714.63 ft; PSE = 1703.23 ft; Sediment Vol. = 247 Ac-Ft.
349          RS       1    STOR       0
350          SV       0      92     226     462     742    1197    1418    1776    1941    3114
351          SQ       0      10    10.5      98     133     149     155    1484    2567    6000
352          SE      99     101   103.0     106     109   113.0   114.6     117     118     120
             * DDM   ***** Preserved *****

353          KK    R180
354          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
355          KM   ROUTE FLOW FROM SIGNAL BUTTE FRS TO SUB-BASIN 260
356          RS       3    FLOW      -1
357          RC    .035    .025    .035    1500    .003
358          RX       0       1       2    22.6    38.6    59.2      60      61
359          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

360          KK     260
361          KM   SUB-BASIN 260
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  .998
364          KM     L =  .81  Kb = .049  Adj. Slope =   68.0
365          BA    .267
366          LG    .300    .360   6.800    .160  15.000
367          UC    .371    .221
368          UA      0       5      16      30      65      77      84      90      94      97
369          UA    100
             * DDM   ***** Preserved *****

370          KK    260C
371          KM   HYDROGRAPH COMBINATION FOR OUTFLOW OF SIGNAL BUTTE FRS & SUB-BASIN 260
372          HC       2    .267
             * DDM   ***** Preserved *****

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

380          KK     280
381          KM   SUB-BASIN 280
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  .998
384          KM     L =   .77  Kb = .049  Adj. Slope =   84.0
385          BA    .304
386          LG    .300    .370   5.300    .290  15.000
387          UC    .342    .180
388          UA       0       5      16      30      65      77      84      90      94      97
389          UA     100
             * DDM   ***** Preserved *****

390          KK    280C
391          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 260 & SUB-BASIN 280
392          HC       2
             * DDM   ***** Preserved *****

393          KK    R280
394          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
395          KM   ROUTE FLOW FROM SUB-BASIN 280 TO SUB-BASIN 300
396          RS       2    FLOW      -1
397          RC    .035    .025    .035    2500    .003
398          RX       0       1       2    23.4    43.4    64.8      65      66
399          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Updated *****
1                                        HEC-1 INPUT                                          PAGE 11

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

400          KK     300
401          KM   SUB-BASIN 300
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  .994
404          KM     L = 2.28  Kb = .041  Adj. Slope =  127.0
405          BA    .988
406          LG    .340    .350   4.500    .370   7.000
407          UC    .542    .365
408          UA       0       5      16      30      65      77      84      90      94      97
409          UA     100
             * DDM   ***** Preserved *****

410          KK    300C
411          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 280 & 300
412          HC       2
             * DDM   ***** Preserved *****

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

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

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

437          KK    D350
438          KM   DIVERT FLOW FROM SUB-BASIN 350. FOR MODELING PURPOSES THE SPLIT FLOW WILL
439          KM   BE ROUTED BETWEEN SUB-BASINS 355 & 310. THE MAIN FLOW WILL ROUTED TO 310
440          DT   SF350
441          DI       0    5000
442          DQ       0    2500
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 12

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

443          KK    350R
444          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING
445          KM   ROUTING OF MAIN FLOW FROM DIVERSION OF SUB-BASIN 350 TO SUB-BASIN 310
446          RS       6    FLOW      -1
447          RC    .045    .035    .045    5150    .025
448          RX       0       1      40      46      56      62     102     103
449          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

450          KK     310
451          KM   SUB-BASIN 310
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  .997
454          KM     L = 2.70  Kb = .045  Adj. Slope =  283.5
455          BA    .555
456          LG    .350    .350   3.910    .480    .000
457          UC    .483    .511
458          UA       0       3       5       8      12      20      43      75      90      96
459          UA     100
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            * DDM   ***** Preserved *****

460         KK    C310
461         KM   HYDROGRAPH COMBINATION OF SUB-BASINS 350 & 310
462         HC       2    .943
            * DDM   ***** Preserved *****

463         KK    R310
464         KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
465         KM   ROUTING OF FLOW FROM SUB-BASIN 310 TO 320
466         RS      10    FLOW      -1
467         RC    .045    .035    .045   10050    .022
468         RX       0       1      40      46      56      62     102     103
469         RY       3       2       2       0       0       2       2       3
            * DDM   ***** Updated *****

470         KK     320
471         KM   SUB-BASIN 320
472         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
473         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
474         KM     L = 2.20  Kb = .042  Adj. slope =  132.0
475         BA    .972
476         LG    .310    .350   4.550    .360  14.000
477         UC    .517    .339
478         UA       0       5      16      30      65      77      84      90      94      97
479         UA     100
            * DDM   ***** Preserved *****

480         KK    D320
481         KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
482         KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
483         KM   SIERRA HEIGHTS       FALCON RIDGE    & MARBLE CREEK
484         KM        MAXIMUM VOLUME DIVERSION = 12.27acre-feet
            *      1
485         DT   BS320   12.27
1                                    HEC-1 INPUT                                    PAGE 13

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

486         DI       0   10000
487         DQ       0   10000
            * DDM   ***** Preserved *****

488         KK   RT320
489         KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
490         DR   BS320
            * DDM   ***** Preserved *****

491         KK   SR320
492         KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
493         KM   12.27 ACRE-FEETx43560/36x3600=4.1cfs
            *      1
494         RS       1    STOR       0
495         SV       0     .01    12.3
496         SQ       0     4.2     4.2
            * DDM   ***** Preserved *****

497         KK    C320
498         KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
499         HC       4
            * DDM   ***** Updated *****

500         KK     340
501         KM   SUB-BASIN 340
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  .991
504         KM     L = 2.40  Kb = .042  Adj. slope =  160.0
505         BA   1.449
506         LG    .280    .350   4.150    .520  21.000
507         UC    .525    .295
508         UA       0       5      16      30      65      77      84      90      94      97
509         UA     100
            * DDM   ***** Preserved *****

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

518         KK   RT340
519         KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
520         DR   BS340
            * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                    PAGE 14

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

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

527         KK    C340
528         KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
529         HC       3
            * DDM   ***** Preserved *****

530         KK   RT350
531         KM   RETRIEVE SPLIT FLOW FROM DIVERSION OF SUB-BASIN 350
532         DR   SF350
            * DDM   ***** Preserved *****
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533          KK   RR350
534          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
535          KM   ROUTING OF FLOW FROM SPLIT OF SUB-BASIN 350 TO 355
536          RS       8    FLOW      -1
537          RC    .045    .035    .045    6050    .025
538          RX       0       1      40      46      56      62     102     103
539          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

540          KK     355
541          KM   SUB-BASIN 355
542          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
543          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
544          KM     L = 3.00  Kb = .044  Adj. Slope =  284.0
545          BA    .659
546          LG    .340    .350   4.450    .370   4.000
547          UC    .488    .509
548          UA       0       3       5       8      12      20      43      75      90      96
549          UA     100
             * DDM   ***** Preserved *****

550          KK    C355
551          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 355 AND THE SPLIT FLOW FROM SUB-BASIN 350
552          HC       2    1.24
             * DDM   ***** Preserved *****

553          KK    R355
554          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
555          KM   ROUTING OF FLOW FROM SUB-BASIN 355 TO SUB-BASIN 360
556          RS       9    FLOW      -1
557          RC    .045    .035    .045   10100    .026
558          RX       0       1      40      46      56      62     102     103
559          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

560          KK     360
561          KM   SUB-BASIN 360
562          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
563          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
564          KM     L = 2.10  Kb = .048  Adj. Slope =  124.0
565          BA    .670
566          LG    .260    .350   4.100    .560  20.000
567          UC    .604    .481
568          UA       0       5      16      30      65      77      84      90      94      97
569          UA     100
             * DDM   ***** Preserved *****

570          KK    D360
571          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
572          KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
573          KM        MAXIMUM VOLUME DIVERSION = 28.6 acre-feet
             *      1
574          DT   BS360    28.6
575          DI       0   10000
576          DQ       0   10000
             * DDM   ***** Preserved *****

577          KK   RT360
578          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
579          DR   BS360
             * DDM   ***** Preserved *****

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

586          KK    360C
587          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
588          HC       4
             * DDM   ***** Updated *****

589          KK     370
590          KM   SUB-BASIN 370
591          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
592          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
593          KM     L = 2.90  Kb = .044  Adj. Slope =  294.6
594          BA    .667
595          LG    .340    .350   4.650    .330   9.000
596          UC    .458    .459
597          UA       0       3       5       8      12      20      43      75      90      96
598          UA     100
             * DDM   ***** Updated *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

599          KK     395
600          KM   SUB-BASIN 395
601          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
602          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
603          KM     L = 1.60  Kb = .051  Adj. Slope =  215.8
604          BA    .198
605          LG    .330    .350   4.900    .300  10.000
606          UC    .387    .474
607          UA       0       3       5       8      12      20      43      75      90      96
608          UA     100
             * DDM   ***** Preserved *****

609          KK    370C
610          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
611          HC       2
             * DDM   ***** Preserved *****

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

619          KK     380
620          KM   SUB-BASIN 380
621          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
622          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
623          KM     L = 2.20  Kb = .048  Adj. Slope =  114.0
624          BA    .972
625          LG    .300    .350   4.150    .500   7.000
626          UC    .671    .454
627          UA       0       5      16      30      65      77      84      90      94      97
628          UA     100
             * DDM   ***** Preserved *****

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

636          KK   RT380
637          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
638          DR   BS380
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

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

645          KK    380C
646          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
647          HC       4
             * DDM   ***** Updated *****

648          KK     390
649          KM   SUB-BASIN 390
650          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
651          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
652          KM     L =  .70  Kb = .050  Adj. Slope =  299.4
653          BA    .244
654          LG    .300    .350   4.700    .380  18.000
655          UC    .208    .109
656          UA       0       5      16      30      65      77      84      90      94      97
657          UA     100
             * DDM   ***** Preserved *****

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

665          KK   RT390
666          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
667          DR   BS390
             * DDM   ***** Preserved *****

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

674          KK    390C
675          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
676          HC       2
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

677          KK   RR390
678          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
679          KM   FROM SUB-BASIN 390 TO SUB-BASIN 400
680          RS      14     FLOW      -1
681          RC    .045    .045    .045    8800    .020
682          RX       0       1      40      46      56      62     102     103
683          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

684          KK     400
685          KM   SUB-BASIN 400
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 = 1.64  Kb = .046  Adj. Slope =  110.0
689          BA    .616
690          LG    .320    .350   3.130    .930   6.000
691          UC    .596    .408
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692          UA       0       5      16      30      65      77      84      90      94      97
693          UA     100
             * DDM   ***** Preserved *****

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

701          KK   RT400
702          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
703          DR   BS400
             * DDM   ***** Preserved *****

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

710          KK    C400
711          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
712          HC       2
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

713          KK    400C
714          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
715          HC       3
             * DDM   ***** Updated *****

716          KK     385
717          KM   SUB-BASIN 385
718          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
719          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
720          KM     L = 2.30  Kb = .045  Adj. Slope =  303.0
721          BA    .523
722          LG    .340    .380   5.600    .220  13.000
723          UC    .383    .360
724          UA       0       3       5       8      12      20      43      75      90      96
725          UA     100
             * DDM   ***** Preserved *****

726          KK    D385
727          KM   DIVERT FLOW INTO SUB-BASINS 415 & 420
728          DT   SF385
729          DI       0    5000
730          DQ       0    3000
             * DDM   ***** Preserved *****

731          KK    385R
732          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
733          KM   ROUTING OF FLOW DIVERSION FROM SUB-BASIN 385 INTO SUB-BASIN 420
734          RS      12    FLOW      -1
735          RC    .045     .04    .045   10250    .022
736          RX       0       1      40      46      56      62     102     103
737          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

738          KK     420
739          KM   SUB-BASIN 420
740          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
741          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .995
742          KM     L = 1.91  Kb = .042  Adj. Slope =  120.0
743          BA    .849
744          LG    .310    .350   3.880    .580  12.000
745          UC    .529    .336
746          UA       0       5      16      30      65      77      84      90      94      97
747          UA     100
             * DDM   ***** Preserved *****

748          KK    D420
749          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
750          KM   DETENTION/RETENTION BASINS LOCATED WITHIN GRAY FOX SUBDIVISION
751          KM        MAXIMUM VOLUME DIVERSION = 8.65 acre-feet
             *      1
752          DT   BS420    8.65
753          DI       0   10000
754          DQ       0   10000
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

755          KK   RT420
756          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
757          DR   BS420
             * DDM   ***** Preserved *****

758          KK   SR420
759          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
760          KM   38.55 ACRE-FEETx43560/36x3600=13cfs
761          RS       1    STOR       0
762          SV       0     .01   38.55
763          SQ       0      13      13
             * DDM   ***** Preserved *****

764          KK    420C
765          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
766          HC       4   10.87
             * DDM   ***** Updated *****
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767          KK     440
768          KM   SUB-BASIN 440
769          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
770          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
771          KM     L =  .40  Kb = .039  Adj. Slope =  315.0
772          BA    .080
773          LG    .190    .380   6.400    .140  13.000
774          UC    .129    .077
775          UA       0       3       5       8      12      20      43      75      90      96
776          UA     100
             * DDM   ***** Preserved *****

777          KK     R10
778          KM   ROUTE FLOW FROM SUB-BASIN 440 TO C108
779          RS       1    FLOW      -1
780          RC     .05    .035     .05    2250     .08
781          RX    1000    1025    1050    1070    1075    1095    1120    1145
782          RY      30    22.9    15.7      10      10    15.7    22.9      30
             * DDM   ***** Updated *****

783          KK     441
784          KM   SUB-BASIN 441
785          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
786          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
787          KM     L =  .28  Kb = .069  Adj. Slope =  315.0
788          BA    .010
789          LG    .300    .380   5.600    .220   5.000
790          UC    .150    .225
791          UA       0       5      16      30      65      77      84      90      94      97
792          UA     100
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 21

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

793          KK    C108
794          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 440 & 441
795          HC       2
             * DDM   ***** Preserved *****

796          KK    DIV4
797          KM        SPLIT FLOW WITH TWO 42 INCH PIPES TO WEST AND SOUTH
             *      1
798          DT   SPLIT
799          DI       0      14      40      82     120     154     180
800          DQ       0       7      20      41      60      77      90
             * DDM   ***** Preserved *****

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

807          KK     442
808          KM   SUB-BASIN 442
809          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
810          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
811          KM     L =  .83  Kb = .055  Adj. Slope =  274.2
812          BA    .100
813          LG    .300    .350   3.290    .770   5.000
814          UC    .262    .268
815          UA       0       5      16      30      65      77      84      90      94      97
816          UA     100
             * DDM   ***** Preserved *****

817          KK     C67
818          KM   COMBINE FLOW FROM SUB-BASIN 442 & DIV4
819          HC       2
             * DDM   ***** Preserved *****

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

826          KK  RTDIV6
827          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
828          DR  BASIN4
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 22

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

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

835          KK   CDIV6
836          KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
837          HC       2
             * DDM   ***** Updated *****

838          KK     443
839          KM   SUB-BASIN 443
840          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
841          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
842          KM     L =  .71  Kb = .050  Adj. Slope =  315.0
843          BA    .080
844          LG    .250    .300   8.000    .080  10.000
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845          UC     .196     .194
846          UA        0        5       16       30       65       77       84       90       94       97
847          UA      100
             * DDM    ***** Preserved *****

848          KK    DIV66
849          KM         DIVERT FLOW INTO 3 NATURAL WASHES WITH ONE 24" PIPE IN EACH WASH.
850          KM         EACH PIPE CAPACITY BASED ON 4 FEET OF HEAD
851          DT    WSH66
852          DI        0       78      100      200
853          DQ        0       78       78       78
             * DDM    ***** Preserved *****

854          KK     R113
855          KM         ROUTE FLOW FROM C113 TO C114
856          RS        1     FLOW       -1
857          RC     .019     .019     .019     1300     .029
858          RX     1000     1004     1008     1012     1018     1022     1026     1030
859          RY       17    15.33    12.67       10       10    12.67    15.33       17
             * DDM    ***** Preserved *****

860          KK     C114
861          KM        .COMBINE HYDROGRAPHS FROM SUB-BASIN 67 AND C113
862          HC        2
             * DDM    ***** Updated *****

863          KK      444
864          KM    SUB-BASIN 444
865          KM    24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
866          KM    THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
867          KM      L =  .33  Kb = .034  Adj. Slope =  315.0
868          BA     .040
869          LG     .130     .350    4.450     .320    1.000
1                                          HEC-1 INPUT                                                    PAGE 23

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

870          UC     .112     .084
871          UA        0        3        5        8       12       20       43       75       90       96
872          UA      100
             * DDM    ***** Preserved *****

873          KK      R58
874          KM    ROUTE FLOW FROM SUB-BASIN 444 TO C107
875          RS        1     FLOW       -1
876          RC      .05     .035      .05     2370    .0516
877          RX     1000     1010     1020     1050     1055     1085     1095     1105
878          RY       19       18       17       10       10       17       18       19
             * DDM    ***** Updated *****

879          KK      445
880          KM    SUB-BASIN 445
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 =  .82  Kb = .036  Adj. Slope =  315.0
884          BA     .190
885          LG     .170     .350    3.470     .590    3.000
886          UC     .192     .130
887          UA        0        5       16       30       65       77       84       90       94       97
888          UA      100
             * DDM    ***** Preserved *****

889          KK     C107
890          KM    COMBINE HYDROGRAPHS FROM SUB-BASINS 444 & 445
891          HC        2
             * DDM    ***** Preserved *****

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

898          KK     RTB2
899          KM         RETRIEVE DIVERTED FLOW FROM BASIN 1
             *       1
900          DR    SPLIT
             * DDM    ***** Preserved *****

901          KK   RSPLIT
902          KM         ROUTE FLOW FROM SPLIT TO C109
903          RS        1     FLOW       -1
904          RC      .05     .035      .05      800      .05
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 *****
1                                          HEC-1 INPUT                                                    PAGE 24

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

907          KK      446
908          KM    SUB-BASIN 446
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 =  .46  Kb = .061  Adj. Slope =  303.9
912          BA     .040
913          LG     .270     .350    4.500     .400   19.000
914          UC     .183     .189
915          UA        0        5       16       30       65       77       84       90       94       97
916          UA      100
             * DDM    ***** Preserved *****

917          KK     C109
918          KM         COMBINE HYDROGRAPHS FROM COMBINES C107 AND C108
919          HC        3
             * DDM    ***** Preserved *****

920          KK     DIV5
921          KM         DIVERT FLOW INTO WASHES TOWARDS WEST
922          KM         DIVERSION THROUGH 36" PIPE WITH 3 FEET OF HEAD
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                *      I
 923            DT  WSH404
 924            DI       0    40.7    71.2   121.6     190     276   379.4   500.6
 925            DQ       0      35      35      35      35      35      35      35
                * DDM   ***** Preserved *****

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

 932            KK     447
 933            KM   SUB-BASIN 447
 934            KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 935            KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
 936            KM     L =  .49  Kb = .056  Adj. Slope =  221.0
 937            BA    .090
 938            LG    .250    .350   3.350    .870  30.000
 939            UC    .208    .145
 940            UA       0       5      16      30      65      77      84      90      94      97
 941            UA     100
                * DDM   ***** Preserved *****

 942            KK   RT404
 943            KM        RETRIEVE DIVERTED FLOW FOR WASH 109
 944            DR  WSH404
                * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 25

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

 945            KK    R404
 946            KM        ROUTE FLOW FROM C110 TO C110
 947            RS       6    FLOW      -1
 948            RC    .019    .019    .019    3540     .03
 949            RX    1000    1012    1016    1020    1025    1029    1033    1045
 950            RY      15      12      11      10      10      11      12      15
                * DDM   ***** Preserved *****

 951            KK    C110
 952            KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 447 AND R404
 953            HC       3
                * DDM   ***** Preserved *****

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

 960            KK    C115
 961            KM        COMBINE HYDROGRAPHS FROM C114 AND C110
 962            HC       2
                * DDM   ***** Preserved *****

 963            KK    R115
                * ******OUTFLOW FROM THIS ROUTING IS GREATER THAN INFLOW TO THE
                * ******ROUTING BY 2cfs.  THIS IS NOTED BUT LEFT UNCHANGED WITHIN THE MODEL
 964            KM        ROUTE FLOW FROM C115 TO C119
 965            RS       1    FLOW      -1
 966            RC    .019    .019    .019    2125    .029
 967            RC    .019    .019    .019     580   .0291
 968            RX    1000    1012    1016    1020    1035    1039    1043    1055
 969            RY      15      12      11      10      10      11      12      15
                * DDM   ***** Updated *****

 970            KK     448
 971            KM   SUB-BASIN 448
 972            KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 973            KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
 974            KM     L =  .36  Kb = .042  Adj. Slope =  315.0
 975            BA    .045
 976            LG    .170    .350   4.200    .390  11.000
 977            UC    .133    .102
 978            UA       0       5      16      30      65      77      84      90      94      97
 979            UA     100
                * DDM   ***** Updated *****
1                                        HEC-1 INPUT                                          PAGE 26

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

 980            KK     449
 981            KM   SUB-BASIN 449
 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 1.000
 984            KM     L =  .40  Kb = .054  Adj. Slope =  315.0
 985            BA    .050
 986            LG    .260    .350   3.500    .640   6.000
 987            UC    .167    .134
 988            UA       0       5      16      30      65      77      84      90      94      97
 989            UA     100
                * DDM   ***** Preserved *****

 990            KK   C6364
 991            KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 448 & 449
 992            HC       2
                * DDM   ***** Preserved *****

 993            KK   R6364
 994            KM   ROUTE FLOW FROM C116 AND SUB-BASINS 448 AND 449
 995            RS       4    FLOW      -1
 996            RC     .05    .035     .05    4375   .0333
 997            RX    1000    1027    1053    1080    1090    1117    1143    1170
 998            RY      15   13.33   11.67      10      10   11.67   13.33      15
                * DDM   ***** Updated *****
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 999    KK     450
1000    KM   SUB-BASIN 450
1001    KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1002    KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1003    KM     L =   .85  Kb = .057  Adj. Slope =  210.5
1004    BA    .070
1005    LG    .340    .350   3.630    .570   4.000
1006    UC    .296    .383
1007    UA       0       3       5       8      12      20      43      75      90      96
1008    UA     100
        * DDM   ***** Updated *****

1009    KK     451
1010    KM   SUB-BASIN 451
1011    KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1012    KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1013    KM     L =   .57  Kb = .063  Adj. Slope =  175.0
1014    BA    .025
1015    LG    .340    .350   3.290    .750   3.000
1016    UC    .271    .453
1017    UA       0       3       5       8      12      20      43      75      90      96
1018    UA     100
        * DDM   ***** Preserved *****
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1 HEC-1 INPUT PAGE 27

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

1019    KK    RT66
1020    KM        RETRIEVE DIVERTED FLOW FROM SUB-BASIN 66
1021    DR   WSH66
        * DDM   ***** Updated *****

1022    KK     452
1023    KM   SUB-BASIN 452
1024    KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1025    KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1026    KM     L =   .43  Kb = .055  Adj. Slope =  315.0
1027    BA    .040
1028    LG    .260    .350   3.700    .550   9.000
1029    UC    .171    .166
1030    UA       0       5      16      30      65      77      84      90      94      97
1031    UA     100
        * DDM   ***** Preserved *****

1032    KK   C6465
1033    KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 443 AND 452
1034    HC       2
        * DDM   ***** Preserved *****

1035    KK   R6566
1036    KM        ROUTE FLOW FROM DIVERSIONS 65 AND 66 TO C116
1037    RS       2    FLOW      -1
1038    RC     .05    .035     .05    2435   .0282
1039    RX    1000    1045    1090    1150    1160    1220    1265    1310
1040    RY      25      23      20      10      10      20      23      25
        * DDM   ***** Preserved *****

1041    KK    C116
1042    KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 450 & 451 AND R6364 & R6465
1043    HC       4
        * DDM   ***** Preserved *****

1044    KK  BASIN5
1045    KM        RESERVOIR WITHIN PARCEL 31      2-48 INCH PIPES AT OUTFALL
1046    KM        BASIN 5 FEET DEEP
1047    RS       1    ELEV       0
1048    SV       0     4.5     9.9
1049    SQ       0      69     190
1050    SE       0     2.5       5
        * DDM   ***** Preserved *****

1051    KK    R116
1052    KM   ROUTE FLOW FROM C116 TO C117
1053    RS       2    FLOW      -1
1054    RC     .05    .035     .05    1300   .0333
1055    RX    1000    1100    1200    1300    1320    1420    1520    1620
1056    RY      13      12      11      10      10      11      12      13
        * DDM   ***** Updated *****
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1 HEC-1 INPUT PAGE 28

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

1057    KK     453
1058    KM   SUB-BASIN 453
1059    KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1060    KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1061    KM     L =   .58  Kb = .058  Adj. Slope =  138.0
1062    BA    .060
1063    LG    .290    .350   3.290    .820  18.000
1064    UC    .279    .289
1065    UA       0       5      16      30      65      77      84      90      94      97
1066    UA     100
        * DDM   ***** Preserved *****

1067    KK    C117
1068    KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 453 AND R116
1069    HC       2
        * DDM   ***** Preserved *****

1070    KK    C118
1071    KM   COMBINE HYDROGRAPHS FROM R115 AND C117
1072    HC       2
        * DDM   ***** Preserved *****

1073    KK    R118
1074    KM        ROUTE FLOW FROM C118 TO  DIV7
1075    RS       1    FLOW      -1
1076    RC    .019    .019    .019    1500    .024
1077    RX    1000    1012    1016    1020    1035    1039    1043    1055
1078    RY      15      12      11      10      10      11      12      15
        * DDM   ***** Preserved *****
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1079        KK    DIV7
1080        KM        OFFLINE BASIN AT NORTH MOUNTAIN RIDGE   FLOWS ENTER BASIN OVER
1081        KM        30' WEIR SET AT 5.3' ABOVE THE CHANNEL BOTTOM
            *      1
1082        DT  BASIN6
1083        DI       0     363     487     563     645     844
1084        DQ       0       3      47      83     125     244
            * DDM   ***** Preserved *****

1085        KK  RTDIV7
1086        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1087        DR  BASIN6
            * DDM   ***** Preserved *****

1088        KK  RFDIV7
1089        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1090        KM     3.6 ACRE-FEETx43560/36x3600=1.2cfs
1091        RS       1    STOR       0
1092        SV       0     .01     3.6
1093        SQ       0     1.2     1.2
            * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                    PAGE 29

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

1094        KK   CDIV7
1095        KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1096        HC       2
            * DDM   ***** Updated *****

1097        KK     454
1098        KM   SUB-BASIN 454
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  .999
1101        KM     L = 1.23  Kb = .051  Adj. Slope =  163.0
1102        BA    .180
1103        LG    .300    .350   3.780    .560  14.000
1104        UC    .383    .400
1105        UA       0       5      16      30      65      77      84      90      94      97
1106        UA     100
            * DDM   ***** Preserved *****

1107        KK    C119
1108        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 454 AND C119
            *      1       2
1109        HC       2
            * DDM   ***** Preserved *****

1110        KK    R454
1111        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1112        KM   ROUTE FLOW FROM C119 TO 415C
1113        RS       2    FLOW      -1
1114        RC    .045    .035    .045    2200    .009
1115        RX       0      .5       1      33      42      67    67.5      68
1116        RY       5       4       4       0       0       6       6       6
            * DDM   ***** Updated *****

1117        KK     415
1118        KM   SUB-BASIN 415
1119        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1120        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
1121        KM     L = 2.58  Kb = .044  Adj. Slope =  298.5
1122        BA    .606
1123        LG    .320    .350   4.500    .400  15.000
1124        UC    .429    .411
1125        UA       0       5      16      30      65      77      84      90      94      97
1126        UA     100
            * DDM   ***** Preserved *****

1127        KK   RT385
1128        KM   RETRIEVE FLOW FROM DIVERSION OF SUB-BASIN 385 INTO SUB-BASIN 415
1129        DR   SF385
            * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                    PAGE 30

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

1130        KK   RR385
1131        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1132        KM   ROUTING OF SPLIT FLOW FROM SUB-BASIN 385 TO SUB-BASIN 415
1133        RS      11    FLOW      -1
1134        RC    .045     .04    .045    5878    .024
1135        RX       0       1      40      46      56      62     102     103
1136        RY       3       2       2       0       0       2       2       3
            * DDM   ***** Preserved *****

1137        KK    415C
1138        KM   HYDROGRAPH COMBINATION OF SUB-BASINS 415, R454 & SPLIT FLOW FROM 385
1139        HC       3    1.71
            * DDM   ***** Preserved *****

1140        KK    R415
1141        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1142        KM   ROUTING OF FLOW FROM 415C TO 455C
1143        RS       2    FLOW      -1
1144        RC    .045     .03    .045    4100    .024
1145        RX       0      .5       1       8      16      23    23.5      24
1146        RY       8       8       8       0       0       8       8       8
            * DDM   ***** Updated *****

1147        KK     455
1148        KM   SUB-BASIN 455
1149        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1150        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
1151        KM     L = 1.70  Kb = .041  Adj. Slope =  146.0
1152        BA   1.111
1153        LG    .270    .350   3.700    .640  24.000
1154        UC    .429    .208
1155        UA       0       5      16      30      65      77      84      90      94      97
1156        UA     100
```

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            * DDM   ***** Preserved *****

1157        KK    D455
1158        KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1159        KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1160        KM   FOR BASIN #: 30      34      43      47&58
1161        KM        MAXIMUM VOLUME DIVERSION = 74.1 acre-feet
            *      1
1162        DT   BS455    74.1
1163        DI       0   10000
1164        DQ       0   10000
            * DDM   ***** Preserved *****

1165        KK   RT455
1166        KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1167        DR   BS455
            * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                    PAGE 31

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

1168        KK   SR455
1169        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1170        KM    74.1 ACRE-FEETx43560/36x3600=25cfs
1171        RS       1    STOR       0
1172        SV       0     .01    74.1
1173        SQ       0      25      25
            * DDM   ***** Preserved *****

1174        KK    C455
1175        KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 455 AND DIVERTED BASIN STORAGE OF 455
1176        HC       2
            * DDM   ***** Preserved *****

1177        KK    455C
1178        KM  HYDROGRAPH COMBINATION OF 420C, R415 AND C455
            *      1       2
1179        HC       3
            * DDM   ***** Preserved *****

1180        KK   SR440
1181        KM   SPOOK HILL FRS PLANS DATED 6/15/77
1182        KM   OUTLET PIPE=7'x7.5'RCBC; L=70 INLET INV.=1566; OUTLET INV.=1566
1183        KM   EMERGENCY SPILLWAY ELEV.=1582; PRINCIPLE SPILLWAY ELEV.=1577.5
1184        KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 200 ACRE-FEET
            *   ESE = 1583.86 ft; PSE = 1579.36 ft; Sediment Vol. = 271 Ac-Ft.
1185        RS       1    STOR       0
1186        SV       0      81     363     533     719     925    1120    1399    1668    4051
1187        SQ       0       0      10     180     367     595     800    1231    2625   24500
1188        SE      76      78      80      81      82      83    83.9      85      86      92
            * DDM   ***** Preserved *****

1189        KK   RR455
1190        KM   ROUTE FLOW FROM SPOOK HILL FRS TO SUB-BASIN 462
1191        RS      14    FLOW      -1
1192        RC    .035    .025    .035    9200    .002
1193        RX       0       1       2      28      58      84      85      86
1194        RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
            * DDM   ***** Updated *****

1195        KK     456
1196        KM   SUB-BASIN 456
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  .998
1199        KM     L =  .94  Kb = .045  Adj. Slope =  315.0
1200        BA    .260
1201        LG    .300    .380   5.600    .200  12.000
1202        UC    .217    .139
1203        UA       0       5      16      30      65      77      84      90      94      97
1204        UA     100
            * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                    PAGE 32

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

1205        KK    DIV1
1206        KM        DIVERT FLOW INTO OFFLINE DETENTION BASIN
1207        KM        WEIR FOR BASIN SET AT 4 FEET ABOVE CHANNEL BOTTOM
            *      1
1208        DT  BASIN1
1209        DI       0    11.1   127.9   234.4   577.7   789.9  1025.5  1280.9  1555.7
1210        DQ       0       0       0    47.7     248   381.8   533.6   701.5     884
            * DDM   ***** Preserved *****

1211        KK    DIV2
1212        KM        SPLIT OUT FLOW FOR WASHES THAT FLOW TO THE SOUTH FROM
1213        KM        WASHES THAT DRAIN TO THE WES, SOUTHERN WASHES FED BY 30" & 24" PIPE
1214        DT    WA30
1215        DI       0    11.1   127.9   189.6   329.7     408   491.9   579.4   671.7
1216        DQ       0    11.1    38.4    48.2      63    69.5      76      81      86
            * DDM   ***** Preserved *****

1217        KK    R456
1218        KM        ROUTE FLOW FROM SUB-BASIN 51 TO C101
1219        RS       2    FLOW      -1
1220        RC     .05    .035     .05    3800    .044
1221        RX    1000    1010    1020    1036    1041    1057    1067    1077
1222        RY   14.88   14.44      14      10      10      14   14.44   14.88
            * DDM   ***** Updated *****

1223        KK     457
1224        KM   SUB-BASIN 457
1225        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1226        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1227        KM     L = 1.01  Kb = .045  Adj. Slope =  308.8
1228        BA    .190
1229        LG    .270    .350   3.950    .460   6.000
1230        UC    .237    .195
1231        UA       0       5      16      30      65      77      84      90      94      97
1232        UA     100
            * DDM   ***** Preserved *****
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1233        KK    C101
1234        KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 50 AND 51
1235        HC       2
            * DDM   ***** Preserved *****

1236        KK    DIV3
1237        KM        RESERVOIR AT THE EDGE OF THE PROPERTY   FLOW FROM CHANNEL
1238        KM        DIVERTED  INTO OFFLINE BASIN A 25' WEIR SET AT ELEVATION 1808 FT
            *      1
1239        DT  BASIN2
1240        DI       0      36      70     110     180   313.5     402   500.9
1241        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

1242        KK  RTDIV3
1243        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1244        DR  BASIN2
            * DDM   ***** Preserved *****

1245        KK  RFDIV3
1246        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1247        KM     5.0 ACRE-FEETx43560/36x3600=1.7cfs
1248        RS       1    STOR       0
1249        SV       0     .01       5
1250        SQ       0     1.7     1.7
            * DDM   ***** Preserved *****

1251        KK   CDIV3
1252        KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1253        HC       2
            * DDM   ***** Preserved *****

1254        KK    R101
1255        KM        ROUTE FLOW FROM SUBBASIN C101 TO C103
1256        RS       1    FLOW      -1
1257        RC     .05    .035     .05    1450     .05
1258        RX    1000    1010    1020    1036    1041    1057    1067    1077
1259        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Updated *****

1260        KK     458
1261        KM   SUB-BASIN 458
1262        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1263        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1264        KM     L =  .76  Kb = .048  Adj. Slope =  299.0
1265        BA    .190
1266        LG    .290    .390   5.800    .190   6.000
1267        UC    .208    .134
1268        UA       0       5      16      30      65      77      84      90      94      97
1269        UA     100
            * DDM   ***** Preserved *****

1270        KK    C103
1271        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 55 AND C101
1272        HC       2
            * DDM   ***** Preserved *****

1273        KK    R103
1274        KM        ROUTE FLOW FROM SUBBASIN C103 TO C106
1275        RS       1    FLOW      -1
1276        RC     .05    .035     .05     900     .03
1277        RX    1000    1010    1020    1030    1050    1060    1070    1080
1278        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

1279        KK    RT30
1280        KM        RETRIEVE DIVERTED FLOW FOR WASH BELOW 30 INCH PIPE
1281        DR    WA30
            * DDM   ***** Preserved *****

1282        KK     R30
1283        KM        ROUTE FLOW FROM WASH DIVERSION TO COMBINE C52
1284        RS       1    FLOW      -1
1285        RC     .05    .035     .05    1630     .05
1286        RX    1000    1010    1020    1036    1041    1057    1067    1077
1287        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Preserved *****

1288        KK    RTB1
1289        KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
            *      1        2
1290        DR  BASIN1
            * DDM   ***** Preserved *****

1291        KK      B1
1292        KM        ROUTE FLOW THROUGH OFFLINE DETENTION BASIN
1293        KM        FLOW OUTLETS THROUGH A 30 INCH OUTLET PIPE
            *      1        2
1294        RS       1    ELEV       0
1295        SV              .7     1.4     2.3     2.7     3.2
1296        SQ       0       5      16      28    32.5      37
1297        SE       0       1       2       3     3.5       4
            * DDM   ***** Preserved *****

1298        KK     RB1
1299        KM        ROUTE FLOW FROM BASIN DIVERSION TO COMBINE C52
1300        RS       2    FLOW      -1
1301        RC     .05    .035     .05    1720     .05
1302        RX    1000    1010    1020    1036    1041    1057    1067    1077
1303        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Preserved *****

1304        KK    CDIV
1305        KM        COMBINE FLOWS FROM WA30 AND BASIN 1
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1306        HC       2     .12
            * DDM   ***** Updated *****

1307        KK     459
1308        KM   SUB-BASIN 459
1309        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1310        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1311        KM     L =  .35  Kb = .052  Adj. Slope =  251.6
1312        BA    .030
1313        LG    .220    .350   3.330    .710   8.000
1314        UC    .162    .157
1315        UA       0       5      16      30      65      77      84      90      94      97
1316        UA     100
            * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 35

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

1317        KK     C52
1318        KM        COMBINE FLOWS FROM SUB-BASIN 52 WA30 AND BASIN 1
1319        HC       2
            * DDM   ***** Preserved *****

1320        KK     R52
1321        KM        ROUTE FLOW FROM SUBBASIN 52 TO C102
1322        RS       2    FLOW      -1
1323        RC     .05    .035     .05    2000     .05
1324        RX    1000    1010    1020    1036    1041    1057    1067    1077
1325        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Updated *****

1326        KK     460
1327        KM   SUB-BASIN 460
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  .999
1330        KM     L =  .62  Kb = .058  Adj. Slope =  194.0
1331        BA    .140
1332        LG    .250    .350   3.740    .690  27.000
1333        UC    .246    .163
1334        UA       0       5      16      30      65      77      84      90      94      97
1335        UA     100
            * DDM   ***** Preserved *****

1336        KK    C102
1337        KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 52 AND 53
1338        HC       2
            * DDM   ***** Preserved *****

1339        KK  BASIN3
1340        KM        RESERVOIR AT CLUBHOUSE LOCATION 1-30 INCH PIPE AT OUTFALL
1341        KM        BOTTOM OF BASIN AT 6 FEET ABOVE 1795 ELEVATION
1342        RS       1    ELEV       0
1343        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
1344        SQ       0      22      45    47.4      48      51      57      62      67      73
1345        SE    1795  1797.5    1800  1800.4  1800.5    1801    1802    1803    1804  1805.5
            * DDM   ***** Preserved *****

1346        KK      R3
1347        KM        ROUTE FLOW FROM C102 to C106
1348        RS       4    FLOW      -1
1349        RC     .05     .03     .05    2750   .0375
1350        RX    1000    1010    1020    1052    1086    1118    1128    1138
1351        RY    19.2    18.4      18      10      10      18    18.4    19.2
            * DDM   ***** Updated *****

1352        KK     461
1353        KM   SUB-BASIN 461
1354        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1355        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1356        KM     L =  .83  Kb = .052  Adj. Slope =  181.0
1357        BA    .120
1                                        HEC-1 INPUT                                          PAGE 36

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

1358        LG    .270    .350   4.250    .450  21.000
1359        UC    .275    .255
1360        UA       0       5      16      30      65      77      84      90      94      97
1361        UA     100
            * DDM   ***** Preserved *****

1362        KK    C104
1363        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 54 AND R102
1364        HC       2
            * DDM   ***** Preserved *****

1365        KK    C106
1366        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN C103 AND C104
1367        HC       2
            * DDM   ***** Preserved *****

1368        KK    R106
1369        KM        ROUTE FLOW FROM C106 TO C49
1370        RS       2    FLOW      -1
1371        RC     .05    .035     .05    3950    .033
1372        RX    1000    1010    1020    1030    1050    1060    1070    1080
1373        RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
            * DDM   ***** Updated *****

1374        KK     462
1375        KM   SUB-BASIN 462
1376        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1377        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1378        KM     L =  .97  Kb = .045  Adj. Slope =  297.7
1379        BA    .301
1380        LG    .300    .370   5.300    .240  12.000
1381        UC    .225    .137
1382        UA       0       5      16      30      65      77      84      90      94      97
1383        UA     100
            * DDM   ***** Preserved *****
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1384        KK     C56
1385        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 56 AND C106
            *      1       2
1386        HC       2
            * DDM   ***** Updated *****

1387        KK     480
1388        KM   SUB-BASIN 480
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  .996
1391        KM     L = 1.21  Kb = .042  Adj. Slope =  165.0
1392        BA    .731
1393        LG    .270    .350   3.580    .730  27.000
1394        UC    .333    .152
1395        UA       0       5      16      30      65      77      84      90      94      97
1396        UA     100
            * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 37

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

1397        KK    D480
1398        KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1399        KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1400        KM   FOR BASIN #: 18 & 26
1401        KM        MAXIMUM VOLUME DIVERSION = 16.5 acre-feet
            *      1
1402        DT   BS480    16.5
1403        DI       0   10000
1404        DQ       0   10000
            * DDM   ***** Preserved *****

1405        KK   RT480
1406        KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1407        DR   BS480
            * DDM   ***** Preserved *****

1408        KK   SR480
1409        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1410        KM    16.5 ACRE-FEETx43560/36x3600=5.5cfs
1411        RS       1    STOR       0
1412        SV       0     .01    16.5
1413        SQ       0     5.6     5.6
            * DDM   ***** Preserved *****

1414        KK    C480
1415        KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1416        HC       2
            * DDM   ***** Preserved *****

1417        KK    480C
1418        KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1419        HC       3    2.09
            * DDM   ***** Preserved *****

1420        KK    R480
1421        KM   ROUTE FLOW FROM SUB-BASIN 480 TO RR480
1422        RS       1    FLOW      -1
1423        RC    .025    .025    .025    1800     .05
1424        RX       0       1      20      32      62      74      93      94
1425        RY      13      12      12       0       0      12      12      13
            * DDM   ***** Preserved *****

1426        KK   RR480
1427        KM   ROUTE FLOW FROM SUB-BASIN 480 TO SUB-BASIN 500
1428        RS       3    FLOW      -1
1429        RC    .055     .05    .055    6500     .05
1430        RX       0       1       2      28      58      84      85      86
1431        RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
            * DDM   ***** Updated *****
1                                        HEC-1 INPUT                                          PAGE 38

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

1432        KK     500
1433        KM   SUB-BASIN 500
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  .994
1436        KM     L = 2.77  Kb = .042  Adj. Slope =  286.8
1437        BA    .930
1438        LG    .350    .400   6.000    .170   9.000
1439        UC    .421    .333
1440        UA       0       3       5       8      12      20      43      75      90      96
1441        UA     100
            * DDM   ***** Preserved *****

1442        KK    500C
1443        KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1444        HC       2    3.02
1445        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

   39        10
              V
              V
   49       R10
              V
              V
   55       R12
              .
              .
   61         .          20
              .           .
              .           .
   71       C20............
              V
              V
   74       R20
              .
              .
   80         .          40
              .           .
              .           .
   90         .           .          60
              .           .           .
              .           .           .
  100       60C........................
              V
              V
  103      SR60
              V
              V
  112       R60
              V
              V
  118      RR60
              .
              .
  124         .          80
              .           .
              .           .
  134       80C............
              V
              V
  137       R80
              .
              .
  143         .         100
              .           .
              .           .
  153      100C............
              V
              V
  156      R100
              .
              .
  162         .         120
              .           .
              .           .
  172      120C............
              V
              V
  175      R120
              .
              .
  181         .         140
              .           .
              .           .
  191         .           .         150
              .           .           V
              .           .           V
  201         .           .        R150
              .           .           V
              .           .           V
  207         .           .        R152
              .           .           .
              .           .           .
  213         .           .           .        160
              .           .           .          .
              .           .           .          .
  223         .           .           .          .        180
              .           .           .          .          .
              .           .           .          .          .
  233      180C..............................................
              .
              .
  236         .         210
              .           V
              .           V
  246         .        R210
              .           .
              .           .
  252         .           .         240
              .           .           .
              .           .           .
  262         .        240C............
              .           V
              .           V
  265         .       SR240
              .           .
              .           .
  272         .           .         220
              .           .           .
              .           .           .
  282         .        220C............
              .           V
              .           V
  285         .       SR220
```

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                .           .
292             .           .        190
                .           .         V
                .           .         V
302             .           .       R190
                .           .         V
                .           .         V
308             .           .       R192
                .           .          .
                .           .          .
314             .           .          .        200
                .           .          .          .
                .           .          .          .
324             .       200C.......................
                .          V
                .          V
327             .      SR200
                .          V
                .          V
334             .      200SR
                .           .
                .           .
341        C180............
              V
              V
344       SR180
              V
              V
353        R180
              .
              .
360           .        260
              .          .
              .          .
370        260C............
              V
              V
373        R260
              .
              .
380           .        280
              .          .
              .          .
390        280C............
              V
              V
393        R280
              .
              .
400           .        300
              .          .
              .          .
410        300C............
              V
              V
413        R300
              V
              V
420       RR300
              .
              .
427           .        350
              .          .
              .          .
440           .          .-------->   SF350
437           .      D350
              .          V
              .          V
443           .      350R
              .          .
              .          .
450           .          .        310
              .          .          .
              .          .          .
460           .      C310............
              .          V
              .          V
463           .      R310
              .          .
              .          .
470           .          .        320
              .          .          .
              .          .          .
485           .          .          .-------->   BS320
480           .          .      D320
              .          .          .
              .          .          .
490           .          .          .          .<-------   BS320
488           .          .          .     RT320
              .          .          .          V
              .          .          .          V
491           .          .          .     SR320
              .          .          .          .
              .          .          .          .
497       C320.................................
              .
              .
500           .        340
              .          .
              .          .
515           .          .-------->   BS340
510           .      D340
              .          .
              .          .
520           .          .          .<-------   BS340
518           .          .     RT340
              .          .          V
              .          .          V
521           .          .     SR340
              .          .          .
              .          .          .
527       C340......................
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532                 .<-------   SF350
530             RT350
                    V
                    V
533             RR350
                    .
                    .
540                 .         355
                    .           .
                    .           .
550             C355............
                    V
                    V
553             R355
                    .
                    .
560                 .         360
                    .           .
                    .           .
574                 .           .-------->   BS360
570                 .       D360
                    .           .
                    .           .
579                 .           .           .<-------   BS360
577                 .           .       RT360
                    .           .           V
                    .           .           V
580                 .           .       SR360
                    .           .           .
                    .           .           .
586         360C...................................
                    .
                    .
589             370
                    .
                    .
599                 .         395
                    .           .
                    .           .
609             370C............
                    V
                    V
612             R370
                    .
                    .
619                 .         380
                    .           .
                    .           .
633                 .           .-------->   BS380
629                 .       D380
                    .           .
                    .           .
638                 .           .           .<-------   BS380
636                 .           .       RT380
                    .           .           V
                    .           .           V
639                 .           .       SR380
                    .           .           .
                    .           .           .
645         380C...................................
                    .
                    .
648             390
                    .
                    .
662                 .-------->   BS390
658             D390
                    .
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667                 .           .<-------   BS390
665                 .       RT390
                    .           V
                    .           V
668                 .       SR390
                    .           .
                    .           .
674             390C............
                    V
                    V
677             RR390
                    .
                    .
684                 .         400
                    .           .
                    .           .
698                 .           .-------->   BS400
694                 .       D400
                    .           .
                    .           .
703                 .           .           .<-------   BS400
701                 .           .       RT400
                    .           .           V
                    .           .           V
704                 .           .       SR400
                    .           .           .
                    .           .           .
710                 .       C400............
                    .           .
                    .           .
713         400C.......................
                    .
                    .
716             385
                    .
                    .
728                 .-------->   SF385
726             D385
                    V
                    V
731             385R
                    .
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738                 420
                      .
752                   .-------> BS420
748               D420
                      .
757                   .<------- BS420
755             RT420
                    V
                    V
758             SR420
                      .
764   420C...............................
767         440
              V
              V
777         R70
                .
783                 441
                      .
793         C108............
                .
798                 .-------> SPLIT
796         DIV4
              V
              V
801         R108
                .
807                 442
                      .
817         C67............
                .
823                 .-------> BASIN4
820         DIV6
                .
828                   .<------- BASIN4
826             RTDIV6
                    V
                    V
829             RFDIV6
                      .
835         CDIV6............
                .
838                 443
                      .
851                   .-------> WSH66
848             DIV66
                    V
                    V
854             R113
                      .
860         C114............
                .
863                 444
                      V
                      V
873                 R58
                      .
879                   .       445
                      .         .
889             C107............
                    V
                    V
892             R107
                      .
900                   .         .<------- SPLIT
898             RTB2
                    V
                    V
901             RSPLIT
                      .         .
907                   .         .       446
                      .         .         .
917             C109........................
                      .
923                   .-------> WSH404
920             DIV5
                    V
                    V
926             R109
                      .
932                   .       447
                      .         .
944                   .         .         .<------- WSH404
942                   .         .     RT404
                      .         .         V
945                   .         .       R404
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951                 C110.......................
                       V
                       V
954                 R110

960          C115............
                V
                V
963          R115

970                 448

980                                 449

990                 C6364............
                       V
                       V
993                 R6364

999                                 450

1009                                                451

1021                                                          .<-------   WSH66
1019                                                     RT66
1022                                                                        452

1032                                                     C6465............
                                                            V
                                                            V
1035                                                     R6566

1041                C116.................................
                       V
                       V
1044             BASIN5
                       V
                       V
1051                R116

1057                                 453

1067                C117............

1070         C118............
                V
                V
1073         R118

1082                .-------> BASIN6
1079         DIV7

1087                         .<-------  BASIN6
1085             RTDIV7
                       V
                       V
1088             RFDIV7

1094        CDIV7............

1097                454

1107         C119............
                V
                V
1110         R454

1117                415

1129                                         .<-------   SF385
1127                                   RT385
                                          V
                                          V
1130                                   RR385

1137        415C........................
                V
                V
1140         R415

1147                455

1162                         .-------> BS455
1157             D455

1167                                         .<-------   BS455
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1165          .           .           .       RT455
              .           .           .           V
              .           .           .           V
1168          .           .           .       SR455
              .           .           .           .
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1174          .           .        C455............
              .           .           .
              .           .           .
1177       455C......................
              V
              V
1180      SR440
              V
              V
1189      RR455
              .
              .
1195          .        456
              .           .
              .           .
1208          .           .-------> BASIN1
1205          .       DIV1
              .           .
              .           .
1214          .           .------->   WA30
1211          .       DIV2
              .           V
              .           V
1217          .       R456
              .           .
              .           .
1223          .           .        457
              .           .           .
              .           .           .
1233          .       C101............
              .           .
              .           .
1239          .           .-------> BASIN2
1236          .       DIV3
              .           .
              .           .
1244          .           .           .<------- BASIN2
1242          .           .     RTDIV3
              .           .         V
              .           .         V
1245          .           .     RFDIV3
              .           .           .
              .           .           .
1251          .      CDIV3............
              .           V
              .           V
1254          .       R101
              .           .
              .           .
1260          .           .        458
              .           .           .
              .           .           .
1270          .       C103............
              .           V
              .           V
1273          .       R103
              .           .
              .           .
1281          .           .           .<-------   WA30
1279          .           .       RT30
              .           .         V
              .           .         V
1282          .           .       R30
              .           .           .
              .           .           .
1290          .           .           .           .<------- BASIN1
1288          .           .           .       RTB1
              .           .           .         V
              .           .           .         V
1291          .           .           .         B1
              .           .           .         V
              .           .           .         V
1298          .           .           .       RB1
              .           .           .         .
              .           .           .         .
1304          .           .       CDIV............
              .           .           .
              .           .           .
1307          .           .           .       459
              .           .           .         .
              .           .           .         .
1317          .           .       C52............
              .           .         V
              .           .         V
1320          .           .       R52
              .           .           .
              .           .           .
1326          .           .           .       460
              .           .           .         .
              .           .           .         .
1336          .           .       C102............
              .           .         V
              .           .         V
1339          .           .     BASIN3
              .           .         V
              .           .         V
1346          .           .       R3
              .           .           .
              .           .           .
1352          .           .           .       461
              .           .           .         .
              .           .           .         .
1362          .           .       C104............
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1365          .      C106............
              .           V
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                 .          V
1368             .       R106
                 .          .
                 .          .
1374             .          .        462
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                 .          .          .
1384             .       C56............
                 .          .
                 .          .
1387             .          .        480
                 .          .          .
                 .          .          .
1402             .          .          .-------->   BS480
1397             .          .      D480
                 .          .          .
                 .          .          .
1407             .          .          .           .<-------   BS480
1405             .          .          .      RT480
                 .          .          .          V
                 .          .          .          V
1408             .          .          .      SR480
                 .          .          .          .
                 .          .          .          .
1414             .          .      C480............
                 .          .          .
                 .          .          .
1417          480C......................
                V
                V
1420          R480
                V
                V
1426         RR480
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                .
1432            .       500
                .          .
                .          .
1442          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	968.	12.27	116.	32.	12.	.70		
+	ROUTED TO	R10	899.	12.40	116.	32.	12.	.70		
+	ROUTED TO	R12	840.	12.63	116.	32.	12.	.70		
+	HYDROGRAPH AT	20	984.	12.43	132.	33.	12.	1.12		
+	2 COMBINED AT	C20	1655.	12.57	247.	65.	23.	1.82		
+	ROUTED TO	R20	1653.	12.57	247.	65.	23.	1.82		
+	HYDROGRAPH AT	40	2643.	12.30	259.	68.	24.	2.23		
+	HYDROGRAPH AT	60	1557.	12.40	229.	62.	22.	1.75		
+	3 COMBINED AT	60C	5327.	12.37	727.	193.	69.	5.80		
+	ROUTED TO	SR60	118.	14.27	118.	114.	69.	5.80		
+	ROUTED TO	R60	118.	14.37	118.	114.	70.	5.80		
+	ROUTED TO	RR60	118.	14.40	118.	114.	70.	5.80		
+	HYDROGRAPH AT	80	1864.	12.27	178.	46.	17.	1.48		
+	2 COMBINED AT	80C	1915.	12.27	284.	156.	87.	1.48		
+	ROUTED TO	R80	1892.	12.30	284.	156.	87.	1.48		
+	HYDROGRAPH AT	100	387.	12.23	56.	14.	5.	.48		
+	2 COMBINED AT	100C	2254.	12.27	338.	170.	92.	1.96		
+	ROUTED TO	R100	2257.	12.30	338.	170.	92.	1.96		
+	HYDROGRAPH AT	120	3213.	12.27	321.	87.	31.	2.20		
+	2 COMBINED AT	120C	5417.	12.27	648.	250.	123.	4.16		
+	ROUTED TO	R120	5353.	12.30	648.	250.	123.	4.16		
+	HYDROGRAPH AT	140	609.	12.17	62.	16.	6.	.60		
+	HYDROGRAPH AT	150	582.	12.17	50.	13.	5.	.41		
+	ROUTED TO	R150	556.	12.23	50.	13.	5.	.41		
+	ROUTED TO	R152	514.	12.33	50.	13.	5.	.41		
+	HYDROGRAPH AT	160	217.	12.40	35.	9.	3.	.37		
+	HYDROGRAPH AT	180	808.	12.37	93.	23.	8.	1.00		
+	5 COMBINED AT	180C	7125.	12.30	872.	306.	143.	6.54		
+	HYDROGRAPH AT	210	886.	12.20	82.	21.	8.	.58		
+	ROUTED TO	R210	831.	12.27	82.	21.	8.	.58		
+	HYDROGRAPH AT	240	1443.	12.30	159.	41.	15.	1.40		
	2 COMBINED AT	240C	2244.	12.30	240.	62.	22.	1.98		
	ROUTED TO	SR240	660.	12.77	193.	50.	18.	1.98		
+	HYDROGRAPH AT	220	1148.	12.17	101.	26.	9.	.73		
+	2 COMBINED AT	220C	1175.	12.20	290.	76.	27.	2.71		

+	ROUTED TO	SR220	950.	12.43	283.	74.	27.	2.71
+	HYDROGRAPH AT	190	1434.	12.17	119.	32.	11.	.92
	ROUTED TO	R190	1379.	12.23	119.	32.	11.	.92
+	ROUTED TO	R192	1297.	12.30	119.	32.	11.	.92
+	HYDROGRAPH AT	200	822.	12.17	71.	19.	7.	.54
+	3 COMBINED AT	200C	2717.	12.27	465.	123.	45.	4.16
+	ROUTED TO	SR200	2580.	12.37	460.	120.	43.	4.16
+	ROUTED TO	200SR	1852.	12.60	339.	89.	32.	4.16
+	2 COMBINED AT	C180	7125.	12.30	1199.	393.	174.	10.69
+	ROUTED TO	SR180	112.	29.47	112.	111.	87.	10.69
+	ROUTED TO	R180	112.	29.53	112.	111.	87.	10.69
+	HYDROGRAPH AT	260	392.	12.13	40.	11.	4.	.27
+	2 COMBINED AT	260C	396.	12.13	131.	121.	96.	.27
+	ROUTED TO	R260	382.	12.20	131.	121.	96.	.27
+	HYDROGRAPH AT	280	455.	12.10	40.	11.	4.	.30
+	2 COMBINED AT	280C	788.	12.13	166.	130.	99.	.57
+	ROUTED TO	R280	747.	12.23	165.	130.	99.	.57
+	HYDROGRAPH AT	300	876.	12.20	110.	29.	11.	.99
	2 COMBINED AT	300C	1613.	12.20	270.	156.	109.	1.56
+	ROUTED TO	R300	1580.	12.27	270.	156.	109.	1.56
+	ROUTED TO	RR300	1550.	12.33	269.	156.	109.	1.56
+	HYDROGRAPH AT	350	1222.	12.20	106.	28.	10.	.97
+	DIVERSION TO	SF350	611.	12.20	53.	14.	5.	.97
+	HYDROGRAPH AT	D350	611.	12.20	53.	14.	5.	.97
+	ROUTED TO	350R	538.	12.40	53.	14.	5.	.97
+	HYDROGRAPH AT	310	386.	12.33	50.	13.	5.	.56
+	2 COMBINED AT	C310	898.	12.40	103.	26.	9.	.94
+	ROUTED TO	R310	793.	12.73	103.	26.	9.	.94
+	HYDROGRAPH AT	320	952.	12.20	122.	34.	12.	.97
+	DIVERSION TO	BS320	427.	11.97	21.	6.	2.	.97
+	HYDROGRAPH AT	D320	952.	12.20	108.	28.	10.	.97
+	HYDROGRAPH AT	RT320	427.	11.97	21.	6.	2.	.97
+	ROUTED TO	SR320	4.	4.10	4.	4.	2.	.97
+	4 COMBINED AT	C320	2514.	12.33	480.	212.	130.	3.47
	HYDROGRAPH AT	340	1425.	12.20	183.	54.	20.	1.45
	DIVERSION TO	BS340	1425.	12.20	103.	28.	10.	1.45
+	HYDROGRAPH AT	D340	1112.	12.37	95.	26.	9.	1.45
+	HYDROGRAPH AT	RT340	1425.	12.20	103.	28.	10.	1.45

+	ROUTED TO	SR340	19.	8.87	19.	19.	10.	1.45
+	3 COMBINED AT	C340	3597.	12.37	589.	256.	149.	4.92
	HYDROGRAPH AT	RT350	611.	12.20	53.	14.	5.	.97
+	ROUTED TO	RR350	534.	12.47	53.	14.	5.	.97
+	HYDROGRAPH AT	355	509.	12.33	70.	18.	7.	.66
+	2 COMBINED AT	C355	985.	12.43	122.	32.	12.	1.24
+	ROUTED TO	R355	894.	12.73	122.	32.	12.	1.24
+	HYDROGRAPH AT	360	475.	12.23	82.	24.	9.	.67
+	DIVERSION TO	BS360	475.	12.23	53.	14.	5.	.67
+	HYDROGRAPH AT	D360	285.	12.67	36.	10.	4.	.67
+	HYDROGRAPH AT	RT360	475.	12.23	53.	14.	5.	.67
+	ROUTED TO	SR360	10.	9.73	10.	10.	5.	.67
+	4 COMBINED AT	360C	3810.	12.37	740.	302.	167.	6.83
+	HYDROGRAPH AT	370	589.	12.30	79.	22.	8.	.67
+	HYDROGRAPH AT	395	180.	12.27	25.	7.	2.	.20
+	2 COMBINED AT	370C	760.	12.30	104.	28.	10.	.87
+	ROUTED TO	R370	656.	12.70	104.	28.	10.	.87
+	HYDROGRAPH AT	380	652.	12.27	98.	26.	10.	.97
	DIVERSION TO	BS380	652.	12.27	56.	14.	5.	.97
+	HYDROGRAPH AT	D380	474.	12.57	46.	12.	4.	.97
+	HYDROGRAPH AT	RT380	652.	12.27	56.	14.	5.	.97
+	ROUTED TO	SR380	10.	11.30	10.	10.	5.	.97
+	4 COMBINED AT	380C	4289.	12.70	869.	342.	183.	8.67
+	HYDROGRAPH AT	390	448.	12.03	32.	9.	3.	.24
+	DIVERSION TO	BS390	90.	11.77	6.	2.	1.	.24
+	HYDROGRAPH AT	D390	448.	12.03	29.	8.	3.	.24
+	HYDROGRAPH AT	RT390	90.	11.77	6.	2.	1.	.24
+	ROUTED TO	SR390	1.	.77	1.	1.	1.	.24
+	2 COMBINED AT	390C	450.	12.03	30.	9.	3.	.24
+	ROUTED TO	RR390	311.	12.53	30.	9.	3.	.24
+	HYDROGRAPH AT	400	350.	12.23	48.	13.	5.	.62
+	DIVERSION TO	BS400	264.	12.13	10.	3.	1.	.62
+	HYDROGRAPH AT	D400	350.	12.23	39.	10.	4.	.62
+	HYDROGRAPH AT	RT400	264.	12.13	10.	3.	1.	.62
	ROUTED TO	SR400	2.	8.63	2.	2.	1.	.62
	2 COMBINED AT	C400	352.	12.23	41.	12.	5.	.62
+	3 COMBINED AT	400C	4599.	12.70	926.	359.	189.	9.53
+	HYDROGRAPH AT	385	588.	12.23	71.	20.	7.	.52

+	DIVERSION TO	SF385	353.	12.23	42.	12.	4.	.52
+	HYDROGRAPH AT	D385	235.	12.23	28.	8.	3.	.52
	ROUTED TO	385R	202.	12.63	28.	8.	3.	.52
+	HYDROGRAPH AT	420	710.	12.20	89.	25.	9.	.85
+	DIVERSION TO	BS420	303.	12.00	15.	4.	2.	.85
+	HYDROGRAPH AT	D420	710.	12.20	80.	21.	8.	.85
+	HYDROGRAPH AT	RT420	303.	12.00	15.	4.	2.	.85
+	ROUTED TO	SR420	13.	11.00	12.	4.	2.	.85
+	4 COMBINED AT	420C	5003.	12.37	1022.	383.	198.	10.87
+	HYDROGRAPH AT	440	182.	12.03	12.	3.	1.	.08
+	ROUTED TO	R70	177.	12.07	12.	3.	1.	.08
+	HYDROGRAPH AT	441	16.	12.03	1.	0.	0.	.01
+	2 COMBINED AT	C108	192.	12.07	14.	4.	1.	.09
+	DIVERSION TO	SPLIT	96.	12.07	7.	2.	1.	.09
+	HYDROGRAPH AT	DIV4	96.	12.07	7.	2.	1.	.09
+	ROUTED TO	R108	89.	12.13	7.	2.	1.	.09
+	HYDROGRAPH AT	442	96.	12.10	8.	2.	1.	.10
+	2 COMBINED AT	C67	183.	12.10	15.	4.	1.	.19
	DIVERSION TO	BASIN4	111.	12.10	6.	1.	0.	.19
+	HYDROGRAPH AT	DIV6	72.	12.10	10.	3.	1.	.19
+	HYDROGRAPH AT	RTDIV6	111.	12.10	6.	1.	0.	.19
+	ROUTED TO	RFDIV6	1.	11.90	1.	1.	0.	.19
+	2 COMBINED AT	CDIV6	73.	12.10	10.	4.	1.	.19
+	HYDROGRAPH AT	443	146.	12.07	14.	4.	1.	.08
+	DIVERSION TO	WSH66	78.	11.90	11.	3.	1.	.08
+	HYDROGRAPH AT	DIV66	68.	12.07	3.	1.	0.	.08
+	ROUTED TO	R113	67.	12.07	3.	1.	0.	.08
+	2 COMBINED AT	C114	138.	12.07	13.	4.	2.	.27
+	HYDROGRAPH AT	444	83.	12.03	5.	1.	0.	.04
+	ROUTED TO	R58	76.	12.07	5.	1.	0.	.04
+	HYDROGRAPH AT	445	297.	12.03	18.	5.	2.	.19
+	2 COMBINED AT	C107	367.	12.03	22.	6.	2.	.23
+	ROUTED TO	R107	366.	12.07	22.	6.	2.	.23
+	HYDROGRAPH AT	RTB2	96.	12.07	7.	2.	1.	.09
	ROUTED TO	RSPLIT	95.	12.07	7.	2.	1.	.09
	HYDROGRAPH AT	446	62.	12.03	5.	2.	1.	.04
+	3 COMBINED AT	C109	522.	12.07	34.	9.	3.	.27
+	DIVERSION TO	WSH404	35.	11.73	7.	2.	1.	.27

+	HYDROGRAPH AT DIV5	487.	12.07	27.	7.	2.	.27
+	ROUTED TO R109	471.	12.10	27.	7.	2.	.27
	HYDROGRAPH AT 447	135.	12.07	12.	4.	1.	.09
+	HYDROGRAPH AT RT404	35.	11.73	7.	2.	1.	.27
+	ROUTED TO R404	35.	11.87	7.	2.	1.	.27
+	3 COMBINED AT C110	635.	12.07	46.	13.	5.	.36
+	ROUTED TO R110	632.	12.10	46.	13.	5.	.36
+	2 COMBINED AT C115	764.	12.10	59.	17.	6.	.63
+	ROUTED TO R115	768.	12.10	59.	17.	6.	.63
+	HYDROGRAPH AT 448	88.	12.03	6.	2.	1.	.05
+	HYDROGRAPH AT 449	77.	12.03	5.	1.	0.	.05
+	2 COMBINED AT C6364	164.	12.03	10.	3.	1.	.09
+	ROUTED TO R6364	134.	12.17	10.	3.	1.	.09
+	HYDROGRAPH AT 450	62.	12.20	7.	2.	1.	.07
+	HYDROGRAPH AT 451	18.	12.17	2.	1.	0.	.03
+	HYDROGRAPH AT RT66	78.	11.90	11.	3.	1.	.08
+	HYDROGRAPH AT 452	60.	12.03	4.	1.	0.	.04
+	2 COMBINED AT C6465	138.	12.03	15.	4.	2.	.04
	ROUTED TO R6566	133.	12.10	15.	4.	2.	.04
+	4 COMBINED AT C116	339.	12.17	34.	9.	3.	.23
+	ROUTED TO BASIN5	149.	12.47	34.	9.	3.	.23
+	ROUTED TO R116	148.	12.53	34.	9.	3.	.23
+	HYDROGRAPH AT 453	60.	12.10	7.	2.	1.	.06
+	2 COMBINED AT C117	167.	12.50	40.	11.	4.	.29
+	2 COMBINED AT C118	851.	12.10	98.	28.	10.	.92
+	ROUTED TO R118	841.	12.10	98.	28.	10.	.92
+	DIVERSION TO BASIN6	242.	12.10	10.	2.	1.	.92
+	HYDROGRAPH AT DIV7	599.	12.10	88.	25.	9.	.92
+	HYDROGRAPH AT RTDIV7	242.	12.10	10.	2.	1.	.92
+	ROUTED TO RFDIV7	1.	11.97	1.	1.	1.	.92
+	2 COMBINED AT CDIV7	600.	12.10	89.	26.	10.	.92
+	HYDROGRAPH AT 454	154.	12.17	20.	6.	2.	.18
+	2 COMBINED AT C119	747.	12.13	109.	32.	12.	1.10
+	ROUTED TO R454	720.	12.20	109.	32.	12.	1.10
	HYDROGRAPH AT 415	542.	12.17	75.	21.	8.	.61
	HYDROGRAPH AT RT385	353.	12.23	42.	12.	4.	.52
+	ROUTED TO RR385	309.	12.60	42.	12.	4.	.52
+	3 COMBINED AT 415C	1413.	12.23	225.	64.	24.	1.71

+	ROUTED TO R415	1397.	12.27	225.	64.	24.	1.71
+	HYDROGRAPH AT 455	1309.	12.13	141.	43.	15.	1.11
	DIVERSION TO BS455	1309.	12.13	137.	37.	13.	1.11
+	HYDROGRAPH AT D455	27.	14.10	15.	5.	2.	1.11
+	HYDROGRAPH AT RT455	1309.	12.13	137.	37.	13.	1.11
+	ROUTED TO SR455	25.	10.43	25.	25.	13.	1.11
+	2 COMBINED AT C455	52.	14.10	40.	30.	15.	1.11
+	3 COMBINED AT 455C	6121.	12.40	1237.	462.	233.	13.69
+	ROUTED TO SR440	240.	20.07	239.	225.	148.	13.69
+	ROUTED TO RR455	240.	20.53	239.	225.	147.	13.69
+	HYDROGRAPH AT 456	475.	12.07	36.	10.	4.	.26
+	DIVERSION TO BASIN1	188.	12.07	8.	2.	1.	.26
+	HYDROGRAPH AT DIV1	287.	12.07	28.	8.	3.	.26
+	DIVERSION TO WA30	58.	12.07	10.	3.	1.	.26
+	HYDROGRAPH AT DIV2	228.	12.07	18.	5.	2.	.26
+	ROUTED TO R456	215.	12.13	18.	5.	2.	.26
+	HYDROGRAPH AT 457	265.	12.07	20.	5.	2.	.19
+	2 COMBINED AT C101	468.	12.10	38.	10.	4.	.45
	DIVERSION TO BASIN2	168.	12.10	7.	2.	1.	.45
+	HYDROGRAPH AT DIV3	299.	12.10	31.	8.	3.	.45
+	HYDROGRAPH AT RTDIV3	168.	12.10	7.	2.	1.	.45
+	ROUTED TO RFDIV3	2.	11.90	2.	2.	1.	.45
+	2 COMBINED AT CDIV3	301.	12.10	32.	9.	4.	.45
+	ROUTED TO R101	298.	12.10	32.	9.	4.	.45
+	HYDROGRAPH AT 458	350.	12.03	25.	7.	2.	.19
+	2 COMBINED AT C103	635.	12.07	56.	16.	6.	.64
+	ROUTED TO R103	630.	12.07	56.	16.	6.	.64
+	HYDROGRAPH AT RT30	58.	12.07	10.	3.	1.	.26
+	ROUTED TO R30	58.	12.10	10.	3.	1.	.26
+	HYDROGRAPH AT RTB1	188.	12.07	8.	2.	1.	.26
+	ROUTED TO B1	38.	12.23	8.	2.	1.	.26
+	ROUTED TO RB1	38.	12.30	8.	2.	1.	.26
+	2 COMBINED AT CDIV	87.	12.20	18.	5.	2.	.12
+	HYDROGRAPH AT 459	43.	12.03	3.	1.	0.	.03
	2 COMBINED AT C52	114.	12.13	20.	6.	2.	.15
	ROUTED TO R52	113.	12.17	20.	6.	2.	.15
+	HYDROGRAPH AT 460	206.	12.07	18.	6.	2.	.14
+	2 COMBINED AT C102	305.	12.07	39.	12.	4.	.29

+	ROUTED TO	BASIN3	70.	12.63	39.	12.	4.	.29
+	ROUTED TO	R3	70.	12.77	39.	12.	4.	.29
+	HYDROGRAPH AT	461	154.	12.10	16.	5.	2.	.12
+	2 COMBINED AT	C104	206.	12.10	54.	17.	6.	.41
+	2 COMBINED AT	C106	829.	12.07	110.	32.	12.	1.05
+	ROUTED TO	R106	792.	12.13	110.	32.	12.	1.05
+	HYDROGRAPH AT	462	540.	12.07	40.	11.	4.	.30
+	2 COMBINED AT	C56	1252.	12.10	149.	43.	16.	1.35
+	HYDROGRAPH AT	480	1022.	12.10	94.	29.	11.	.73
+	DIVERSION TO	BS480	523.	11.93	27.	8.	3.	.73
+	HYDROGRAPH AT	D480	1022.	12.10	77.	21.	8.	.73
+	HYDROGRAPH AT	RT480	523.	11.93	27.	8.	3.	.73
+	ROUTED TO	SR480	6.	3.77	6.	6.	3.	.73
+	2 COMBINED AT	C480	1028.	12.10	83.	27.	11.	.73
+	3 COMBINED AT	480C	2267.	12.10	413.	302.	187.	2.09
+	ROUTED TO	R480	2253.	12.10	413.	301.	187.	2.09
+	ROUTED TO	RR480	2114.	12.20	410.	301.	186.	2.09
+	HYDROGRAPH AT	500	1097.	12.27	125.	34.	12.	.93
	2 COMBINED AT	500C	3141.	12.23	523.	329.	198.	3.02

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

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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   27JUL00  TIME  10:36:13 *                                  *          (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   UPDATE TO EXISTING CONDITION 24-HR 100-YR MODEL RUN BASED ON RE-ALIGNMENT
 13           ID   OF SUB-BASIN BOUNDARIES FOR SUB-BASINS 385 (REDUCED) & 415 (ENLARGED)
 14           ID   UPDATE BASED ON INFORMATION FROM 2' CONTOUR MAPPING.
 15           ID
 16           ID   ANALYSIS PERFORMED BY WOOD/PATEL; MW;        07/27/00  FILE: S24CE30B.DAT
 17           ID
 18           ID   DDM MCUHP1 SPOOK HILL AMDP - EXISTING CONDITIONS MODEL - 100YR, 24HR STORM
              *       Original File Name: S24CE30.DAT
              *       Modified File Name: S24CE30B.DAT
              *       Changes: 1) No. of Hydrograph Ordinates Increased to 2000
              *                2) SE, SV and SQ Cards for the Three (3) FRSs Updated
              *                3) Sediment Volumes Subtracted from Storage Volumes
              *                4) Old Elevation Datum Adjusted to NAVD 1988
              *       Wood/Patel, July 19, 2000.  SZ.
              *
              *       Changes: 5) The d-theta condition was changed for all sub-basins to
              *                   the normal condition.
              *       Wood/Patel, July 27, 2000.  MW.
              *
              *
              *
              *DIAGRAM
 19           IT       2                    2000
 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    3.68    5.80
 34           JD    3.58   10.00
 35           JD    3.57   10.69
 36           JD    3.54   13.69
 37           JD    3.43   30.00
 38           JD    3.28   60.00
              * DDM   ***** Updated *****
1                                          HEC-1 INPUT                                                    PAGE  2

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


 39           KK      10
 40           KM   SUB-BASIN 10
 41           KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 42           KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
 43           KM     L = 2.00  Kb = .044  Adj. Slope =  165.0
 44           BA    .702
 45           LG    .350    .150   7.600    .090  15.000
 46           UC    .412    .295
 47           UA       0       3       5       8      12      20      43      75      90      96
 48           UA     100
              * DDM   ***** Preserved *****

 49           KK     R10
 50           KM   ROUTING OF FLOW FROM SUB-BASIN 10 TO R12
 51           RS       4    FLOW      -1
 52           RC    .045     .03    .045    8700    .021
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 53          RX       0       1       2      17      27      42      43      44
 54          RY       5       5       5       0       0       5       5       5
             * DDM   ***** Preserved *****

 55          KK     R12
 56          KM   ROUTING OF FLOW FROM R12 TO SUB-BASIN 20
 57          RS       6    FLOW      -1
 58          RC    .045     .03    .045    4500     .01
 59          RX       0       1      45    52.5    72.5      80     124     125
 60          RY       4     2.5     2.5       0       0     2.5     2.5       4
             * DDM   ***** Updated *****

 61          KK      20
 62          KM   SUB-BASIN 20
 63          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 64          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
 65          KM     L = 2.50  Kb = .041  Adj. Slope =   88.0
 66          BA   1.120
 67          LG    .350    .250   5.800    .190   1.000
 68          UC    .633    .435
 69          UA       0       3       5       8      12      20      43      75      90      96
 70          UA     100
             * DDM   ***** Preserved *****

 71          KK     C20
 72          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 10 AND 20
 73          HC       2
             * DDM   ***** Preserved *****

 74          KK     R20
 75          KM        ROUTE FLOW THROUGH BULLDOG FLOODWAY FROM APACHE JUNCTION FRS
 76          RS       1    FLOW      -1
 77          RC    .016    .016    .016     990    .004
 78          RX       0       5       7    14.5    34.5      42      44      50
 79          RY       4       2       2       0       0       2       2       4
             * DDM   ***** Updated *****
1                                    HEC-1 INPUT                                          PAGE  3

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

 80          KK      40
 81          KM   SUB-BASIN 40
 82          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 83          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
 84          KM     L = 3.08  Kb = .036  Adj. Slope =  189.0
 85          BA   2.233
 86          LG    .340    .250   4.900    .280   5.000
 87          UC    .483    .257
 88          UA       0       3       5       8      12      20      43      75      90      96
 89          UA     100
             * DDM   ***** Updated *****

 90          KK      60
 91          KM   SUB-BASIN 60
 92          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 93          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .990
 94          KM     L = 4.19  Kb = .038  Adj. Slope =  209.6
 95          BA   1.746
 96          LG    .330    .250   5.800    .190   9.000
 97          UC    .583    .466
 98          UA       0       3       5       8      12      20      43      75      90      96
 99          UA     100
             * DDM   ***** Preserved *****

100          KK     60C
101          KM   HYDROGRAPH COMBINATION FOR APACHE JUNCTION FRS
             *      1       2
102          HC       3
             * DDM   ***** Preserved *****

103          KK    SR60
104          KM   APACHE JUNCTION FRS AS-BUILT PLANS 12/19/88
105          KM   OUTLET PIPE=30"RCP; L=136.6'; INLET INV.=1783.5; OUTLET INV.=1783
106          KM   EMERGENCY SPILLWAY ELEV.=1799.77'; PRINCIPLE SPILLWAY ELEV.=1793.5'
107          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 100 ACRE-FEET
             *  ESE = 1801.92 ft; PSE = 1795.65 ft; Sediment Vol. = 237 Ac-Ft.
108          RS       1    STOR       0
109          SV       0       0      77     242     371     439     563     687    2163
110          SQ       0      12     103     114     120     362    1462    3101   30000
111          SE    95.0    96.0    98.0   100.0   101.6   101.9   103.0   104.0   112.9
             * DDM   ***** Preserved *****

112          KK     R60
113          KM        ROUTE FLOW THROUGH BULLDOG FLOODWAY FROM APACHE JUNCTION FRS
114          RS       2    FLOW      -1
115          RC    .016    .016    .016    2850    .012
116          RX       0       1       2     2.1     5.6     5.7       6       7
117          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

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

124          KK      80
125          KM   SUB-BASIN 80
126          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
127          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .991
128          KM     L = 2.69  Kb = .039  Adj. Slope =  229.8
129          BA   1.475
130          LG    .330    .250   5.600    .210   4.000
131          UC    .425    .253
132          UA       0       3       5       8      12      20      43      75      90      96
133          UA     100
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            * DDM   ***** Preserved *****

 134        KK     80C
 135        KM   HYDROGRAPH COMBINATION FOR FLOW FROM APACHE JUNCTION FRS & SUB-BASIN 80
 136        HC       2   1.475
            * DDM   ***** Preserved *****

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

 143        KK     100
 144        KM   SUB-BASIN 100
 145        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 146        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
 147        KM     L = 1.94  Kb = .046  Adj. Slope =  108.0
 148        BA    .484
 149        LG    .320    .250   5.100    .260   3.000
 150        UC    .529    .469
 151        UA       0       5      16      30      65      77      84      90      94      97
 152        UA     100
            * DDM   ***** Preserved *****

 153        KK    100C
 154        KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 80 & 100
 155        HC       2
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE  5

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

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

 162        KK     120
 163        KM   SUB-BASIN 120
 164        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 165        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
 166        KM     L = 3.07  Kb = .037  Adj. Slope =  239.0
 167        BA   2.202
 168        LG    .330    .170   6.800    .130  11.000
 169        UC    .425    .224
 170        UA       0       3       5       8      12      20      43      75      90      96
 171        UA     100
            * DDM   ***** Preserved *****

 172        KK    120C
 173        KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 100 & 120
 174        HC       2
            * DDM   ***** Preserved *****

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

 181        KK     140
 182        KM   SUB-BASIN 140
 183        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 184        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
 185        KM     L = 1.61  Kb = .044  Adj. Slope =  149.0
 186        BA    .598
 187        LG    .310    .250   4.200    .440   5.000
 188        UC    .417    .275
 189        UA       0       5      16      30      65      77      84      90      94      97
 190        UA     100
            * DDM   ***** Updated *****

 191        KK     150
 192        KM   SUB-BASIN 150
 193        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 194        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
 195        KM     L = 1.50  Kb = .047  Adj. Slope =  314.6
 196        BA    .408
 197        LG    .350    .250   5.100    .260   7.000
 198        UC    .292    .217
 199        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

 200        UA     100
            * DDM   ***** Preserved *****

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

 207        KK    R152
 208        KM   ROUTING OF FLOW FROM R152 TO SUB-BASIN 160
 209        RS       3    FLOW      -1
 210        RC    .045     .03    .045    5900    .019
 211        RX       0       1       2       8      33      39      40      41
 212        RY       2       2       2       0       0       2       2       2
            * DDM   ***** Updated *****
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213          KK     160
214          KM   SUB-BASIN 160
215          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
216          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
217          KM     L = 2.10  Kb = .047  Adj. Slope =  129.0
218          BA    .369
219          LG    .340    .250   4.150    .440   1.000
220          UC    .567    .629
221          UA       0       3       5       8      12      20      43      75      90      96
222          UA     100
             * DDM   ***** Updated *****

223          KK     180
224          KM   SUB-BASIN 180
225          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
226          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
227          KM     L = 2.42  Kb = .041  Adj. Slope =  140.0
228          BA   1.000
229          LG    .350    .250   4.150    .430    .000
230          UC    .542    .380
231          UA       0       3       5       8      12      20      43      75      90      96
232          UA     100
             * DDM   ***** Preserved *****

233          KK    180C
234          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
235          HC       5
             * DDM   ***** Updated *****

236          KK     210
237          KM   SUB-BASIN 210
238          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
239          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
240          KM     L = 1.84  Kb = .045  Adj. Slope =  315.0
241          BA    .583
242          LG    .350    .150   7.000    .120   5.000
1                                        HEC-1 INPUT                                          PAGE  7

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

243          UC    .313    .225
244          UA       0       3       5       8      12      20      43      75      90      96
245          UA     100
             * DDM   ***** Preserved *****

246          KK    R210
247          KM   ROUTING OF FLOW FROM SUB-BASIN 210 TO SUB-BASIN 220
248          RS       3    FLOW      -1
249          RC    .045     .03    .045    5100    .022
250          RX       0       1       2      14      34      46      47      48
251          RY       4       4       4       0       0       4       4       4
             * DDM   ***** Updated *****

252          KK     240
253          KM   SUB-BASIN 240
254          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
255          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .992
256          KM     L = 3.50  Kb = .039  Adj. Slope =  298.6
257          BA   1.398
258          LG    .350    .250   5.200    .240   2.000
259          UC    .458    .350
260          UA       0       3       5       8      12      20      43      75      90      96
261          UA     100
             * DDM   ***** Preserved *****

262          KK    240C
263          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
264          HC       2
             * DDM   ***** Preserved *****

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

272          KK     220
273          KM   SUB-BASIN 220
274          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
275          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
276          KM     L = 1.92  Kb = .043  Adj. Slope =  315.0
277          BA    .725
278          LG    .350    .150   7.000    .120   4.000
279          UC    .313    .206
280          UA       0       3       5       8      12      20      43      75      90      96
281          UA     100
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE  8

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

282          KK    220C
283          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
284          HC       2
             * DDM   ***** Preserved *****

285          KK   SR220
286          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
287          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
288          RS       1    STOR       0
289          SA     .78     4.1    13.7
290          SE       1       3      10
291          SS       3      65       3     1.5
             * DDM   ***** Updated *****

292          KK     190
293          KM   SUB-BASIN 190
294          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
295          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
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296          KM     L = 1.91  Kb = .042  Adj. Slope =  315.0
297          BA    .918
298          LG    .350    .250   5.800    .190   8.000
299          UC    .313    .179
300          UA       0       3       5       8      12      20      43      75      90      96
301          UA     100
             * DDM   ***** Preserved *****

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

308          KK    R192
309          KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
310          RS       2    FLOW      -1
311          RC    .045    .035    .045    2200    .018
312          RX       0       1      50    57.5    77.5      85     137     138
313          RY     3.5     2.5     2.5       0       0     2.5     2.5     3.5
             * DDM   ***** Updated *****

314          KK     200
315          KM   SUB-BASIN 200
316          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
317          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
318          KM     L = 1.58  Kb = .045  Adj. Slope =  305.6
319          BA    .535
320          LG    .350    .250   5.700    .200  10.000
321          UC    .292    .194
322          UA       0       3       5       8      12      20      43      75      90      96
323          UA     100
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

324          KK    200C
325          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 220 & 200
326          HC       3
             * DDM   ***** Preserved *****

327          KK   SR200
328          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
329          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
330          RS       1    STOR       0
331          SA    2.56     3.1     9.4
332          SE       0       3      10
333          SS       3     112       3     1.5
             * DDM   ***** Preserved *****

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

341          KK    C180
342          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
             *      1       2
343          HC       2
             * DDM   ***** Preserved *****

344          KK   SR180
345          KM   SIGNAL BUTTE FRS DATED 1/28/85
346          KM   OUTLET PIPE=36"RCP; L= 147';  INLET INV.=1690; OUTLET INV.=1687
347          KM   EMERGENCY SPILLWAY ELEV.=1712.4; PRINCIPLE SPILLWAY ELEV.=1701
348          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 250 ACRE-FEET
             *  ESE = 1714.63 ft; PSE = 1703.23 ft; Sediment Vol. = 247 Ac-Ft.
349          RS       1    STOR       0
350          SV       0      92     226     462     742    1197    1418    1776    1941    3114
351          SQ       0      10    10.5      98     133     149     155    1484    2567    6000
352          SE      99     101   103.0     106     109   113.0   114.6     117     118     120
             * DDM   ***** Preserved *****

353          KK    R180
354          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
355          KM   ROUTE FLOW FROM SIGNAL BUTTE FRS TO SUB-BASIN 260
356          RS       3    FLOW      -1
357          RC    .035    .025    .035    1500    .003
358          RX       0       1       2    22.6    38.6    59.2      60      61
359          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

360          KK     260
361          KM   SUB-BASIN 260
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  .998
364          KM     L =  .81  Kb = .049  Adj. Slope =   68.0
365          BA    .267
366          LG    .300    .170   6.800    .160  15.000
367          UC    .363    .215
368          UA       0       5      16      30      65      77      84      90      94      97
369          UA     100
             * DDM   ***** Preserved *****

370          KK    260C
371          KM   HYDROGRAPH COMBINATION FOR OUTFLOW OF SIGNAL BUTTE FRS & SUB-BASIN 260
372          HC       2    .267
             * DDM   ***** Preserved *****

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

380          KK     280
381          KM   SUB-BASIN 280
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  .998
384          KM     L =  .77  Kb = .049  Adj. Slope =   84.0
385          BA    .304
386          LG    .300    .250   5.300    .290  15.000
387          UC    .333    .175
388          UA       0       5      16      30      65      77      84      90      94      97
389          UA     100
             * DDM   ***** Preserved *****

390          KK    280C
391          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 260 & SUB-BASIN 280
392          HC       2
             * DDM   ***** Preserved *****

393          KK    R280
394          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
395          KM   ROUTE FLOW FROM SUB-BASIN 280 TO SUB-BASIN 300
396          RS       2    FLOW      -1
397          RC    .035    .025    .035    2500    .003
398          RX       0       1       2    23.4    43.4    64.8      65      66
399          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

400          KK     300
401          KM   SUB-BASIN 300
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  .994
404          KM     L = 2.28  Kb = .041  Adj. Slope =  127.0
405          BA    .988
406          LG    .340    .250   4.500    .370   7.000
407          UC    .525    .352
408          UA       0       5      16      30      65      77      84      90      94      97
409          UA     100
             * DDM   ***** Preserved *****

410          KK    300C
411          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 280 & 300
412          HC       2
             * DDM   ***** Preserved *****

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

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

427          KK     350
428          KM   SUB-BASIN 350
429          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
430          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
431          KM     L = 2.22  Kb = .042  Adj. Slope =  315.0
432          BA    .970
433          LG    .350    .250   4.550    .340   4.000
434          UC    .358    .228
435          UA       0       3       5       8      12      20      43      75      90      96
436          UA     100
             * DDM   ***** Preserved *****

437          KK    D350
438          KM   DIVERT FLOW FROM SUB-BASIN 350. FOR MODELING PURPOSES THE SPLIT FLOW WILL
439          KM   BE ROUTED BETWEEN SUB-BASINS 355 & 310. THE MAIN FLOW WILL ROUTED TO 310
440          DT   SF350
441          DI       0    5000
442          DQ       0    2500
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

443          KK    350R
444          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING
445          KM   ROUTING OF MAIN FLOW FROM DIVERSION OF SUB-BASIN 350 TO SUB-BASIN 310
446          RS       6    FLOW      -1
447          RC    .045    .035    .045    5150    .025
448          RX       0       1      40      46      56      62     102     103
449          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

450          KK     310
451          KM   SUB-BASIN 310
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  .997
454          KM     L = 2.70  Kb = .045  Adj. Slope =  283.5
455          BA    .555
456          LG    .350    .250   3.910    .480    .000
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457          UC    .467    .492
458          UA       0       3       5       8      12      20      43      75      90      96
459          UA     100
             * DDM   ***** Preserved *****

460          KK    C310
461          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 350 & 310
462          HC       2    .943
             * DDM   ***** Preserved *****

463          KK    R310
464          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
465          KM   ROUTING OF FLOW FROM SUB-BASIN 310 TO 320
466          RS      10    FLOW      -1
467          RC    .045    .035    .045   10050    .022
468          RX       0       1      40      46      56      62     102     103
469          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

470          KK     320
471          KM   SUB-BASIN 320
472          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
473          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
474          KM     L = 2.20  Kb = .042  Adj. Slope =  132.0
475          BA    .972
476          LG    .310    .250   4.550    .360  14.000
477          UC    .500    .327
478          UA       0       5      16      30      65      77      84      90      94      97
479          UA     100
             * DDM   ***** Preserved *****

480          KK    D320
481          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
482          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
483          KM   SIERRA HEIGHTS       FALCON RIDGE    & MARBLE CREEK
484          KM        MAXIMUM VOLUME DIVERSION = 12.27acre-feet
             *      1
485          DT   BS320   12.27
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

486          DI       0   10000
487          DQ       0   10000
             * DDM   ***** Preserved *****

488          KK   RT320
489          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
490          DR   BS320
             * DDM   ***** Preserved *****

491          KK   SR320
492          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
493          KM   12.27 ACRE-FEETx43560/36x3600=4.1cfs
             *      1
494          RS       1    STOR       0
495          SV       0     .01    12.3
496          SQ       0     4.2     4.2
             * DDM   ***** Preserved *****

497          KK    C320
498          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
499          HC       4
             * DDM   ***** Updated *****

500          KK     340
501          KM   SUB-BASIN 340
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  .991
504          KM     L = 2.40  Kb = .042  Adj. Slope =  160.0
505          BA   1.449
506          LG    .280    .250   4.150    .520  21.000
507          UC    .508    .285
508          UA       0       5      16      30      65      77      84      90      94      97
509          UA     100
             * DDM   ***** Preserved *****

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

518          KK   RT340
519          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
520          DR   BS340
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

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

527          KK    C340
528          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
529          HC       3
             * DDM   ***** Preserved *****

530          KK   RT350
531          KM   RETRIEVE SPLIT FLOW FROM DIVERSION OF SUB-BASIN 350
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532          DR   SF350
             * DDM   ***** Preserved *****

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

540          KK     355
541          KM   SUB-BASIN 355
542          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
543          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
544          KM     L = 3.00  Kb = .044  Adj. Slope =  284.0
545          BA    .659
546          LG    .340    .250   4.450    .370   4.000
547          UC    .475    .495
548          UA       0       3       5       8      12      20      43      75      90      96
549          UA     100
             * DDM   ***** Preserved *****

550          KK    C355
551          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 355 AND THE SPLIT FLOW FROM SUB-BASIN 350
552          HC       2    1.24
             * DDM   ***** Preserved *****

553          KK    R355
554          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
555          KM   ROUTING OF FLOW FROM SUB-BASIN 355 TO SUB-BASIN 360
556          RS       9    FLOW      -1
557          RC    .045    .035    .045   10100    .026
558          RX       0       1      40      46      56      62     102     103
559          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

560          KK     360
561          KM   SUB-BASIN 360
562          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
563          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
564          KM     L = 2.10  Kb = .048  Adj. Slope =  124.0
565          BA    .670
566          LG    .260    .250   4.100    .560  20.000
567          UC    .583    .463
568          UA       0       5      16      30      65      77      84      90      94      97
569          UA     100
             * DDM   ***** Preserved *****

570          KK    D360
571          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
572          KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
573          KM        MAXIMUM VOLUME DIVERSION = 28.6 acre-feet
             *      1
574          DT   BS360    28.6
575          DI       0   10000
576          DQ       0   10000
             * DDM   ***** Preserved *****

577          KK   RT360
578          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
579          DR   BS360
             * DDM   ***** Preserved *****

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

586          KK    360C
587          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
588          HC       4
             * DDM   ***** Updated *****

589          KK     370
590          KM   SUB-BASIN 370
591          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
592          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
593          KM     L = 2.90  Kb = .044  Adj. Slope =  294.6
594          BA    .667
595          LG    .340    .250   4.650    .330   9.000
596          UC    .450    .450
597          UA       0       3       5       8      12      20      43      75      90      96
598          UA     100
             * DDM   ***** Updated *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

599          KK     395
600          KM   SUB-BASIN 395
601          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
602          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
603          KM     L = 1.60  Kb = .051  Adj. Slope =  215.8
604          BA    .198
605          LG    .330    .250   4.900    .300  10.000
606          UC    .379    .462
607          UA       0       3       5       8      12      20      43      75      90      96
608          UA     100
             * DDM   ***** Preserved *****

609          KK    370C
610          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
611          HC       2
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            * DDM   ***** Preserved *****

 612        KK    R370
 613        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
 614        KM   ROUTING OF FLOW FROM SUB-BASINS 370 AND 395 TO SUB-BASIN 380.
 615        RS      12    FLOW      -1
 616        RC    .045    .035    .045   10250    .023
 617        RX       0       1      40      46      56      62     102     103
 618        RY       3       2       2       0       0       2       2       3
            * DDM   ***** Updated *****

 619        KK     380
 620        KM   SUB-BASIN 380
 621        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 622        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
 623        KM     L = 2.20  Kb = .048  Adj. Slope =  114.0
 624        BA    .972
 625        LG    .300    .250   4.150    .500   7.000
 626        UC    .642    .432
 627        UA       0       5      16      30      65      77      84      90      94      97
 628        UA     100
            * DDM   ***** Preserved *****

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

 636        KK   RT380
 637        KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
 638        DR   BS380
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 17

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

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

 645        KK    380C
 646        KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
 647        HC       4
            * DDM   ***** Updated *****

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

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

 665        KK   RT390
 666        KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
 667        DR   BS390
            * DDM   ***** Preserved *****

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

 674        KK    390C
 675        KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
 676        HC       2
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 18

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

 677        KK   RR390
 678        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
 679        KM   FROM SUB-BASIN 390 TO SUB-BASIN 400
 680        RS      14    FLOW      -1
 681        RC    .045    .045    .045    8800    .020
 682        RX       0       1      40      46      56      62     102     103
 683        RY       3       2       2       0       0       2       2       3
            * DDM   ***** Updated *****

 684        KK     400
 685        KM   SUB-BASIN 400
 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 = 1.64  Kb = .046  Adj. Slope =  110.0
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689          BA    .616
690          LG    .320    .280   3.130    .930   6.000
691          UC    .583    .398
692          UA      0       5      16       30      65      77      84      90      94      97
693          UA    100
             * DDM   ***** Preserved *****

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

701          KK   RT400
702          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
703          DR   BS400
             * DDM   ***** Preserved *****

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

710          KK    C400
711          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
712          HC       2
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

713          KK    400C
714          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
715          HC       3
             * DDM   ***** Updated *****

716          KK     385
717          KM   SUB-BASIN 385
718          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
719          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
720          KM     L = 2.30  Kb = .045  Adj. Slope =  303.0
721          BA    .523
722          LG    .340    .250   5.600    .220  13.000
723          UC    .375    .351
724          UA      0       3       5       8      12      20      43      75      90      96
725          UA    100
             * DDM   ***** Preserved *****

726          KK    D385
727          KM   DIVERT FLOW INTO SUB-BASINS 415 & 420
728          DT   SF385
729          DI       0    5000
730          DQ       0    3000
             * DDM   ***** Preserved *****

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

738          KK     420
739          KM   SUB-BASIN 420
740          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
741          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .995
742          KM     L = 1.91  Kb = .042  Adj. Slope =  120.0
743          BA    .849
744          LG    .310    .250   3.880    .580  12.000
745          UC    .508    .322
746          UA      0       5      16      30      65      77      84      90      94      97
747          UA    100
             * DDM   ***** Preserved *****

748          KK    D420
749          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
750          KM   DETENTION/RETENTION BASINS LOCATED WITHIN GRAY FOX SUBDIVISION
751          KM        MAXIMUM VOLUME DIVERSION = 8.65 acre-feet
             *      1
752          DT   BS420    8.65
753          DI       0   10000
754          DQ       0   10000
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

755          KK   RT420
756          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
757          DR   BS420
             * DDM   ***** Preserved *****

758          KK   SR420
759          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
760          KM   38.55 ACRE-FEETx43560/36x3600=13cfs
761          RS       1    STOR       0
762          SV       0     .01   38.55
763          SQ       0      13      13
             * DDM   ***** Preserved *****

764          KK    420C
765          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
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766          HC        4   10.87
             * DDM    ***** Updated *****

767          KK      440
768          KM    SUB-BASIN 440
769          KM    24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
770          KM    THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
771          KM      L =  .40  Kb = .039  Adj. Slope =  315.0
772          BA     .080
773          LG     .190     .210   6.400     .140  13.000
774          UC     .129     .077
775          UA        0        3       5       8      12      20      43      75      90      96
776          UA      100
             * DDM    ***** Preserved *****

777          KK      R70
778          KM    ROUTE FLOW FROM SUB-BASIN 440 TO C108
779          RS        1    FLOW      -1
780          RC      .05     .035     .05    2250     .08
781          RX     1000     1025    1050    1070    1075    1095    1120    1145
782          RY       30     22.9    15.7      10      10    15.7    22.9      30
             * DDM    ***** Updated *****

783          KK      441
784          KM    SUB-BASIN 441
785          KM    24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
786          KM    THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
787          KM      L =  .28  Kb = .069  Adj. Slope =  315.0
788          BA     .010
789          LG     .300     .250   5.600     .220   5.000
790          UC     .150     .225
791          UA        0        5      16      30      65      77      84      90      94      97
792          UA      100
             * DDM    ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

793          KK     C108
794          KM    COMBINE HYDROGRAPHS FROM SUB-BASINS 440 & 441
795          HC        2
             * DDM    ***** Preserved *****

796          KK     DIV4
797          KM         SPLIT FLOW WITH TWO 42 INCH PIPES TO WEST AND SOUTH
             *       1
798          DT    SPLIT
799          DI        0       14       40       82      120      154      180
800          DQ        0        7       20       41       60       77       90
             * DDM    ***** Preserved *****

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

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

817          KK      C67
818          KM    COMBINE FLOW FROM SUB-BASIN 442 & DIV4
819          HC        2
             * DDM    ***** Preserved *****

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

826          KK   RTDIV6
827          KM    RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
828          DR   BASIN4
             * DDM    ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

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

835          KK    CDIV6
836          KM    HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
837          HC        2
             * DDM    ***** Updated *****

838          KK      443
839          KM    SUB-BASIN 443
840          KM    24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
841          KM    THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
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842          KM     L =  .71  Kb = .050  Adj. Slope =  315.0
843          BA    .080
844          LG    .250    .150   8.000    .080  10.000
845          UC    .196    .194
846          UA       0       5      16      30      65      77      84      90      94      97
847          UA     100
             * DDM   ***** Preserved *****

848          KK   DIV66
849          KM        DIVERT FLOW INTO 3 NATURAL WASHES WITH ONE 24" PIPE IN EACH WASH.
850          KM        EACH PIPE CAPACITY BASED ON 4 FEET OF HEAD
851          DT   WSH66
852          DI       0      78     100     200
853          DQ       0      78      78      78
             * DDM   ***** Preserved *****

854          KK    R113
855          KM        ROUTE FLOW FROM C113 TO C114
856          RS       1    FLOW      -1
857          RC    .019    .019    .019    1300    .029
858          RX    1000    1004    1008    1012    1018    1022    1026    1030
859          RY      17   15.33   12.67      10      10   12.67   15.33      17
             * DDM   ***** Preserved *****

860          KK    C114
861          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 67 AND C113
862          HC       2
             * DDM   ***** Updated *****

863          KK     444
864          KM   SUB-BASIN 444
865          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
866          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
867          KM     L =  .33  Kb = .034  Adj. Slope =  315.0
868          BA    .040
869          LG    .130    .250   4.450    .320   1.000
1                                        HEC-1 INPUT                                          PAGE 23

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

870          UC    .112    .084
871          UA       0       3       5       8      12      20      43      75      90      96
872          UA     100
             * DDM   ***** Preserved *****

873          KK     R58
874          KM   ROUTE FLOW FROM SUB-BASIN 444 TO C107
875          RS       1    FLOW      -1
876          RC     .05    .035     .05    2370   .0516
877          RX    1000    1010    1020    1050    1055    1085    1095    1105
878          RY      19      18      17      10      10      17      18      19
             * DDM   ***** Updated *****

879          KK     445
880          KM   SUB-BASIN 445
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 =  .82  Kb = .036  Adj. Slope =  315.0
884          BA    .190
885          LG    .170    .260   3.470    .590   3.000
886          UC    .188    .127
887          UA       0       5      16      30      65      77      84      90      94      97
888          UA     100
             * DDM   ***** Preserved *****

889          KK    C107
890          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 444 & 445
891          HC       2
             * DDM   ***** Preserved *****

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

898          KK    RTB2
899          KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
             *      1
900          DR   SPLIT
             * DDM   ***** Preserved *****

901          KK  RSPLIT
902          KM        ROUTE FLOW FROM SPLIT TO C109
903          RS       1    FLOW      -1
904          RC     .05    .035     .05     800     .05
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 *****
1                                        HEC-1 INPUT                                          PAGE 24

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

907          KK     446
908          KM   SUB-BASIN 446
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 =  .46  Kb = .061  Adj. Slope =  303.9
912          BA    .040
913          LG    .270    .250   4.500    .400  19.000
914          UC    .183    .189
915          UA       0       5      16      30      65      77      84      90      94      97
916          UA     100
             * DDM   ***** Preserved *****

917          KK    C109
918          KM        COMBINE HYDROGRAPHS FROM COMBINES C107 AND C108
919          HC       3
             * DDM   ***** Preserved *****
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920          KK    DIV5
921          KM        DIVERT FLOW INTO WASHES TOWARDS WEST
922          KM        DIVERSION THROUGH 36" PIPE WITH 3 FEET OF HEAD
             *      1
923          DT  WSH404
924          DI       0    40.7    71.2   121.6     190     276   379.4   500.6
925          DQ       0      35      35      35      35      35      35      35
             * DDM   ***** Preserved *****

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

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

942          KK   RT404
943          KM        RETRIEVE DIVERTED FLOW FOR WASH 109
944          DR  WSH404
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 25

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

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

951          KK    C110
952          KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 447 AND R404
953          HC       3
             * DDM   ***** Preserved *****

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

960          KK    C115
961          KM        COMBINE HYDROGRAPHS FROM C114 AND C110
962          HC       2
             * DDM   ***** Preserved *****

963          KK    R115
             * ******OUTFLOW FROM THIS ROUTING IS GREATER THAN INFLOW TO THE
             * ******ROUTING BY 2cfs.  THIS IS NOTED BUT LEFT UNCHANGED WITHIN THE MODEL
964          KM        ROUTE FLOW FROM C115 TO C119
965          RS       1    FLOW      -1
966          RC    .019    .019    .019    2125    .029
967          RC    .019    .019    .019     580   .0291
968          RX    1000    1012    1016    1020    1035    1039    1043    1055
969          RY      15      12      11      10      10      11      12      15
             * DDM   ***** Updated *****

970          KK     448
971          KM   SUB-BASIN 448
972          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
973          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
974          KM     L =  .36  Kb = .042  Adj. Slope =  315.0
975          BA    .045
976          LG    .170    .250   4.200    .390  11.000
977          UC    .133    .102
978          UA       0       5      16      30      65      77      84      90      94      97
979          UA     100
             * DDM   ***** Updated *****
1                                    HEC-1 INPUT                                          PAGE 26

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

980          KK     449
981          KM   SUB-BASIN 449
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 1.000
984          KM     L =  .40  Kb = .054  Adj. Slope =  315.0
985          BA    .050
986          LG    .260    .260   3.500    .640   6.000
987          UC    .162    .130
988          UA       0       5      16      30      65      77      84      90      94      97
989          UA     100
             * DDM   ***** Preserved *****

990          KK   C6364
991          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 448 & 449
992          HC       2
             * DDM   ***** Preserved *****

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

 999          KK     450
1000          KM   SUB-BASIN 450
1001          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1002          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1003          KM     L =  .85  Kb = .057  Adj. Slope =  210.5
1004          BA    .070
1005          LG    .340    .260   3.630    .570   4.000
1006          UC    .287    .371
1007          UA       0       3       5       8      12      20      43      75      90      96
1008          UA     100
              * DDM   ***** Updated *****

1009          KK     451
1010          KM   SUB-BASIN 451
1011          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1012          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1013          KM     L =  .57  Kb = .063  Adj. Slope =  175.0
1014          BA    .025
1015          LG    .340    .270   3.290    .750   3.000
1016          UC    .267    .446
1017          UA       0       3       5       8      12      20      43      75      90      96
1018          UA     100
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 27

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

1019          KK    RT66
1020          KM        RETRIEVE DIVERTED FLOW FROM SUB-BASIN 66
1021          DR   WSH66
              * DDM   ***** Updated *****

1022          KK     452
1023          KM   SUB-BASIN 452
1024          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1025          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1026          KM     L =  .43  Kb = .055  Adj. Slope =  315.0
1027          BA    .040
1028          LG    .260    .260   3.700    .550   9.000
1029          UC    .171    .166
1030          UA       0       5      16      30      65      77      84      90      94      97
1031          UA     100
              * DDM   ***** Preserved *****

1032          KK   C6465
1033          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 443 AND 452
1034          HC       2
              * DDM   ***** Preserved *****

1035          KK   R6566
1036          KM        ROUTE FLOW FROM DIVERSIONS 65 AND 66 TO C116
1037          RS       2    FLOW      -1
1038          RC     .05    .035     .05    2435   .0282
1039          RX    1000    1045    1090    1150    1160    1220    1265    1310
1040          RY      25      23      20      10      10      20      23      25
              * DDM   ***** Preserved *****

1041          KK    C116
1042          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 450 & 451 AND R6364 & R6465
1043          HC       4
              * DDM   ***** Preserved *****

1044          KK  BASIN5
1045          KM        RESERVOIR WITHIN PARCEL 31      2-48 INCH PIPES AT OUTFALL
1046          KM        BASIN 5 FEET DEEP
1047          RS       1    ELEV       0
1048          SV       0     4.5     9.9
1049          SQ       0      69     190
1050          SE       0     2.5       5
              * DDM   ***** Preserved *****

1051          KK    R116
1052          KM   ROUTE FLOW FROM C116 TO C117
1053          RS       2    FLOW      -1
1054          RC     .05    .035     .05    1300   .0333
1055          RX    1000    1100    1200    1300    1320    1420    1520    1620
1056          RY      13      12      11      10      10      11      12      13
              * DDM   ***** Updated *****
1                                        HEC-1 INPUT                                          PAGE 28

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

1057          KK     453
1058          KM   SUB-BASIN 453
1059          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1060          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1061          KM     L =  .58  Kb = .058  Adj. Slope =  138.0
1062          BA    .060
1063          LG    .290    .270   3.290    .820  18.000
1064          UC    .275    .284
1065          UA       0       5      16      30      65      77      84      90      94      97
1066          UA     100
              * DDM   ***** Preserved *****

1067          KK    C117
1068          KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 453 AND R116
1069          HC       2
              * DDM   ***** Preserved *****

1070          KK    C118
1071          KM   COMBINE HYDROGRAPHS FROM R115 AND C117
1072          HC       2
              * DDM   ***** Preserved *****

1073          KK    R118
1074          KM        ROUTE FLOW FROM C118 TO  DIV7
1075          RS       1    FLOW      -1
1076          RC    .019    .019    .019    1500    .024
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1077          RX    1000    1012    1016    1020    1035    1039    1043    1055
1078          RY      15      12      11      10      10      11      12      15
              * DDM   ***** Preserved *****

1079          KK    DIV7
1080          KM        OFFLINE BASIN AT NORTH MOUNTAIN RIDGE   FLOWS ENTER BASIN OVER
1081          KM        30' WEIR SET AT 5.3' ABOVE THE CHANNEL BOTTOM
              *      1
1082          DT  BASIN6
1083          DI       0     363     487     563     645     844
1084          DQ       0       3      47      83     125     244
              * DDM   ***** Preserved *****

1085          KK  RTDIV7
1086          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1087          DR  BASIN6
              * DDM   ***** Preserved *****

1088          KK  RFDIV7
1089          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1090          KM     3.6 ACRE-FEETx43560/36x3600=1.2cfs
1091          RS       1    STOR       0
1092          SV       0     .01     3.6
1093          SQ       0     1.2     1.2
              * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                    PAGE 29

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

1094          KK   CDIV7
1095          KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1096          HC       2
              * DDM   ***** Updated *****

1097          KK     454
1098          KM   SUB-BASIN 454
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  .999
1101          KM     L = 1.23  Kb = .051  Adj. Slope =  163.0
1102          BA    .180
1103          LG    .300    .260   3.780    .560  14.000
1104          UC    .375    .391
1105          UA       0       5      16      30      65      77      84      90      94      97
1106          UA     100
              * DDM   ***** Preserved *****

1107          KK    C119
1108          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 454 AND C119
              *      1       2
1109          HC       2
              * DDM   ***** Preserved *****

1110          KK    R454
1111          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1112          KM   ROUTE FLOW FROM C119 TO 415C
1113          RS       2    FLOW      -1
1114          RC    .045    .035    .045    2200    .009
1115          RX       0      .5       1      33      42      67    67.5      68
1116          RY       5       4       4       0       0       6       6       6
              * DDM   ***** Updated *****

1117          KK     415
1118          KM   SUB-BASIN 415
1119          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1120          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
1121          KM     L = 2.58  Kb = .044  Adj. Slope =  298.5
1122          BA    .606
1123          LG    .320    .250   4.500    .400  15.000
1124          UC    .417    .398
1125          UA       0       5      16      30      65      77      84      90      94      97
1126          UA     100
              * DDM   ***** Preserved *****

1127          KK   RT385
1128          KM   RETRIEVE FLOW FROM DIVERSION OF SUB-BASIN 385 INTO SUB-BASIN 415
1129          DR   SF385
              * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                    PAGE 30

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

1130          KK   RR385
1131          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1132          KM   ROUTING OF SPLIT FLOW FROM SUB-BASIN 385 TO SUB-BASIN 415
1133          RS      10    FLOW      -1
1134          RC    .045     .04    .045    5878    .024
1135          RX       0       1      40      46      56      62     102     103
1136          RY       3       2       2       0       0       2       2       3
              * DDM   ***** Preserved *****

1137          KK    415C
1138          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 415, R454 & SPLIT FLOW FROM 385
1139          HC       3    1.71
              * DDM   ***** Preserved *****

1140          KK    R415
1141          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1142          KM   ROUTING OF FLOW FROM 415C TO 455C
1143          RS       2    FLOW      -1
1144          RC    .045     .03    .045    4100    .024
1145          RX       0      .5       1       8      16      23    23.5      24
1146          RY       8       8       8       0       0       8       8       8
              * DDM   ***** Updated *****

1147          KK     455
1148          KM   SUB-BASIN 455
1149          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1150          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
1151          KM     L = 1.70  Kb = .041  Adj. Slope =  146.0
1152          BA   1.111
1153          LG    .270    .260   3.700    .640  24.000
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1154          UC     .421     .204
1155          UA        0        5       16       30       65       77       84       90       94       97
1156          UA      100
              * DDM    ***** Preserved *****

1157          KK     D455
1158          KM         DIVERT FLOW INTO ONLINE  DETENTION BASIN
1159          KM    DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1160          KM    FOR BASIN #: 30      34      43      47&58
1161          KM         MAXIMUM VOLUME DIVERSION = 74.1 acre-feet
              *       1
1162          DT    BS455     74.1
1163          DI        0    10000
1164          DQ        0    10000
              * DDM    ***** Preserved *****

1165          KK    RT455
1166          KM    RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1167          DR    BS455
              * DDM    ***** Preserved *****
1                                        HEC-1 INPUT                                                    PAGE 31

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

1168          KK    SR455
1169          KM    RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1170          KM     74.1 ACRE-FEETx43560/36x3600=25cfs
1171          RS        1     STOR        0
1172          SV        0      .01     74.1
1173          SQ        0       25       25
              * DDM    ***** Preserved *****

1174          KK     C455
1175          KM    HYDROGRAPH COMBINATION FOR SUB-BASIN 455 AND DIVERTED BASIN STORAGE OF 455
1176          HC        2
              * DDM    ***** Preserved *****

1177          KK     455C
1178          KM   HYDROGRAPH COMBINATION OF 420C, R415 AND C455
              *       1        2
1179          HC        3
              * DDM    ***** Preserved *****

1180          KK    SR440
1181          KM    SPOOK HILL FRS PLANS DATED 6/15/77
1182          KM    OUTLET PIPE=7'x7.5'RCBC; L=70 INLET INV.=1566; OUTLET INV.=1566
1183          KM    EMERGENCY SPILLWAY ELEV.=1582; PRINCIPLE SPILLWAY ELEV.=1577.5
1184          KM    STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 200 ACRE-FEET
              *    ESE = 1583.86 ft; PSE = 1579.36 ft; Sediment Vol. = 271 Ac-Ft.
1185          RS        1     STOR        0
1186          SV        0       81      363      533      719      925     1120     1399     1668     4051
1187          SQ        0        0       10      180      367      595      800     1231     2625    24500
1188          SE       76       78       80       81       82       83     83.9       85       86       92
              * DDM    ***** Preserved *****

1189          KK    RR455
1190          KM    ROUTE FLOW FROM SPOOK HILL FRS TO SUB-BASIN 462
1191          RS       14     FLOW       -1
1192          RC     .035     .025     .035     9200     .002
1193          RX        0        1        2       28       58       84       85       86
1194          RY     13.5     13.5     13.5        0        0     13.5     13.5     13.5
              * DDM    ***** Updated *****

1195          KK      456
1196          KM    SUB-BASIN 456
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  .998
1199          KM      L =  .94  Kb = .045  Adj. Slope =  315.0
1200          BA     .260
1201          LG     .300     .250    5.600     .200   12.000
1202          UC     .217     .139
1203          UA        0        5       16       30       65       77       84       90       94       97
1204          UA      100
              * DDM    ***** Preserved *****
1                                        HEC-1 INPUT                                                    PAGE 32

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

1205          KK     DIV1
1206          KM         DIVERT FLOW INTO OFFLINE DETENTION BASIN
1207          KM         WEIR FOR BASIN SET AT 4 FEET ABOVE CHANNEL BOTTOM
              *       1
1208          DT   BASIN1
1209          DI        0     11.1    127.9    234.4    577.7    789.9   1025.5   1280.9   1555.7
1210          DQ        0        0        0     47.7      248    381.8    533.6    701.5      884
              * DDM    ***** Preserved *****

1211          KK     DIV2
1212          KM         SPLIT OUT FLOW FOR WASHES THAT FLOW TO THE SOUTH FROM
1213          KM         WASHES THAT DRAIN TO THE WES, SOUTHERN WASHES FED BY 30" & 24" PIPE
1214          DT     WA30
1215          DI        0     11.1    127.9    189.6    329.7      408    491.9    579.4    671.7
1216          DQ        0     11.1     38.4     48.2       63     69.5       76       81       86
              * DDM    ***** Preserved *****

1217          KK     R456
1218          KM         ROUTE FLOW FROM SUB-BASIN 51 TO C101
1219          RS        2     FLOW       -1
1220          RC      .05      .035      .05     3800     .044
1221          RX     1000     1010     1020     1036     1041     1057     1067     1077
1222          RY    14.88    14.44       14       10       10       14    14.44    14.88
              * DDM    ***** Updated *****

1223          KK      457
1224          KM    SUB-BASIN 457
1225          KM    24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1226          KM    THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1227          KM      L = 1.01  Kb = .045  Adj. Slope =  308.8
1228          BA     .190
1229          LG     .270     .250    3.950     .460    6.000
1230          UC     .233     .191
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1231          UA       0       5      16      30      65      77      84      90      94      97
1232          UA     100
              * DDM   ***** Preserved *****

1233          KK    C101
1234          KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 50 AND 51
1235          HC       2
              * DDM   ***** Preserved *****

1236          KK    DIV3
1237          KM        RESERVOIR AT THE EDGE OF THE PROPERTY   FLOW FROM CHANNEL
1238          KM        DIVERTED  INTO OFFLINE BASIN A 25' WEIR SET AT ELEVATION 1808 FT
              *      1
1239          DT  BASIN2
1240          DI       0      36      70     110     180   313.5     402   500.9
1241          DQ       0       0       0       0       0    67.5     124   190.9
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 33

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


1242          KK  RTDIV3
1243          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1244          DR  BASIN2
              * DDM   ***** Preserved *****

1245          KK  RFDIV3
1246          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1247          KM     5.0 ACRE-FEETx43560/36x3600=1.7cfs
1248          RS       1    STOR       0
1249          SV       0     .01       5
1250          SQ       0     1.7     1.7
              * DDM   ***** Preserved *****

1251          KK   CDIV3
1252          KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1253          HC       2
              * DDM   ***** Preserved *****

1254          KK    R101
1255          KM        ROUTE FLOW FROM SUBBASIN C101 TO C103
1256          RS       1    FLOW      -1
1257          RC     .05    .035     .05    1450     .05
1258          RX    1000    1010    1020    1036    1041    1057    1067    1077
1259          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Updated *****

1260          KK     458
1261          KM   SUB-BASIN 458
1262          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1263          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1264          KM     L =  .76  Kb = .048  Adj. Slope =  299.0
1265          BA    .190
1266          LG    .290    .250   5.800    .190   6.000
1267          UC    .204    .131
1268          UA       0       5      16      30      65      77      84      90      94      97
1269          UA     100
              * DDM   ***** Preserved *****

1270          KK    C103
1271          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 55 AND C101
1272          HC       2
              * DDM   ***** Preserved *****

1273          KK    R103
1274          KM        ROUTE FLOW FROM SUBBASIN C103 TO C106
1275          RS       1    FLOW      -1
1276          RC     .05    .035     .05     900     .03
1277          RX    1000    1010    1020    1030    1050    1060    1070    1080
1278          RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 34

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


1279          KK    RT30
1280          KM        RETRIEVE DIVERTED FLOW FOR WASH BELOW 30 INCH PIPE
1281          DR    WA30
              * DDM   ***** Preserved *****

1282          KK     R30
1283          KM        ROUTE FLOW FROM WASH DIVERSION TO COMBINE C52
1284          RS       1    FLOW      -1
1285          RC     .05    .035     .05    1630     .05
1286          RX    1000    1010    1020    1036    1041    1057    1067    1077
1287          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Preserved *****

1288          KK    RTB1
1289          KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
              *      1       2
1290          DR  BASIN1
              * DDM   ***** Preserved *****

1291          KK      B1
1292          KM        ROUTE FLOW THROUGH OFFLINE DETENTION BASIN
1293          KM        FLOW OUTLETS THROUGH A 30 INCH OUTLET PIPE
              *      1       2
1294          RS       1    ELEV       0
1295          SV              .7     1.4     2.3     2.7     3.2
1296          SQ       0       5      16      28    32.5      37
1297          SE       0       1       2       3     3.5       4
              * DDM   ***** Preserved *****

1298          KK     RB1
1299          KM        ROUTE FLOW FROM BASIN DIVERSION TO COMBINE C52
1300          RS       2    FLOW      -1
1301          RC     .05    .035     .05    1720     .05
1302          RX    1000    1010    1020    1036    1041    1057    1067    1077
1303          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Preserved *****
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1304          KK    CDIV
1305          KM        COMBINE FLOWS FROM WA30 AND BASIN 1
1306          HC       2      .12
              * DDM   ***** Updated *****

1307          KK     459
1308          KM   SUB-BASIN 459
1309          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1310          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1311          KM     L =  .35  Kb = .052  Adj. Slope =  251.6
1312          BA    .030
1313          LG    .220    .270   3.330    .710   8.000
1314          UC    .162    .157
1315          UA       0       5      16      30      65      77      84      90      94      97
1316          UA     100
              * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 35

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


1317          KK     C52
1318          KM        COMBINE FLOWS FROM SUB-BASIN 52 WA30 AND BASIN 1
1319          HC       2
              * DDM   ***** Preserved *****

1320          KK     R52
1321          KM        ROUTE FLOW FROM SUBBASIN 52 TO C102
1322          RS       2    FLOW      -1
1323          RC     .05    .035     .05    2000     .05
1324          RX    1000    1010    1020    1036    1041    1057    1067    1077
1325          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Updated *****

1326          KK     460
1327          KM   SUB-BASIN 460
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  .999
1330          KM     L =  .62  Kb = .058  Adj. Slope =  194.0
1331          BA    .140
1332          LG    .250    .260   3.740    .690  27.000
1333          UC    .242    .160
1334          UA       0       5      16      30      65      77      84      90      94      97
1335          UA     100
              * DDM   ***** Preserved *****

1336          KK    C102
1337          KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 52 AND 53
1338          HC       2
              * DDM   ***** Preserved *****

1339          KK  BASIN3
1340          KM        RESERVOIR AT CLUBHOUSE LOCATION 1-30 INCH PIPE AT OUTFALL
1341          KM        BOTTOM OF BASIN AT 6 FEET ABOVE 1795 ELEVATION
1342          RS       1    ELEV       0
1343          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
1344          SQ       0      22      45    47.4      48      51      57      62      67      73
1345          SE    1795  1797.5    1800  1800.4  1800.5    1801    1802    1803    1804  1805.5
              * DDM   ***** Preserved *****

1346          KK      R3
1347          KM        ROUTE FLOW FROM C102 to C106
1348          RS       4    FLOW      -1
1349          RC     .05     .03     .05    2750   .0375
1350          RX    1000    1010    1020    1052    1086    1118    1128    1138
1351          RY    19.2    18.4      18      10      10      18    18.4    19.2
              * DDM   ***** Updated *****

1352          KK     461
1353          KM   SUB-BASIN 461
1354          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1355          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1356          KM     L =  .83  Kb = .052  Adj. Slope =  181.0
1357          BA    .120
1                                   HEC-1 INPUT                                          PAGE 36

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

1358          LG    .270    .250   4.250    .450  21.000
1359          UC    .271    .250
1360          UA       0       5      16      30      65      77      84      90      94      97
1361          UA     100
              * DDM   ***** Preserved *****

1362          KK    C104
1363          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 54 AND R102
1364          HC       2
              * DDM   ***** Preserved *****

1365          KK    C106
1366          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN C103 AND C104
1367          HC       2
              * DDM   ***** Preserved *****

1368          KK    R106
1369          KM        ROUTE FLOW FROM C106 TO C49
1370          RS       2    FLOW      -1
1371          RC     .05    .035     .05    3950    .033
1372          RX    1000    1010    1020    1030    1050    1060    1070    1080
1373          RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
              * DDM   ***** Updated *****

1374          KK     462
1375          KM   SUB-BASIN 462
1376          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1377          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1378          KM     L =  .97  Kb = .045  Adj. Slope =  297.7
1379          BA    .301
1380          LG    .300    .250   5.300    .240  12.000
1381          UC    .225    .137
1382          UA       0       5      16      30      65      77      84      90      94      97
```

```
1383          UA     100
              * DDM   ***** Preserved *****

1384          KK     C56
1385          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 56 AND C106
              *      1        2
1386          HC       2
              * DDM   ***** Updated *****

1387          KK     480
1388          KM   SUB-BASIN 480
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  .996
1391          KM     L = 1.21  Kb = .042  Adj. Slope =  165.0
1392          BA    .731
1393          LG    .270    .260   3.580    .730  27.000
1394          UC    .325    .148
1395          UA       0       5      16      30      65      77      84      90      94      97
1396          UA     100
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 37

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


1397          KK    D480
1398          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1399          KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1400          KM   FOR BASIN #: 18 & 26
1401          KM        MAXIMUM VOLUME DIVERSION = 16.5 acre-feet
              *      1
1402          DT   BS480    16.5
1403          DI       0   10000
1404          DQ       0   10000
              * DDM   ***** Preserved *****

1405          KK   RT480
1406          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1407          DR   BS480
              * DDM   ***** Preserved *****

1408          KK   SR480
1409          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1410          KM    16.5 ACRE-FEETx43560/36x3600=5.5cfs
1411          RS       1    STOR       0
1412          SV       0     .01    16.5
1413          SQ       0     5.6     5.6
              * DDM   ***** Preserved *****

1414          KK    C480
1415          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1416          HC       2
              * DDM   ***** Preserved *****

1417          KK    480C
1418          KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1419          HC       3    2.09
              * DDM   ***** Preserved *****

1420          KK    R480
1421          KM   ROUTE FLOW FROM SUB-BASIN 480 TO RR480
1422          RS       1    FLOW      -1
1423          RC    .025    .025    .025    1800     .05
1424          RX       0       1      20      32      62      74      93      94
1425          RY      13      12      12       0       0      12      12      13
              * DDM   ***** Preserved *****

1426          KK   RR480
1427          KM   ROUTE FLOW FROM SUB-BASIN 480 TO SUB-BASIN 500
1428          RS       3    FLOW      -1
1429          RC    .055     .05    .055    6500     .05
1430          RX       0       1       2      28      58      84      85      86
1431          RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
              * DDM   ***** Updated *****
1                                        HEC-1 INPUT                                          PAGE 38

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


1432          KK     500
1433          KM   SUB-BASIN 500
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  .994
1436          KM     L = 2.77  Kb = .042  Adj. Slope =  286.8
1437          BA    .930
1438          LG    .350    .250   6.000    .170   9.000
1439          UC    .412    .326
1440          UA       0       3       5       8      12      20      43      75      90      96
1441          UA     100
              * DDM   ***** Preserved *****

1442          KK    500C
1443          KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1444          HC       2    3.02
1445          ZZ
```

SCHEMATIC DIAGRAM OF STREAM NETWORK

```
INPUT
 LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

  NO.      (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

  39          10
               V
               V
  49         R10
               V
               V
  55         R12
               .
               .
  61           .          20
               .           .
               .           .
  71         C20............
               V
               V
  74         R20
               .
               .
  80           .          40
               .           .
               .           .
  90           .           .          60
               .           .           .
               .           .           .
 100         60C........................
               V
               V
 103        SR60
               V
               V
 112         R60
               V
               V
 118        RR60
               .
               .
 124           .          80
               .           .
               .           .
 134         80C............
               V
               V
 137         R80
               .
               .
 143           .         100
               .           .
               .           .
 153        100C............
               V
               V
 156        R100
               .
               .
 162           .         120
               .           .
               .           .
 172        120C............
               V
               V
 175        R120
               .
               .
 181           .         140
               .           .
               .           .
 191           .           .         150
               .           .           V
               .           .           V
 201           .           .        R150
               .           .           V
               .           .           V
 207           .           .        R152
               .           .           .
               .           .           .
 213           .           .           .         160
               .           .           .           .
               .           .           .           .
 223           .           .           .           .         180
               .           .           .           .           .
               .           .           .           .           .
 233        180C.............................................
               .
               .
 236           .         210
               .           V
               .           V
 246           .        R210
               .           .
               .           .
 252           .           .         240
               .           .           .
               .           .           .
 262           .        240C............
               .           V
               .           V
 265           .       SR240
               .           .
               .           .
 272           .           .         220
               .           .           .
               .           .           .
 282           .        220C............
               .           V
               .           V
 285           .       SR220
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292          .           .         190
             .           .           V
             .           .           V
302          .           .        R190
             .           .           V
             .           .           V
308          .           .        R192
             .           .           .
             .           .           .
314          .           .           .        200
             .           .           .          .
             .           .           .          .
324          .        200C.......................
             .           V
             .           V
327          .       SR200
             .           V
             .           V
334          .       200SR
             .           .
             .           .
341       C180............
             V
             V
344      SR180
             V
             V
353       R180
             .
             .
360          .         260
             .           .
             .           .
370       260C............
             V
             V
373       R260
             .
             .
380          .         280
             .           .
             .           .
390       280C............
             V
             V
393       R280
             .
             .
400          .         300
             .           .
             .           .
410       300C............
             V
             V
413       R300
             V
             V
420      RR300
             .
             .
427          .         350
             .           .
             .           .
440          .           .-------->   SF350
437          .        D350
             .           V
             .           V
443          .        350R
             .           .
             .           .
450          .           .         310
             .           .           .
             .           .           .
460          .        C310............
             .           V
             .           V
463          .        R310
             .           .
             .           .
470          .           .         320
             .           .           .
             .           .           .
485          .           .           .-------->   BS320
480          .           .        D320
             .           .           .
             .           .           .
490          .           .           .           .<--------   BS320
488          .           .           .       RT320
             .           .           .           V
             .           .           .           V
491          .           .           .       SR320
             .           .           .           .
             .           .           .           .
497       C320.................................
             .
             .
500          .         340
             .           .
             .           .
515          .           .-------->   BS340
510          .        D340
             .           .
             .           .
520          .           .           .<--------   BS340
518          .           .        RT340
             .           .           V
             .           .           V
521          .           .        SR340
             .           .           .
             .           .           .
527       C340........................
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532          .           .<-------   SF350
530          .       RT350
             .           V
             .           V
533          .       RR350
             .           .
             .           .
540          .           .         355
             .           .           .
             .           .           .
550          .        C355............
             .           V
             .           V
553          .        R355
             .           .
             .           .
560          .           .         360
             .           .           .
             .           .           .
574          .           .           .------->   BS360
570          .           .       D360
             .           .           .
             .           .           .
579          .           .           .           .<-------   BS360
577          .           .           .       RT360
             .           .           .           V
             .           .           .           V
580          .           .           .       SR360
             .           .           .           .
             .           .           .           .
586       360C...................................
             .
             .
589          .        370
             .           .
             .           .
599          .           .         395
             .           .           .
             .           .           .
609          .        370C............
             .           V
             .           V
612          .        R370
             .           .
             .           .
619          .           .         380
             .           .           .
             .           .           .
633          .           .           .------->   BS380
629          .           .       D380
             .           .           .
             .           .           .
638          .           .           .           .<-------   BS380
636          .           .           .       RT380
             .           .           .           V
             .           .           .           V
639          .           .           .       SR380
             .           .           .           .
             .           .           .           .
645       380C...................................
             .
             .
648          .        390
             .           .
             .           .
662          .           .------->   BS390
658          .        D390
             .           .
             .           .
667          .           .           .<-------   BS390
665          .           .       RT390
             .           .           V
             .           .           V
668          .           .       SR390
             .           .           .
             .           .           .
674          .        390C............
             .           V
             .           V
677          .       RR390
             .           .
             .           .
684          .           .         400
             .           .           .
             .           .           .
698          .           .           .------->   BS400
694          .           .       D400
             .           .           .
             .           .           .
703          .           .           .           .<-------   BS400
701          .           .           .       RT400
             .           .           .           V
             .           .           .           V
704          .           .           .       SR400
             .           .           .           .
             .           .           .           .
710          .           .       C400............
             .           .           .
             .           .           .
713       400C........................
             .
             .
716          .        385
             .           .
             .           .
728          .           .------->   SF385
726          .        D385
             .           V
             .           V
731          .        385R
             .           .
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738          .           .         420
             .           .           .
             .           .           .
752          .           .           .-------->   BS420
748          .           .       D420
             .           .           .
             .           .           .
757          .           .           .           .<-------   BS420
755          .           .           .      RT420
             .           .           .          V
             .           .           .          V
758          .           .           .      SR420
             .           .           .           .
             .           .           .           .
764       420C.................................
             .
767          .        440
             .          V
             .          V
777          .        R70
             .           .
             .           .
783          .           .         441
             .           .           .
             .           .           .
793          .       C108............
             .           .
             .           .
798          .           .-------->   SPLIT
796          .       DIV4
             .          V
             .          V
801          .       R108
             .           .
             .           .
807          .           .         442
             .           .           .
             .           .           .
817          .        C67............
             .           .
             .           .
823          .           .-------->  BASIN4
820          .       DIV6
             .           .
             .           .
828          .           .           .<-------  BASIN4
826          .           .     RTDIV6
             .           .         V
             .           .         V
829          .           .     RFDIV6
             .           .           .
             .           .           .
835          .      CDIV6............
             .           .
             .           .
838          .           .         443
             .           .           .
             .           .           .
851          .           .           .-------->   WSH66
848          .           .      DIV66
             .           .         V
             .           .         V
854          .           .       R113
             .           .           .
             .           .           .
860          .       C114............
             .           .
             .           .
863          .           .         444
             .           .           V
             .           .           V
873          .           .         R58
             .           .           .
             .           .           .
879          .           .           .        445
             .           .           .          .
             .           .           .          .
889          .           .       C107............
             .           .         V
             .           .         V
892          .           .       R107
             .           .           .
             .           .           .
900          .           .           .           .<-------   SPLIT
898          .           .           .       RTB2
             .           .           .          V
             .           .           .          V
901          .           .           .     RSPLIT
             .           .           .           .
             .           .           .           .
907          .           .           .           .        446
             .           .           .           .          .
             .           .           .           .          .
917          .           .       C109........................
             .           .           .
             .           .           .
923          .           .           .-------->  WSH404
920          .           .       DIV5
             .           .         V
             .           .         V
926          .           .       R109
             .           .           .
             .           .           .
932          .           .           .        447
             .           .           .          .
             .           .           .          .
944          .           .           .          .           .<-------  WSH404
942          .           .           .          .      RT404
             .           .           .          .          V
             .           .           .          .          V
945          .           .           .          .       R404
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951                 C110.......................
                       V
                       V
954                 R110
                       .
                       .
960          C115............
                V
                V
963          R115
                .
                .
970                  448
                       .
                       .
980                       449
                       .
                       .
990                 C6364............
                       V
                       V
993                 R6364
                       .
                       .
999                       450
                       .
                       .
1009                      .         451
                       .            .
                       .            .
1021                   .            .          .<-------   WSH66
1019                   .            .       RT66
                       .            .          .
                       .            .          .
1022                   .            .          .         452
                       .            .          .           .
                       .            .          .           .
1032                   .            .       C6465............
                       .            .          V
                       .            .          V
1035                   .            .       R6566
                       .            .          .
                       .            .          .
1041                 C116.................................
                       V
                       V
1044                BASIN5
                       V
                       V
1051                R116
                       .
                       .
1057                      453
                       .
                       .
1067                 C117............
                       .
                       .
1070         C118............
                V
                V
1073         R118
                .
                .
1082            .------->  BASIN6
1079         DIV7
                .
                .
1087                   .<-------  BASIN6
1085                RTDIV7
                       V
                       V
1088                RFDIV7
                       .
                       .
1094        CDIV7............
                .
                .
1097                 454
                       .
                       .
1107         C119............
                V
                V
1110         R454
                .
                .
1117                 415
                       .
                       .
1129                   .          .<-------   SF385
1127                   .       RT385
                       .          V
                       .          V
1130                   .       RR385
                       .          .
                       .          .
1137         415C........................
                V
                V
1140         R415
                .
                .
1147                 455
                       .
                       .
1162                   .-------->   BS455
1157                D455
                       .
                       .
1167                   .          .<-------   BS455
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1165          .           .           .       RT455
              .           .           .          V
              .           .           .          V
1168          .           .           .       SR455
              .           .           .          .
              .           .           .          .
1174          .           .       C455............
              .           .           .
              .           .           .
1177       455C......................
             V
             V
1180      SR440
             V
             V
1189      RR455
              .
              .
1195          .        456
              .           .
              .           .
1208          .           .-------> BASIN1
1205          .       DIV1
              .           .
              .           .
1214          .           .------->   WA30
1211          .       DIV2
              .          V
              .          V
1217          .       R456
              .           .
              .           .
1223          .           .        457
              .           .          .
              .           .          .
1233          .       C101............
              .           .
              .           .
1239          .           .-------> BASIN2
1236          .       DIV3
              .           .
              .           .
1244          .           .           .<-------  BASIN2
1242          .           .     RTDIV3
              .           .          V
              .           .          V
1245          .           .     RFDIV3
              .           .          .
              .           .          .
1251          .      CDIV3............
              .          V
              .          V
1254          .       R101
              .           .
              .           .
1260          .           .        458
              .           .          .
              .           .          .
1270          .       C103............
              .          V
              .          V
1273          .       R103
              .           .
              .           .
1281          .           .           .<-------   WA30
1279          .           .       RT30
              .           .          V
              .           .          V
1282          .           .       R30
              .           .          .
              .           .          .
1290          .           .           .          .<-------  BASIN1
1288          .           .           .       RTB1
              .           .           .          V
              .           .           .          V
1291          .           .           .         B1
              .           .           .          V
              .           .           .          V
1298          .           .           .        RB1
              .           .           .          .
              .           .           .          .
1304          .           .       CDIV............
              .           .           .
              .           .           .
1307          .           .           .        459
              .           .           .          .
              .           .           .          .
1317          .           .       C52............
              .           .          V
              .           .          V
1320          .           .       R52
              .           .          .
              .           .          .
1326          .           .           .        460
              .           .           .          .
              .           .           .          .
1336          .           .       C102............
              .           .          V
              .           .          V
1339          .           .     BASIN3
              .           .          V
              .           .          V
1346          .           .       R3
              .           .          .
              .           .          .
1352          .           .           .        461
              .           .           .          .
              .           .           .          .
1362          .           .       C104............
              .           .          .
              .           .          .
1365          .       C106............
              .          V
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                .          V
1368            .        R106
                .          .
                .          .
1374            .          .         462
                .          .           .
                .          .           .
1384            .         C56...........
                .          .
                .          .
1387            .          .         480
                .          .           .
                .          .           .
1402            .          .           .-------->   BS480
1397            .          .        D480
                .          .           .
                .          .           .
1407            .          .           .           .<-------   BS480
1405            .          .           .       RT480
                .          .           .           V
                .          .           .           V
1408            .          .           .       SR480
                .          .           .           .
                .          .           .           .
1414            .          .        C480...........
                .          .           .
                .          .           .
1417        480C......................
              V
              V
1420        R480
              V
              V
1426       RR480
                .
                .
1432            .         500
                .          .
                .          .
1442        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	1025.	12.27	130.	35.	13.	.70		
+	ROUTED TO	R10	959.	12.40	130.	35.	13.	.70		
+	ROUTED TO	R12	896.	12.60	130.	35.	13.	.70		
+	HYDROGRAPH AT	20	1086.	12.40	145.	37.	13.	1.12		
+	2 COMBINED AT	C20	1807.	12.53	273.	72.	26.	1.82		
+	ROUTED TO	R20	1802.	12.53	273.	72.	26.	1.82		
+	HYDROGRAPH AT	40	2824.	12.30	277.	73.	26.	2.23		
+	HYDROGRAPH AT	60	1692.	12.40	248.	66.	24.	1.75		
+	3 COMBINED AT	60C	5775.	12.33	791.	209.	75.	5.80		
+	ROUTED TO	SR60	120.	14.27	119.	115.	75.	5.80		
+	ROUTED TO	R60	120.	14.33	119.	115.	75.	5.80		
+	ROUTED TO	RR60	120.	14.43	119.	115.	75.	5.80		
+	HYDROGRAPH AT	80	2007.	12.27	194.	50.	18.	1.48		
+	2 COMBINED AT	80C	2066.	12.27	304.	163.	94.	1.48		
+	ROUTED TO	R80	2044.	12.27	303.	163.	94.	1.48		
+	HYDROGRAPH AT	100	426.	12.20	61.	16.	6.	.48		
+	2 COMBINED AT	100C	2451.	12.27	362.	177.	99.	1.96		
+	ROUTED TO	R100	2440.	12.30	361.	177.	99.	1.96		
+	HYDROGRAPH AT	120	3445.	12.23	360.	97.	35.	2.20		
+	2 COMBINED AT	120C	5844.	12.27	710.	266.	133.	4.16		
+	ROUTED TO	R120	5767.	12.30	709.	266.	133.	4.16		
+	HYDROGRAPH AT	140	666.	12.13	67.	18.	6.	.60		
+	HYDROGRAPH AT	150	617.	12.17	54.	14.	5.	.41		
+	ROUTED TO	R150	589.	12.23	54.	14.	5.	.41		
+	ROUTED TO	R152	539.	12.33	54.	14.	5.	.41		
+	HYDROGRAPH AT	160	244.	12.40	38.	10.	4.	.37		
+	HYDROGRAPH AT	180	906.	12.33	102.	26.	9.	1.00		
+	5 COMBINED AT	180C	7767.	12.30	954.	328.	155.	6.54		
+	HYDROGRAPH AT	210	959.	12.17	95.	25.	9.	.58		
+	ROUTED TO	R210	919.	12.27	95.	25.	9.	.58		
+	HYDROGRAPH AT	240	1565.	12.30	174.	44.	16.	1.40		
	2 COMBINED AT	240C	2463.	12.27	268.	69.	25.	1.98		
	ROUTED TO	SR240	758.	12.73	220.	57.	21.	1.98		
+	HYDROGRAPH AT	220	1233.	12.17	117.	30.	11.	.73		
+	2 COMBINED AT	220C	1306.	12.20	332.	87.	31.	2.71		

+	ROUTED TO SR220	1093.	12.47	326.	85.	31.	2.71
+	HYDROGRAPH AT 190	1532.	12.17	129.	34.	12.	.92
	ROUTED TO R190	1472.	12.23	129.	34.	12.	.92
+	ROUTED TO R192	1406.	12.30	129.	34.	12.	.92
+	HYDROGRAPH AT 200	878.	12.17	77.	21.	7.	.54
+	3 COMBINED AT 200C	2991.	12.27	524.	138.	50.	4.16
+	ROUTED TO SR200	2820.	12.33	519.	134.	48.	4.16
+	ROUTED TO 200SR	2205.	12.57	397.	104.	38.	4.16
+	2 COMBINED AT C180	7767.	12.30	1340.	430.	192.	10.69
+	ROUTED TO SR180	119.	25.63	119.	119.	94.	10.69
+	ROUTED TO R180	119.	25.70	119.	119.	94.	10.69
+	HYDROGRAPH AT 260	424.	12.10	44.	12.	4.	.27
+	2 COMBINED AT 260C	429.	12.10	143.	130.	103.	.27
+	ROUTED TO R260	414.	12.20	143.	130.	103.	.27
+	HYDROGRAPH AT 280	486.	12.10	43.	12.	4.	.30
+	2 COMBINED AT 280C	852.	12.13	181.	139.	106.	.57
+	ROUTED TO R280	810.	12.20	180.	139.	106.	.57
+	HYDROGRAPH AT 300	958.	12.20	118.	31.	11.	.99
	2 COMBINED AT 300C	1758.	12.20	292.	167.	117.	1.56
+	ROUTED TO R300	1719.	12.27	292.	167.	116.	1.56
+	ROUTED TO RR300	1684.	12.30	291.	167.	116.	1.56
+	HYDROGRAPH AT 350	1312.	12.20	113.	29.	11.	.97
+	DIVERSION TO SF350	656.	12.20	57.	15.	5.	.97
+	HYDROGRAPH AT D350	656.	12.20	57.	15.	5.	.97
+	ROUTED TO 350R	582.	12.40	57.	15.	5.	.97
+	HYDROGRAPH AT 310	431.	12.30	55.	14.	5.	.56
+	2 COMBINED AT C310	984.	12.37	111.	28.	10.	.94
+	ROUTED TO R310	874.	12.70	111.	28.	10.	.94
+	HYDROGRAPH AT 320	1031.	12.17	129.	36.	13.	.97
+	DIVERSION TO BS320	414.	11.93	21.	6.	2.	.97
+	HYDROGRAPH AT D320	1031.	12.17	115.	30.	11.	.97
+	HYDROGRAPH AT RT320	414.	11.93	21.	6.	2.	.97
+	ROUTED TO SR320	4.	4.10	4.	4.	2.	.97
+	4 COMBINED AT C320	2749.	12.30	517.	228.	139.	3.47
	HYDROGRAPH AT 340	1550.	12.17	194.	57.	21.	1.45
	DIVERSION TO BS340	1550.	12.17	104.	28.	10.	1.45
+	HYDROGRAPH AT D340	1334.	12.30	106.	29.	10.	1.45
+	HYDROGRAPH AT RT340	1550.	12.17	104.	28.	10.	1.45

+	ROUTED TO	SR340	19.	8.83	19.	19.	10.	1.45
+	3 COMBINED AT	C340	4081.	12.30	638.	274.	159.	4.92
+	HYDROGRAPH AT	RT350	656.	12.20	57.	15.	5.	.97
+	ROUTED TO	RR350	570.	12.43	57.	15.	5.	.97
+	HYDROGRAPH AT	355	555.	12.30	75.	20.	7.	.66
+	2 COMBINED AT	C355	1065.	12.40	131.	34.	12.	1.24
+	ROUTED TO	R355	971.	12.70	131.	34.	12.	1.24
+	HYDROGRAPH AT	360	526.	12.23	87.	26.	9.	.67
+	DIVERSION TO	BS360	526.	12.23	53.	14.	5.	.67
+	HYDROGRAPH AT	D360	357.	12.57	41.	11.	4.	.67
+	HYDROGRAPH AT	RT360	526.	12.23	53.	14.	5.	.67
+	ROUTED TO	SR360	10.	9.73	10.	10.	5.	.67
+	4 COMBINED AT	360C	4195.	12.33	803.	324.	178.	6.83
+	HYDROGRAPH AT	370	629.	12.30	84.	23.	8.	.67
+	HYDROGRAPH AT	395	194.	12.23	26.	7.	3.	.20
+	2 COMBINED AT	370C	812.	12.27	110.	30.	11.	.87
+	ROUTED TO	R370	717.	12.67	110.	30.	11.	.87
+	HYDROGRAPH AT	380	735.	12.23	106.	29.	10.	.97
+	DIVERSION TO	BS380	735.	12.23	56.	14.	5.	.97
+	HYDROGRAPH AT	D380	595.	12.47	54.	14.	5.	.97
+	HYDROGRAPH AT	RT380	735.	12.23	56.	14.	5.	.97
+	ROUTED TO	SR380	10.	11.27	10.	10.	5.	.97
+	4 COMBINED AT	380C	4903.	12.60	948.	367.	195.	8.67
+	HYDROGRAPH AT	390	469.	12.03	34.	10.	4.	.24
+	DIVERSION TO	BS390	97.	11.73	6.	2.	1.	.24
+	HYDROGRAPH AT	D390	469.	12.03	30.	8.	3.	.24
+	HYDROGRAPH AT	RT390	97.	11.73	6.	2.	1.	.24
+	ROUTED TO	SR390	1.	.77	1.	1.	1.	.24
+	2 COMBINED AT	390C	470.	12.03	32.	9.	4.	.24
+	ROUTED TO	RR390	330.	12.50	31.	9.	4.	.24
+	HYDROGRAPH AT	400	378.	12.23	50.	14.	5.	.62
+	DIVERSION TO	BS400	287.	12.10	10.	3.	1.	.62
+	HYDROGRAPH AT	D400	378.	12.23	42.	11.	4.	.62
+	HYDROGRAPH AT	RT400	287.	12.10	10.	3.	1.	.62
+	ROUTED TO	SR400	2.	8.63	2.	2.	1.	.62
+	2 COMBINED AT	C400	380.	12.23	44.	13.	5.	.62
+	3 COMBINED AT	400C	5342.	12.60	1009.	385.	202.	9.53
+	HYDROGRAPH AT	385	632.	12.23	76.	21.	8.	.52

+	DIVERSION TO	SF385	379.	12.23	46.	13.	5.	.52
+	HYDROGRAPH AT	D385	253.	12.23	30.	8.	3.	.52
	ROUTED TO	385R	214.	12.70	30.	8.	3.	.52
+	HYDROGRAPH AT	420	789.	12.20	96.	27.	10.	.85
+	DIVERSION TO	BS420	268.	11.93	15.	4.	2.	.85
+	HYDROGRAPH AT	D420	789.	12.20	87.	23.	8.	.85
+	HYDROGRAPH AT	RT420	268.	11.93	15.	4.	2.	.85
+	ROUTED TO	SR420	13.	11.00	12.	4.	2.	.85
+	4 COMBINED AT	420C	5789.	12.60	1114.	412.	212.	10.87
+	HYDROGRAPH AT	440	188.	12.03	13.	4.	1.	.08
+	ROUTED TO	R70	183.	12.07	13.	4.	1.	.08
+	HYDROGRAPH AT	441	16.	12.03	1.	0.	0.	.01
+	2 COMBINED AT	C108	199.	12.07	15.	4.	1.	.09
+	DIVERSION TO	SPLIT	99.	12.07	7.	2.	1.	.09
+	HYDROGRAPH AT	DIV4	99.	12.07	7.	2.	1.	.09
+	ROUTED TO	R108	92.	12.13	7.	2.	1.	.09
+	HYDROGRAPH AT	442	103.	12.10	9.	2.	1.	.10
+	2 COMBINED AT	C67	193.	12.10	16.	4.	2.	.19
	DIVERSION TO	BASIN4	120.	12.10	6.	2.	1.	.19
+	HYDROGRAPH AT	DIV6	73.	12.10	10.	3.	1.	.19
+	HYDROGRAPH AT	RTDIV6	120.	12.10	6.	2.	1.	.19
+	ROUTED TO	RFDIV6	1.	11.90	1.	1.	1.	.19
+	2 COMBINED AT	CDIV6	74.	12.10	11.	4.	2.	.19
+	HYDROGRAPH AT	443	151.	12.07	15.	4.	1.	.08
+	DIVERSION TO	WSH66	78.	11.87	12.	3.	1.	.08
+	HYDROGRAPH AT	DIV66	73.	12.07	3.	1.	0.	.08
+	ROUTED TO	R113	71.	12.07	3.	1.	0.	.08
+	2 COMBINED AT	C114	144.	12.07	14.	4.	2.	.27
+	HYDROGRAPH AT	444	85.	12.03	5.	1.	0.	.04
+	ROUTED TO	R58	79.	12.07	5.	1.	0.	.04
+	HYDROGRAPH AT	445	314.	12.03	19.	5.	2.	.19
+	2 COMBINED AT	C107	388.	12.03	24.	6.	2.	.23
+	ROUTED TO	R107	385.	12.07	24.	6.	2.	.23
+	HYDROGRAPH AT	RTB2	99.	12.07	7.	2.	1.	.09
	ROUTED TO	RSPLIT	99.	12.07	7.	2.	1.	.09
	HYDROGRAPH AT	446	65.	12.03	6.	2.	1.	.04
+	3 COMBINED AT	C109	546.	12.07	37.	10.	4.	.27
+	DIVERSION TO	WSH404	35.	11.70	8.	2.	1.	.27

+	HYDROGRAPH AT	DIV5	511.	12.07	29.	7.	3.	.27
+	ROUTED TO	R109	495.	12.07	29.	7.	3.	.27
	HYDROGRAPH AT	447	139.	12.07	12.	4.	1.	.09
+	HYDROGRAPH AT	RT404	35.	11.70	8.	2.	1.	.27
+	ROUTED TO	R404	35.	11.87	8.	2.	1.	.27
+	3 COMBINED AT	C110	667.	12.07	49.	14.	5.	.36
+	ROUTED TO	R110	663.	12.07	49.	14.	5.	.36
+	2 COMBINED AT	C115	803.	12.07	62.	18.	7.	.63
+	ROUTED TO	R115	803.	12.10	62.	18.	7.	.63
+	HYDROGRAPH AT	448	90.	12.03	6.	2.	1.	.05
+	HYDROGRAPH AT	449	82.	12.03	5.	1.	0.	.05
+	2 COMBINED AT	C6364	172.	12.03	11.	3.	1.	.09
+	ROUTED TO	R6364	143.	12.17	11.	3.	1.	.09
+	HYDROGRAPH AT	450	67.	12.17	7.	2.	1.	.07
+	HYDROGRAPH AT	451	19.	12.17	2.	1.	0.	.03
+	HYDROGRAPH AT	RT66	78.	11.87	12.	3.	1.	.08
+	HYDROGRAPH AT	452	63.	12.03	5.	1.	0.	.04
+	2 COMBINED AT	C6465	141.	12.03	17.	5.	2.	.04
	ROUTED TO	R6566	136.	12.10	17.	5.	2.	.04
+	4 COMBINED AT	C116	357.	12.17	37.	10.	4.	.23
+	ROUTED TO	BASIN5	161.	12.47	37.	10.	4.	.23
+	ROUTED TO	R116	160.	12.53	37.	10.	4.	.23
+	HYDROGRAPH AT	453	63.	12.10	7.	2.	1.	.06
+	2 COMBINED AT	C117	180.	12.47	43.	12.	4.	.29
+	2 COMBINED AT	C118	896.	12.10	105.	29.	11.	.92
+	ROUTED TO	R118	889.	12.10	105.	29.	11.	.92
+	DIVERSION TO	BASIN6	271.	12.10	11.	3.	1.	.92
+	HYDROGRAPH AT	DIV7	618.	12.10	94.	26.	10.	.92
+	HYDROGRAPH AT	RTDIV7	271.	12.10	11.	3.	1.	.92
+	ROUTED TO	RFDIV7	1.	11.93	1.	1.	1.	.92
+	2 COMBINED AT	CDIV7	619.	12.10	94.	27.	11.	.92
+	HYDROGRAPH AT	454	166.	12.13	22.	6.	2.	.18
+	2 COMBINED AT	C119	777.	12.13	116.	33.	13.	1.10
+	ROUTED TO	R454	752.	12.20	116.	33.	13.	1.10
	HYDROGRAPH AT	415	588.	12.17	80.	23.	8.	.61
	HYDROGRAPH AT	RT385	379.	12.23	46.	13.	5.	.52
+	ROUTED TO	RR385	332.	12.57	46.	13.	5.	.52
+	3 COMBINED AT	415C	1505.	12.20	239.	68.	26.	1.71

+	ROUTED TO R415	1483.	12.27	239.	68.	26.	1.71
+	HYDROGRAPH AT 455	1396.	12.13	148.	45.	16.	1.11
	DIVERSION TO BS455	1396.	12.13	139.	37.	13.	1.11
+	HYDROGRAPH AT D455	74.	13.07	21.	7.	3.	1.11
+	HYDROGRAPH AT RT455	1396.	12.13	139.	37.	13.	1.11
+	ROUTED TO SR455	25.	10.43	25.	25.	13.	1.11
+	2 COMBINED AT C455	99.	13.07	46.	32.	16.	1.11
+	3 COMBINED AT 455C	6855.	12.33	1350.	496.	249.	13.69
+	ROUTED TO SR440	277.	16.97	275.	251.	163.	13.69
+	ROUTED TO RR455	277.	17.43	275.	251.	161.	13.69
+	HYDROGRAPH AT 456	494.	12.07	39.	11.	4.	.26
+	DIVERSION TO BASIN1	199.	12.07	9.	2.	1.	.26
+	HYDROGRAPH AT DIV1	295.	12.07	29.	8.	3.	.26
+	DIVERSION TO WA30	59.	12.07	10.	3.	1.	.26
+	HYDROGRAPH AT DIV2	235.	12.07	19.	5.	2.	.26
+	ROUTED TO R456	222.	12.13	19.	5.	2.	.26
+	HYDROGRAPH AT 457	282.	12.07	22.	6.	2.	.19
+	2 COMBINED AT C101	491.	12.07	41.	11.	4.	.45
	DIVERSION TO BASIN2	184.	12.07	9.	2.	1.	.45
+	HYDROGRAPH AT DIV3	307.	12.07	32.	8.	3.	.45
+	HYDROGRAPH AT RTDIV3	184.	12.07	9.	2.	1.	.45
+	ROUTED TO RFDIV3	2.	11.90	2.	2.	1.	.45
+	2 COMBINED AT CDIV3	309.	12.07	34.	10.	4.	.45
+	ROUTED TO R101	306.	12.10	34.	10.	4.	.45
+	HYDROGRAPH AT 458	370.	12.03	27.	7.	3.	.19
+	2 COMBINED AT C103	661.	12.07	60.	17.	6.	.64
+	ROUTED TO R103	657.	12.07	60.	17.	6.	.64
+	HYDROGRAPH AT RT30	59.	12.07	10.	3.	1.	.26
+	ROUTED TO R30	58.	12.10	10.	3.	1.	.26
+	HYDROGRAPH AT RTB1	199.	12.07	9.	2.	1.	.26
+	ROUTED TO B1	41.	12.23	9.	2.	1.	.26
+	ROUTED TO RB1	41.	12.30	9.	2.	1.	.26
+	2 COMBINED AT CDIV	90.	12.20	19.	6.	2.	.12
+	HYDROGRAPH AT 459	45.	12.03	3.	1.	0.	.03
	2 COMBINED AT C52	119.	12.10	22.	7.	2.	.15
	ROUTED TO R52	118.	12.17	22.	7.	2.	.15
+	HYDROGRAPH AT 460	217.	12.07	19.	6.	2.	.14
+	2 COMBINED AT C102	321.	12.07	41.	12.	4.	.29

+	ROUTED TO	BASIN3	71.	12.67	41.	12.	4.	.29
+	ROUTED TO	R3	71.	12.80	41.	12.	4.	.29
	HYDROGRAPH AT	461	163.	12.10	17.	5.	2.	.12
+	2 COMBINED AT	C104	216.	12.10	57.	17.	6.	.41
+	2 COMBINED AT	C106	868.	12.07	117.	33.	12.	1.05
+	ROUTED TO	R106	831.	12.13	117.	33.	12.	1.05
+	HYDROGRAPH AT	462	561.	12.07	43.	12.	4.	.30
+	2 COMBINED AT	C56	1317.	12.10	159.	45.	17.	1.35
+	HYDROGRAPH AT	480	1079.	12.10	98.	30.	11.	.73
+	DIVERSION TO	BS480	475.	11.90	27.	8.	3.	.73
+	HYDROGRAPH AT	D480	1079.	12.10	81.	22.	8.	.73
+	HYDROGRAPH AT	RT480	475.	11.90	27.	8.	3.	.73
+	ROUTED TO	SR480	6.	3.77	6.	6.	3.	.73
+	2 COMBINED AT	C480	1085.	12.10	87.	28.	11.	.73
+	3 COMBINED AT	480C	2389.	12.10	461.	331.	203.	2.09
+	ROUTED TO	R480	2380.	12.10	461.	331.	203.	2.09
+	ROUTED TO	RR480	2241.	12.20	458.	331.	202.	2.09
+	HYDROGRAPH AT	500	1176.	12.27	135.	36.	13.	.93
	2 COMBINED AT	500C	3340.	12.20	581.	362.	214.	3.02

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

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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   27JUL00  TIME  11:13:01  *                                    *          (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

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   UPDATE TO EXISTING CONDITION 24-HR 100-YR MODEL RUN BASED ON RE-ALIGNMENT
 13           ID   OF SUB-BASIN BOUNDARIES FOR SUB-BASINS 385 (REDUCED) & 415 (ENLARGED)
 14           ID   UPDATE BASED ON INFORMATION FROM 2' CONTOUR MAPPING.
 15           ID
 16           ID   ANALYSIS PERFORMED BY WOOD/PATEL; MW;        07/27/00  FILE: S24CE30C.DAT
 17           ID
 18           ID   DDM MCUHP1 SPOOK HILL AMDP - EXISTING CONDITIONS MODEL - 100YR, 24HR STORM
              *       Original File Name: S24CE30.DAT
              *       Modified File Name: S24CE30C.DAT
              *       Changes: 1) No. of Hydrograph Ordinates Increased to 2000
              *                2) SE, SV and SQ Cards for the Three (3) FRSs Updated
              *                3) Sediment Volumes Subtracted from Storage Volumes
              *                4) Old Elevation Datum Adjusted to NAVD 1988
              *       Wood/Patel, July 19, 2000.  SZ.
              *
              *       Changes: 5) d-theta changed for all sub-basins to wet
              *       Wood/Patel, July 27, 2000.  MW
              *
              *
              *
              *DIAGRAM
 19           IT       2                    2000
 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    3.68    5.80
 34           JD    3.58   10.00
 35           JD    3.57   10.69
 36           JD    3.54   13.69
 37           JD    3.43   30.00
 38           JD    3.28   60.00
              * DDM   ***** Updated *****
1                                          HEC-1 INPUT                                                    PAGE  2

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

 39           KK      10
 40           KM   SUB-BASIN 10
 41           KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 42           KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
 43           KM     L = 2.00  Kb = .044  Adj. Slope =  165.0
 44           BA    .702
 45           LG    .350    .000   7.600    .090  15.000
 46           UC    .408    .292
 47           UA       0       3       5       8      12      20      43      75      90      96
 48           UA     100
              * DDM   ***** Preserved *****

 49           KK     R10
 50           KM   ROUTING OF FLOW FROM SUB-BASIN 10 TO R12
 51           RS       4    FLOW      -1
 52           RC    .045     .03    .045    8700    .021
 53           RX       0       1       2      17      27      42      43      44
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 54          RY       5       5       5       0       0       5       5       5
             * DDM   ***** Preserved *****

 55          KK     R12
 56          KM   ROUTING OF FLOW FROM R12 TO SUB-BASIN 20
 57          RS       7    FLOW      -1
 58          RC    .045     .03    .045    4500     .01
 59          RX       0       1      45    52.5    72.5      80     124     125
 60          RY     3.5     2.5     2.5       0       0     2.5     2.5     3.5
             * DDM   ***** Updated *****

 61          KK      20
 62          KM   SUB-BASIN 20
 63          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 64          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
 65          KM     L = 2.50  Kb = .041  Adj. Slope =   88.0
 66          BA   1.120
 67          LG    .350    .000   5.800    .190   1.000
 68          UC    .587    .400
 69          UA       0       3       5       8      12      20      43      75      90      96
 70          UA     100
             * DDM   ***** Preserved *****

 71          KK     C20
 72          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 10 AND 20
 73          HC       2
             * DDM   ***** Preserved *****

 74          KK     R20
 75          KM        ROUTE FLOW THROUGH BULLDOG FLOODWAY FROM APACHE JUNCTION FRS
 76          RS       1    FLOW      -1
 77          RC    .016    .016    .016     990    .004
 78          RX       0       5       7    14.5    34.5      42      44      50
 79          RY       4       2       2       0       0       2       2       4
             * DDM   ***** Updated *****
1                                     HEC-1 INPUT                                    PAGE  3

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

 80          KK      40
 81          KM   SUB-BASIN 40
 82          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 83          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
 84          KM     L = 3.08  Kb = .036  Adj. Slope =  189.0
 85          BA   2.233
 86          LG    .340    .000   4.900    .280   5.000
 87          UC    .454    .240
 88          UA       0       3       5       8      12      20      43      75      90      96
 89          UA     100
             * DDM   ***** Updated *****

 90          KK      60
 91          KM   SUB-BASIN 60
 92          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 93          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .990
 94          KM     L = 4.19  Kb = .038  Adj. Slope =  209.6
 95          BA   1.746
 96          LG    .330    .000   5.800    .190   9.000
 97          UC    .546    .433
 98          UA       0       3       5       8      12      20      43      75      90      96
 99          UA     100
             * DDM   ***** Preserved *****

100          KK     60C
101          KM   HYDROGRAPH COMBINATION FOR APACHE JUNCTION FRS
             *      1       2
102          HC       3
             * DDM   ***** Preserved *****

103          KK    SR60
104          KM   APACHE JUNCTION FRS AS-BUILT PLANS 12/19/88
105          KM   OUTLET PIPE=30"RCP; L=136.6'; INLET INV.=1783.5; OUTLET INV.=1783
106          KM   EMERGENCY SPILLWAY ELEV.=1799.77'; PRINCIPLE SPILLWAY ELEV.=1793.5'
107          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 100 ACRE-FEET
             *  ESE = 1801.92 ft; PSE = 1795.65 ft; Sediment Vol. = 237 Ac-Ft.
108          RS       1    STOR       0
109          SV       0       0      77     242     371     439     563     687    2163
110          SQ       0      12     103     114     120     362    1462    3101   30000
111          SE    95.0    96.0    98.0   100.0   101.6   101.9   103.0   104.0   112.9
             * DDM   ***** Preserved *****

112          KK     R60
113          KM        ROUTE FLOW THROUGH BULLDOG FLOODWAY FROM APACHE JUNCTION FRS
114          RS       2    FLOW      -1
115          RC    .016    .016    .016    2850    .012
116          RX       0       1       2     2.1     5.6     5.7       6       7
117          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

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

124          KK      80
125          KM   SUB-BASIN 80
126          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
127          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .991
128          KM     L = 2.69  Kb = .039  Adj. Slope =  229.8
129          BA   1.475
130          LG    .330    .000   5.600    .210   4.000
131          UC    .404    .239
132          UA       0       3       5       8      12      20      43      75      90      96
133          UA     100
             * DDM   ***** Preserved *****
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 134          KK     80C
 135          KM   HYDROGRAPH COMBINATION FOR FLOW FROM APACHE JUNCTION FRS & SUB-BASIN 80
 136          HC       2   1.475
              * DDM   ***** Preserved *****

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

 143          KK     100
 144          KM   SUB-BASIN 100
 145          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 146          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
 147          KM     L = 1.94  Kb = .046  Adj. Slope =  108.0
 148          BA    .484
 149          LG    .320    .000   5.100    .260   3.000
 150          UC    .492    .432
 151          UA       0       5      16      30      65      77      84      90      94      97
 152          UA     100
              * DDM   ***** Preserved *****

 153          KK    100C
 154          KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 80 & 100
 155          HC       2
              * DDM   ***** Preserved *****
1                                      HEC-1 INPUT                                          PAGE  5

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

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

 162          KK     120
 163          KM   SUB-BASIN 120
 164          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 165          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
 166          KM     L = 3.07  Kb = .037  Adj. Slope =  239.0
 167          BA   2.202
 168          LG    .330    .000   6.800    .130  11.000
 169          UC    .417    .219
 170          UA       0       3       5       8      12      20      43      75      90      96
 171          UA     100
              * DDM   ***** Preserved *****

 172          KK    120C
 173          KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 100 & 120
 174          HC       2
              * DDM   ***** Preserved *****

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

 181          KK     140
 182          KM   SUB-BASIN 140
 183          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 184          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
 185          KM     L = 1.61  Kb = .044  Adj. Slope =  149.0
 186          BA    .598
 187          LG    .310    .000   4.200    .440   5.000
 188          UC    .387    .253
 189          UA       0       5      16      30      65      77      84      90      94      97
 190          UA     100
              * DDM   ***** Updated *****

 191          KK     150
 192          KM   SUB-BASIN 150
 193          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 194          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
 195          KM     L = 1.50  Kb = .047  Adj. Slope =  314.6
 196          BA    .408
 197          LG    .350    .000   5.100    .260   7.000
 198          UC    .279    .207
 199          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

 200          UA     100
              * DDM   ***** Preserved *****

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

 207          KK    R152
 208          KM   ROUTING OF FLOW FROM R152 TO SUB-BASIN 160
 209          RS       4    FLOW      -1
 210          RC    .045     .03    .045    5900    .019
 211          RX       0       1       2       8      33      39      40      41
 212          RY       3       2       2       0       0       2       2       3
              * DDM   ***** Updated *****

 213          KK     160
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214          KM   SUB-BASIN 160
215          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
216          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
217          KM     L = 2.10  Kb = .047  Adj. Slope =  129.0
218          BA    .369
219          LG    .340    .000   4.150    .440   1.000
220          UC    .504    .553
221          UA       0       3       5       8      12      20      43      75      90      96
222          UA     100
             * DDM   ***** Updated *****

223          KK     180
224          KM   SUB-BASIN 180
225          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
226          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
227          KM     L = 2.42  Kb = .041  Adj. Slope =  140.0
228          BA   1.000
229          LG    .350    .000   4.150    .430    .000
230          UC    .492    .341
231          UA       0       3       5       8      12      20      43      75      90      96
232          UA     100
             * DDM   ***** Preserved *****

233          KK    180C
234          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
235          HC       5
             * DDM   ***** Updated *****

236          KK     210
237          KM   SUB-BASIN 210
238          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
239          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
240          KM     L = 1.84  Kb = .045  Adj. Slope =  315.0
241          BA    .583
242          LG    .350    .000   7.000    .120   5.000
1                                        HEC-1 INPUT                                                    PAGE  7

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

243          UC    .304    .219
244          UA       0       3       5       8      12      20      43      75      90      96
245          UA     100
             * DDM   ***** Preserved *****

246          KK    R210
247          KM   ROUTING OF FLOW FROM SUB-BASIN 210 TO SUB-BASIN 220
248          RS       2    FLOW      -1
249          RC    .045     .03    .045    5100    .022
250          RX       0       1       2      14      34      46      47      48
251          RY       4       4       4       0       0       4       4       4
             * DDM   ***** Updated *****

252          KK     240
253          KM   SUB-BASIN 240
254          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
255          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .992
256          KM     L = 3.50  Kb = .039  Adj. Slope =  298.6
257          BA   1.398
258          LG    .350    .000   5.200    .240   2.000
259          UC    .433    .329
260          UA       0       3       5       8      12      20      43      75      90      96
261          UA     100
             * DDM   ***** Preserved *****

262          KK    240C
263          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
264          HC       2
             * DDM   ***** Preserved *****

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

272          KK     220
273          KM   SUB-BASIN 220
274          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
275          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
276          KM     L = 1.92  Kb = .043  Adj. Slope =  315.0
277          BA    .725
278          LG    .350    .000   7.000    .120   4.000
279          UC    .304    .200
280          UA       0       3       5       8      12      20      43      75      90      96
281          UA     100
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                                    PAGE  8

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

282          KK    220C
283          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
284          HC       2
             * DDM   ***** Preserved *****

285          KK   SR220
286          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
287          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
288          RS       1    STOR       0
289          SA     .78     4.1    13.7
290          SE       1       3      10
291          SS       3      65       3     1.5
             * DDM   ***** Updated *****

292          KK     190
293          KM   SUB-BASIN 190
294          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
295          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
296          KM     L = 1.91  Kb = .042  Adj. Slope =  315.0
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297          BA    .918
298          LG    .350    .000   5.800    .190   8.000
299          UC    .300    .171
300          UA       0       3       5       8      12      20      43      75      90      96
301          UA     100
             * DDM   ***** Preserved *****

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

308          KK    R192
309          KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
310          RS       2    FLOW      -1
311          RC    .045    .035    .045    2200    .018
312          RX       0       1      50    57.5    77.5      85     134     135
313          RY     3.5     2.5     2.5       0       0     2.5     2.5     3.5
             * DDM   ***** Updated *****

314          KK     200
315          KM   SUB-BASIN 200
316          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
317          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
318          KM     L = 1.58  Kb = .045  Adj. Slope =  305.6
319          BA    .535
320          LG    .350    .000   5.700    .200  10.000
321          UC    .283    .188
322          UA       0       3       5       8      12      20      43      75      90      96
323          UA     100
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

324          KK    200C
325          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 220 & 200
326          HC       3
             * DDM   ***** Preserved *****

327          KK   SR200
328          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
329          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
330          RS       1    STOR       0
331          SA    2.56     3.1     9.4
332          SE       0       3      10
333          SS       3     112       3     1.5
             * DDM   ***** Preserved *****

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

341          KK    C180
342          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
             *      1       2
343          HC       2
             * DDM   ***** Preserved *****

344          KK   SR180
345          KM   SIGNAL BUTTE FRS DATED 1/28/85
346          KM   OUTLET PIPE=36"RCP; L= 147';  INLET INV.=1690; OUTLET INV.=1687
347          KM   EMERGENCY SPILLWAY ELEV.=1712.4; PRINCIPLE SPILLWAY ELEV.=1701
348          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 250 ACRE-FEET
             *  ESE = 1714.63 ft; PSE = 1703.23 ft; Sediment Vol. = 247 Ac-Ft.
349          RS       1    STOR       0
350          SV       0      92     226     462     742    1197    1418    1776    1941    3114
351          SQ       0      10    10.5      98     133     149     155    1484    2567    6000
352          SE      99     101   103.0     106     109   113.0   114.6     117     118     120
             * DDM   ***** Preserved *****

353          KK    R180
354          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
355          KM   ROUTE FLOW FROM SIGNAL BUTTE FRS TO SUB-BASIN 260
356          RS       3    FLOW      -1
357          RC    .035    .025    .035    1500    .003
358          RX       0       1       2    22.6    38.6    59.2      60      61
359          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

360          KK     260
361          KM   SUB-BASIN 260
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  .998
364          KM     L =  .81  Kb = .049  Adj. Slope =   68.0
365          BA    .267
366          LG    .300    .000   6.800    .160  15.000
367          UC    .354    .210
368          UA       0       5      16      30      65      77      84      90      94      97
369          UA     100
             * DDM   ***** Preserved *****

370          KK    260C
371          KM   HYDROGRAPH COMBINATION FOR OUTFLOW OF SIGNAL BUTTE FRS & SUB-BASIN 260
372          HC       2    .267
             * DDM   ***** Preserved *****

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

380          KK     280
381          KM   SUB-BASIN 280
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  .998
384          KM     L =  .77  Kb = .049  Adj. Slope =   84.0
385          BA    .304
386          LG    .300    .000   5.300    .290  15.000
387          UC    .321    .168
388          UA       0       5      16      30      65      77      84      90      94      97
389          UA     100
             * DDM   ***** Preserved *****

390          KK    280C
391          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 260 & SUB-BASIN 280
392          HC       2
             * DDM   ***** Preserved *****

393          KK    R280
394          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
395          KM   ROUTE FLOW FROM SUB-BASIN 280 TO SUB-BASIN 300
396          RS       2    FLOW      -1
397          RC    .035    .025    .035    2500    .003
398          RX       0       1       2    23.4    43.4    64.8      65      66
399          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

400          KK     300
401          KM   SUB-BASIN 300
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  .994
404          KM     L = 2.28  Kb = .041  Adj. Slope =  127.0
405          BA    .988
406          LG    .340    .000   4.500    .370   7.000
407          UC    .483    .321
408          UA       0       5      16      30      65      77      84      90      94      97
409          UA     100
             * DDM   ***** Preserved *****

410          KK    300C
411          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 280 & 300
412          HC       2
             * DDM   ***** Preserved *****

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

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

427          KK     350
428          KM   SUB-BASIN 350
429          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
430          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
431          KM     L = 2.22  Kb = .042  Adj. Slope =  315.0
432          BA    .970
433          LG    .350    .000   4.550    .340   4.000
434          UC    .342    .216
435          UA       0       3       5       8      12      20      43      75      90      96
436          UA     100
             * DDM   ***** Preserved *****

437          KK    D350
438          KM   DIVERT FLOW FROM SUB-BASIN 350. FOR MODELING PURPOSES THE SPLIT FLOW WILL
439          KM   BE ROUTED BETWEEN SUB-BASINS 355 & 310. THE MAIN FLOW WILL ROUTED TO 310
440          DT   SF350
441          DI       0    5000
442          DQ       0    2500
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

443          KK    350R
444          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING
445          KM   ROUTING OF MAIN FLOW FROM DIVERSION OF SUB-BASIN 350 TO SUB-BASIN 310
446          RS       6    FLOW      -1
447          RC    .045    .035    .045    5150    .025
448          RX       0       1      40      46      56      62     102     103
449          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

450          KK     310
451          KM   SUB-BASIN 310
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  .997
454          KM     L = 2.70  Kb = .045  Adj. Slope =  283.5
455          BA    .555
456          LG    .350    .000   3.910    .480    .000
457          UC    .429    .448
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458          UA       0       3       5       8      12      20      43      75      90      96
459          UA     100
             * DDM   ***** Preserved *****

460          KK    C310
461          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 350 & 310
462          HC       2     .943
             * DDM   ***** Preserved *****

463          KK    R310
464          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
465          KM   ROUTING OF FLOW FROM SUB-BASIN 310 TO 320
466          RS      10    FLOW      -1
467          RC    .045    .035    .045   10050    .022
468          RX       0       1      40      46      56      62     102     103
469          RY     3.5       2       2       0       0       2       2     3.5
             * DDM   ***** Updated *****

470          KK     320
471          KM   SUB-BASIN 320
472          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
473          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
474          KM     L = 2.20  Kb = .042  Adj. Slope =  132.0
475          BA    .972
476          LG    .310    .000   4.550    .360  14.000
477          UC    .471    .306
478          UA       0       5      16      30      65      77      84      90      94      97
479          UA     100
             * DDM   ***** Preserved *****

480          KK    D320
481          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
482          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
483          KM   SIERRA HEIGHTS       FALCON RIDGE    & MARBLE CREEK
484          KM        MAXIMUM VOLUME DIVERSION = 12.27acre-feet
             *      1
485          DT   BS320   12.27
1                                        HEC-1 INPUT                                          PAGE 13

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

486          DI       0   10000
487          DQ       0   10000
             * DDM   ***** Preserved *****

488          KK   RT320
489          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
490          DR   BS320
             * DDM   ***** Preserved *****

491          KK   SR320
492          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
493          KM   12.27 ACRE-FEETx43560/36x3600=4.1cfs
             *      1
494          RS       1    STOR       0
495          SV       0     .01    12.3
496          SQ       0     4.2     4.2
             * DDM   ***** Preserved *****

497          KK    C320
498          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
499          HC       4
             * DDM   ***** Updated *****

500          KK     340
501          KM   SUB-BASIN 340
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  .991
504          KM     L = 2.40  Kb = .042  Adj. Slope =  160.0
505          BA   1.449
506          LG    .280    .000   4.150    .520  21.000
507          UC    .471    .261
508          UA       0       5      16      30      65      77      84      90      94      97
509          UA     100
             * DDM   ***** Preserved *****

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

518          KK   RT340
519          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
520          DR   BS340
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 14

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

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

527          KK    C340
528          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
529          HC       3
             * DDM   ***** Preserved *****

530          KK   RT350
531          KM   RETRIEVE SPLIT FLOW FROM DIVERSION OF SUB-BASIN 350
532          DR   SF350
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            * DDM   ***** Preserved *****

533         KK   RR350
534         KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
535         KM   ROUTING OF FLOW FROM SPLIT OF SUB-BASIN 350 TO 355
536         RS       8    FLOW      -1
537         RC    .045    .035    .045    6050    .025
538         RX       0       1      40      46      56      62     102     103
539         RY       3       2       2       0       0       2       2       3
            * DDM   ***** Updated *****

540         KK     355
541         KM   SUB-BASIN 355
542         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
543         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
544         KM     L = 3.00  Kb = .044  Adj. Slope =  284.0
545         BA    .659
546         LG    .340    .000   4.450    .370   4.000
547         UC    .442    .456
548         UA       0       3       5       8      12      20      43      75      90      96
549         UA     100
            * DDM   ***** Preserved *****

550         KK    C355
551         KM   HYDROGRAPH COMBINATION OF SUB-BASIN 355 AND THE SPLIT FLOW FROM SUB-BASIN 350
552         HC       2    1.24
            * DDM   ***** Preserved *****

553         KK    R355
554         KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
555         KM   ROUTING OF FLOW FROM SUB-BASIN 355 TO SUB-BASIN 360
556         RS       9    FLOW      -1
557         RC    .045    .035    .045   10100    .026
558         RX       0       1      40      46      56      62     102     103
559         RY     3.5       2       2       0       0       2       2     3.5
            * DDM   ***** Updated *****
1                                   HEC-1 INPUT                                          PAGE 15

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

560         KK     360
561         KM   SUB-BASIN 360
562         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
563         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
564         KM     L = 2.10  Kb = .048  Adj. Slope =  124.0
565         BA    .670
566         LG    .260    .000   4.100    .560  20.000
567         UC    .525    .412
568         UA       0       5      16      30      65      77      84      90      94      97
569         UA     100
            * DDM   ***** Preserved *****

570         KK    D360
571         KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
572         KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
573         KM        MAXIMUM VOLUME DIVERSION = 28.6 acre-feet
            *      1
574         DT   BS360    28.6
575         DI       0   10000
576         DQ       0   10000
            * DDM   ***** Preserved *****

577         KK   RT360
578         KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
579         DR   BS360
            * DDM   ***** Preserved *****

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

586         KK    360C
587         KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
588         HC       4
            * DDM   ***** Updated *****

589         KK     370
590         KM   SUB-BASIN 370
591         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
592         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
593         KM     L = 2.90  Kb = .044  Adj. Slope =  294.6
594         BA    .667
595         LG    .340    .000   4.650    .330   9.000
596         UC    .421    .418
597         UA       0       3       5       8      12      20      43      75      90      96
598         UA     100
            * DDM   ***** Updated *****
1                                   HEC-1 INPUT                                          PAGE 16

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

599         KK     395
600         KM   SUB-BASIN 395
601         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
602         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
603         KM     L = 1.60  Kb = .051  Adj. Slope =  215.8
604         BA    .198
605         LG    .330    .000   4.900    .300  10.000
606         UC    .358    .434
607         UA       0       3       5       8      12      20      43      75      90      96
608         UA     100
            * DDM   ***** Preserved *****

609         KK    370C
610         KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
611         HC       2
            * DDM   ***** Preserved *****
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612          KK    R370
613          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
614          KM   ROUTING OF FLOW FROM SUB-BASINS 370 AND 395 TO SUB-BASIN 380.
615          RS      11    FLOW      -1
616          RC    .045    .035    .045   10250    .023
617          RX       0       1      40      46      56      62     102     103
618          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

619          KK     380
620          KM   SUB-BASIN 380
621          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
622          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
623          KM     L = 2.20  Kb = .048  Adj. Slope =  114.0
624          BA    .972
625          LG    .300    .000   4.150    .500   7.000
626          UC    .571    .379
627          UA       0       5      16      30      65      77      84      90      94      97
628          UA     100
             * DDM   ***** Preserved *****

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

636          KK   RT380
637          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
638          DR   BS380
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

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

645          KK    380C
646          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
647          HC       4
             * DDM   ***** Updated *****

648          KK     390
649          KM   SUB-BASIN 390
650          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
651          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
652          KM     L =  .70  Kb = .050  Adj. Slope =  299.4
653          BA    .244
654          LG    .300    .000   4.700    .380  18.000
655          UC    .200    .104
656          UA       0       5      16      30      65      77      84      90      94      97
657          UA     100
             * DDM   ***** Preserved *****

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

665          KK   RT390
666          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
667          DR   BS390
             * DDM   ***** Preserved *****

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

674          KK    390C
675          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
676          HC       2
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

677          KK   RR390
678          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
679          KM   FROM SUB-BASIN 390 TO SUB-BASIN 400
680          RS      14    FLOW      -1
681          RC    .045    .045    .045    8800    .020
682          RX       0       1      40      46      56      62     102     103
683          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

684          KK     400
685          KM   SUB-BASIN 400
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 = 1.64  Kb = .046  Adj. Slope =  110.0
689          BA    .616
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690          LG    .320    .000   3.130    .930   6.000
691          UC    .492    .329
692          UA       0       5      16      30      65      77      84      90      94      97
693          UA     100
             * DDM   ***** Preserved *****

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

701          KK   RT400
702          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
703          DR   BS400
             * DDM   ***** Preserved *****

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

710          KK    C400
711          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
712          HC       2
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

713          KK    400C
714          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
715          HC       3
             * DDM   ***** Updated *****

716          KK     385
717          KM   SUB-BASIN 385
718          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
719          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
720          KM     L = 2.30  Kb = .045  Adj. Slope =  303.0
721          BA    .523
722          LG    .340    .000   5.600    .220  13.000
723          UC    .363    .338
724          UA       0       3       5       8      12      20      43      75      90`     96
725          UA     100
             * DDM   ***** Preserved *****

726          KK    D385
727          KM   DIVERT FLOW INTO SUB-BASINS 415 & 420
728          DT   SF385
729          DI       0    5000
730          DQ       0    3000
             * DDM   ***** Preserved *****

731          KK    385R
732          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
733          KM   ROUTING OF FLOW DIVERSION FROM SUB-BASIN 385 INTO SUB-BASIN 420
734          RS      12    FLOW      -1
735          RC    .045     .04    .045   10250    .022
736          RX       0       1      40      46      56      62     102     103
737          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

738          KK     420
739          KM   SUB-BASIN 420
740          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
741          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .995
742          KM     L = 1.91  Kb = .042  Adj. Slope =  120.0
743          BA    .849
744          LG    .310    .000   3.880    .580  12.000
745          UC    .463    .290
746          UA       0       5      16      30      65      77      84      90      94      97
747          UA     100
             * DDM   ***** Preserved *****

748          KK    D420
749          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
750          KM   DETENTION/RETENTION BASINS LOCATED WITHIN GRAY FOX SUBDIVISION
751          KM        MAXIMUM VOLUME DIVERSION = 8.65 acre-feet
             *      1
752          DT   BS420    8.65
753          DI       0   10000
754          DQ       0   10000
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

755          KK   RT420
756          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
757          DR   BS420
             * DDM   ***** Preserved *****

758          KK   SR420
759          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
760          KM   38.55 ACRE-FEETx43560/36x3600=13cfs
761          RS       1    STOR       0
762          SV       0     .01   38.55
763          SQ       0      13      13
             * DDM   ***** Preserved *****

764          KK    420C
765          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
766          HC       4   10.87
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            * DDM   ***** Updated *****

767         KK     440
768         KM   SUB-BASIN 440
769         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
770         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
771         KM     L =  .40  Kb = .039  Adj. Slope =  315.0
772         BA    .080
773         LG    .190    .000   6.400    .140  13.000
774         UC    .129    .077
775         UA       0       3       5       8      12      20      43      75      90      96
776         UA     100
            * DDM   ***** Preserved *****

777         KK     R70
778         KM   ROUTE FLOW FROM SUB-BASIN 440 TO C108
779         RS       1    FLOW      -1
780         RC     .05    .035     .05    2250     .08
781         RX    1000    1025    1050    1070    1075    1095    1120    1145
782         RY      30    22.9    15.7      10      10    15.7    22.9      30
            * DDM   ***** Updated *****

783         KK     441
784         KM   SUB-BASIN 441
785         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
786         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
787         KM     L =  .28  Kb = .069  Adj. Slope =  315.0
788         BA    .010
789         LG    .300    .000   5.600    .220   5.000
790         UC    .146    .218
791         UA       0       5      16      30      65      77      84      90      94      97
792         UA     100
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 21

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

793         KK    C108
794         KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 440 & 441
795         HC       2
            * DDM   ***** Preserved *****

796         KK    DIV4
797         KM        SPLIT FLOW WITH TWO 42 INCH PIPES TO WEST AND SOUTH
            *      1
798         DT   SPLIT
799         DI       0      14      40      82     120     154     180
800         DQ       0       7      20      41      60      77      90
            * DDM   ***** Preserved *****

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

807         KK     442
808         KM   SUB-BASIN 442
809         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
810         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
811         KM     L =  .83  Kb = .055  Adj. Slope =  274.2
812         BA    .100
813         LG    .300    .000   3.290    .770   5.000
814         UC    .242    .245
815         UA       0       5      16      30      65      77      84      90      94      97
816         UA     100
            * DDM   ***** Preserved *****

817         KK     C67
818         KM   COMBINE FLOW FROM SUB-BASIN 442 & DIV4
819         HC       2
            * DDM   ***** Preserved *****

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

826         KK  RTDIV6
827         KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
828         DR  BASIN4
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 22

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

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

835         KK   CDIV6
836         KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
837         HC       2
            * DDM   ***** Updated *****

838         KK     443
839         KM   SUB-BASIN 443
840         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
841         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
842         KM     L =  .71  Kb = .050  Adj. Slope =  315.0
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843          BA    .080
844          LG    .250    .000   8.000    .080  10.000
845          UC    .192    .190
846          UA       0       5      16      30      65      77      84      90      94      97
847          UA     100
             * DDM   ***** Preserved *****

848          KK   DIV66
849          KM        DIVERT FLOW INTO 3 NATURAL WASHES WITH ONE 24" PIPE IN EACH WASH.
850          KM        EACH PIPE CAPACITY BASED ON 4 FEET OF HEAD
851          DT   WSH66
852          DI       0      78     100     200
853          DQ       0      78      78      78
             * DDM   ***** Preserved *****

854          KK    R113
855          KM        ROUTE FLOW FROM C113 TO C114
856          RS       1    FLOW      -1
857          RC    .019    .019    .019    1300    .029
858          RX    1000    1004    1008    1012    1018    1022    1026    1030
859          RY      17   15.33   12.67      10      10   12.67   15.33      17
             * DDM   ***** Preserved *****

860          KK    C114
861          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 67 AND C113
862          HC       2
             * DDM   ***** Updated *****

863          KK     444
864          KM   SUB-BASIN 444
865          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
866          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
867          KM     L =  .33  Kb = .034  Adj. Slope =  315.0
868          BA    .040
869          LG    .130    .000   4.450    .320   1.000
1                                        HEC-1 INPUT                                                    PAGE 23

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

870          UC    .108    .081
871          UA       0       3       5       8      12      20      43      75      90      96
872          UA     100
             * DDM   ***** Preserved *****

873          KK     R58
874          KM   ROUTE FLOW FROM SUB-BASIN 444 TO C107
875          RS       1    FLOW      -1
876          RC     .05    .035     .05    2370   .0516
877          RX    1000    1010    1020    1050    1055    1085    1095    1105
878          RY      19      18      17      10      10      17      18      19
             * DDM   ***** Updated *****

879          KK     445
880          KM   SUB-BASIN 445
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 =  .82  Kb = .036  Adj. Slope =  315.0
884          BA    .190
885          LG    .170    .000   3.470    .590   3.000
886          UC    .183    .124
887          UA       0       5      16      30      65      77      84      90      94      97
888          UA     100
             * DDM   ***** Preserved *****

889          KK    C107
890          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 444 & 445
891          HC       2
             * DDM   ***** Preserved *****

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

898          KK    RTB2
899          KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
             *      1
900          DR   SPLIT
             * DDM   ***** Preserved *****

901          KK  RSPLIT
902          KM        ROUTE FLOW FROM SPLIT TO C109
903          RS       1    FLOW      -1
904          RC     .05    .035     .05     800     .05
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 *****
1                                        HEC-1 INPUT                                                    PAGE 24

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

907          KK     446
908          KM   SUB-BASIN 446
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 =  .46  Kb = .061  Adj. Slope =  303.9
912          BA    .040
913          LG    .270    .000   4.500    .400  19.000
914          UC    .179    .185
915          UA       0       5      16      30      65      77      84      90      94      97
916          UA     100
             * DDM   ***** Preserved *****

917          KK    C109
918          KM        COMBINE HYDROGRAPHS FROM COMBINES C107 AND C108
919          HC       3
             * DDM   ***** Preserved *****

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

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

932          KK     447
933          KM   SUB-BASIN 447
934          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
935          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
936          KM     L =  .49  Kb = .056  Adj. Slope =  221.0
937          BA    .090
938          LG    .250    .000   3.350    .870  30.000
939          UC    .200    .138
940          UA       0       5      16      30      65      77      84      90      94      97
941          UA     100
             * DDM   ***** Preserved *****

942          KK   RT404
943          KM        RETRIEVE DIVERTED FLOW FOR WASH 109
944          DR  WSH404
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 25

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

945          KK    R404
946          KM        ROUTE FLOW FROM C110 TO C110
947          RS       6    FLOW      -1
948          RC    .019    .019    .019    3540     .03
949          RX    1000    1012    1016    1020    1025    1029    1033    1045
950          RY      15      12      11      10      10      11      12      15
             * DDM   ***** Preserved *****

951          KK    C110
952          KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 447 AND R404
953          HC       3
             * DDM   ***** Preserved *****

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

960          KK    C115
961          KM       COMBINE HYDROGRAPHS FROM C114 AND C110
962          HC       2
             * DDM   ***** Preserved *****

963          KK    R115
             * ******OUTFLOW FROM THIS ROUTING IS GREATER THAN INFLOW TO THE
             * ******ROUTING BY 2cfs.  THIS IS NOTED BUT LEFT UNCHANGED WITHIN THE MODEL
964          KM        ROUTE FLOW FROM C115 TO C119
965          RS       1    FLOW      -1
966          RC    .019    .019    .019    2125    .029
967          RC    .019    .019    .019     580   .0291
968          RX    1000    1012    1016    1020    1035    1039    1043    1055
969          RY      15      12      11      10      10      11      12      15
             * DDM   ***** Updated *****

970          KK     448
971          KM   SUB-BASIN 448
972          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
973          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
974          KM     L =  .36  Kb = .042  Adj. Slope =  315.0
975          BA    .045
976          LG    .170    .000   4.200    .390  11.000
977          UC    .129    .099
978          UA       0       5      16      30      65      77      84      90      94      97
979          UA     100
             * DDM   ***** Updated *****
1                                    HEC-1 INPUT                                          PAGE 26

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

980          KK     449
981          KM   SUB-BASIN 449
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 1.000
984          KM     L =  .40  Kb = .054  Adj. Slope =  315.0
985          BA    .050
986          LG    .260    .000   3.500    .640   6.000
987          UC    .158    .127
988          UA       0       5      16      30      65      77      84      90      94      97
989          UA     100
             * DDM   ***** Preserved *****

990          KK   C6364
991          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 448 & 449
992          HC       2
             * DDM   ***** Preserved *****

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

 999            KK     450
1000            KM   SUB-BASIN 450
1001            KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1002            KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1003            KM     L =  .85  Kb = .057  Adj. Slope =  210.5
1004            BA    .070
1005            LG    .340    .000   3.630    .570   4.000
1006            UC    .271    .347
1007            UA       0       3       5       8      12      20      43      75      90      96
1008            UA     100
                * DDM   ***** Updated *****

1009            KK     451
1010            KM   SUB-BASIN 451
1011            KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1012            KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1013            KM     L =  .57  Kb = .063  Adj. Slope =  175.0
1014            BA    .025
1015            LG    .340    .000   3.290    .750   3.000
1016            UC    .246    .407
1017            UA       0       3       5       8      12      20      43      75      90      96
1018            UA     100
                * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                          PAGE 27

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


1019            KK    RT66
1020            KM        RETRIEVE DIVERTED FLOW FROM SUB-BASIN 66
1021            DR   WSH66
                * DDM   ***** Updated *****

1022            KK     452
1023            KM   SUB-BASIN 452
1024            KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1025            KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1026            KM     L =  .43  Kb = .055  Adj. Slope =  315.0
1027            BA    .040
1028            LG    .260    .000   3.700    .550   9.000
1029            UC    .162    .157
1030            UA       0       5      16      30      65      77      84      90      94      97
1031            UA     100
                * DDM   ***** Preserved *****

1032            KK   C6465
1033            KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 443 AND 452
1034            HC       2
                * DDM   ***** Preserved *****

1035            KK   R6566
1036            KM        ROUTE FLOW FROM DIVERSIONS 65 AND 66 TO C116
1037            RS       2    FLOW      -1
1038            RC     .05    .035     .05    2435   .0282
1039            RX    1000    1045    1090    1150    1160    1220    1265    1310
1040            RY      25      23      20      10      10      20      23      25
                * DDM   ***** Preserved *****

1041            KK    C116
1042            KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 450 & 451 AND R6364 & R6465
1043            HC .     4
                * DDM   ***** Preserved *****

1044            KK  BASIN5
1045            KM        RESERVOIR WITHIN PARCEL 31      2-48 INCH PIPES AT OUTFALL
1046            KM        BASIN 5 FEET DEEP
1047            RS       1    ELEV      0
1048            SV       0     4.5     9.9
1049            SQ       0      69     190
1050            SE       0     2.5       5
                * DDM   ***** Preserved *****

1051            KK    R116
1052            KM   ROUTE FLOW FROM C116 TO C117
1053            RS       2    FLOW      -1
1054            RC     .05    .035     .05    1300   .0333
1055            RX    1000    1100    1200    1300    1320    1420    1520    1620
1056            RY      13      12      11      10      10      11      12      13
                * DDM   ***** Updated *****
1                                          HEC-1 INPUT                                          PAGE 28

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


1057            KK     453
1058            KM   SUB-BASIN 453
1059            KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1060            KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1061            KM     L =  .58  Kb = .058  Adj. Slope =  138.0
1062            BA    .060
1063            LG    .290    .000   3.290    .820  18.000
1064            UC    .258    .265
1065            UA       0       5      16      30      65      77      84      90      94      97
1066            UA     100
                * DDM   ***** Preserved *****

1067            KK    C117
1068            KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 453 AND R116
1069            HC       2
                * DDM   ***** Preserved *****

1070            KK    C118
1071            KM   COMBINE HYDROGRAPHS FROM R115 AND C117
1072            HC       2
                * DDM   ***** Preserved *****

1073            KK    R118
1074            KM        ROUTE FLOW FROM C118 TO  DIV7
1075            RS       1    FLOW      -1
1076            RC    .019    .019    .019    1500    .024
1077            RX    1000    1012    1016    1020    1035    1039    1043    1055
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1078          RY      15      12      11      10      10      11      12      15
              * DDM   ***** Preserved *****

1079          KK    DIV7
1080          KM        OFFLINE BASIN AT NORTH MOUNTAIN RIDGE   FLOWS ENTER BASIN OVER
1081          KM        30' WEIR SET AT 5.3' ABOVE THE CHANNEL BOTTOM
              *      1
1082          DT  BASIN6
1083          DI       0     363     487     563     645     844
1084          DQ       0       3      47      83     125     244
              * DDM   ***** Preserved *****

1085          KK  RTDIV7
1086          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1087          DR  BASIN6
              * DDM   ***** Preserved *****

1088          KK  RFDIV7
1089          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1090          KM     3.6 ACRE-FEETx43560/36x3600=1.2cfs
1091          RS       1    STOR       0
1092          SV       0     .01     3.6
1093          SQ       0     1.2     1.2
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 29

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


1094          KK   CDIV7
1095          KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1096          HC       2
              * DDM   ***** Updated *****

1097          KK     454
1098          KM   SUB-BASIN 454
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  .999
1101          KM     L = 1.23  Kb = .051  Adj. Slope =  163.0
1102          BA    .180
1103          LG    .300    .000   3.780    .560  14.000
1104          UC    .350    .362
1105          UA       0       5      16      30      65      77      84      90      94      97
1106          UA     100
              * DDM   ***** Preserved *****

1107          KK    C119
1108          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 454 AND C119
              *      1       2
1109          HC       2
              * DDM   ***** Preserved *****

1110          KK    R454
1111          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1112          KM   ROUTE FLOW FROM C119 TO 415C
1113          RS       2    FLOW      -1
1114          RC    .045    .035    .045    2200    .009
1115          RX       0      .5       1      33      42      67    67.5      68
1116          RY       5       4       4       0       0       6       6       6
              * DDM   ***** Updated *****

1117          KK     415
1118          KM   SUB-BASIN 415
1119          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1120          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
1121          KM     L = 2.58  Kb = .044  Adj. Slope =  298.5
1122          BA    .606
1123          LG    .320    .000   4.500    .400  15.000
1124          UC    .392    .371
1125          UA       0       5      16      30      65      77      84      90      94      97
1126          UA     100
              * DDM   ***** Preserved *****

1127          KK   RT385
1128          KM   RETRIEVE FLOW FROM DIVERSION OF SUB-BASIN 385 INTO SUB-BASIN 415
1129          DR   SF385
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 30

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


1130          KK   RR385
1131          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1132          KM   ROUTING OF SPLIT FLOW FROM SUB-BASIN 385 TO SUB-BASIN 415
1133          RS      11    FLOW      -1
1134          RC    .045     .04    .045    5878    .024
1135          RX       0       1      40      46      56      62     102     103
1136          RY       3       2       2       0       0       2       2       3
              * DDM   ***** Preserved *****

1137          KK    415C
1138          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 415, R454 & SPLIT FLOW FROM 385
1139          HC       3    1.71
              * DDM   ***** Preserved *****

1140          KK    R415
1141          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1142          KM   ROUTING OF FLOW FROM 415C TO 455C
1143          RS       2    FLOW      -1
1144          RC    .045     .03    .045    4100    .024
1145          RX       0      .5       1       8      16      23    23.5      24
1146          RY       8       8       8       0       0       8       8       8
              * DDM   ***** Updated *****

1147          KK     455
1148          KM   SUB-BASIN 455
1149          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1150          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
1151          KM     L = 1.70  Kb = .041  Adj. Slope =  146.0
1152          BA   1.111
1153          LG    .270    .000   3.700    .640  24.000
1154          UC    .392    .188
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1155          UA       0       5      16      30      65      77      84      90      94      97
1156          UA     100
              * DDM   ***** Preserved *****

1157          KK    D455
1158          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1159          KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1160          KM   FOR BASIN #: 30      34      43      47&58
1161          KM        MAXIMUM VOLUME DIVERSION = 74.1 acre-feet
              *      1
1162          DT   BS455    74.1
1163          DI       0   10000
1164          DQ       0   10000
              * DDM   ***** Preserved *****

1165          KK   RT455
1166          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1167          DR   BS455
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 31

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

1168          KK   SR455
1169          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1170          KM    74.1 ACRE-FEETx43560/36x3600=25cfs
1171          RS       1    STOR       0
1172          SV       0     .01    74.1
1173          SQ       0      25      25
              * DDM   ***** Preserved *****

1174          KK    C455
1175          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 455 AND DIVERTED BASIN STORAGE OF 455
1176          HC       2
              * DDM   ***** Preserved *****

1177          KK    455C
1178          KM  HYDROGRAPH COMBINATION OF 420C, R415 AND C455
              *      1       2
1179          HC       3
              * DDM   ***** Preserved *****

1180          KK   SR440
1181          KM   SPOOK HILL FRS PLANS DATED 6/15/77
1182          KM   OUTLET PIPE=7'x7.5'RCBC; L=70 INLET INV.=1566; OUTLET INV.=1566
1183          KM   EMERGENCY SPILLWAY ELEV.=1582; PRINCIPLE SPILLWAY ELEV.=1577.5
1184          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 200 ACRE-FEET
              *   ESE = 1583.86 ft; PSE = 1579.36 ft; Sediment Vol. = 271 Ac-Ft.
1185          RS       1    STOR       0
1186          SV       0      81     363     533     719     925    1120    1399    1668    4051
1187          SQ       0       0      10     180     367     595     800    1231    2625   24500
1188          SE      76      78      80      81      82      83    83.9      85      86      92
              * DDM   ***** Preserved *****

1189          KK   RR455
1190          KM   ROUTE FLOW FROM SPOOK HILL FRS TO SUB-BASIN 462
1191          RS      14    FLOW      -1
1192          RC    .035    .025    .035    9200    .002
1193          RX       0       1       2      28      58      84      85      86
1194          RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
              * DDM   ***** Updated *****

1195          KK     456
1196          KM   SUB-BASIN 456
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  .998
1199          KM     L =  .94  Kb = .045  Adj. Slope =  315.0
1200          BA    .260
1201          LG    .300    .000   5.600    .200  12.000
1202          UC    .213    .136
1203          UA       0       5      16      30      65      77      84      90      94      97
1204          UA     100
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 32

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

1205          KK    DIV1
1206          KM        DIVERT FLOW INTO OFFLINE DETENTION BASIN
1207          KM        WEIR FOR BASIN SET AT 4 FEET ABOVE CHANNEL BOTTOM
              *      1
1208          DT  BASIN1
1209          DI       0    11.1   127.9   234.4   577.7   789.9  1025.5  1280.9  1555.7
1210          DQ       0       0       0    47.7     248   381.8   533.6   701.5     884
              * DDM   ***** Preserved *****

1211          KK    DIV2
1212          KM        SPLIT OUT FLOW FOR WASHES THAT FLOW TO THE SOUTH FROM
1213          KM        WASHES THAT DRAIN TO THE WES, SOUTHERN WASHES FED BY 30" & 24" PIPE
1214          DT    WA30
1215          DI       0    11.1   127.9   189.6   329.7     408   491.9   579.4   671.7
1216          DQ       0    11.1    38.4    48.2      63    69.5      76      81      86
              * DDM   ***** Preserved *****

1217          KK    R456
1218          KM        ROUTE FLOW FROM SUB-BASIN 51 TO C101
1219          RS       2    FLOW      -1
1220          RC     .05    .035     .05    3800    .044
1221          RX    1000    1010    1020    1036    1041    1057    1067    1077
1222          RY   14.88   14.44      14      10      10      14   14.44   14.88
              * DDM   ***** Updated *****

1223          KK     457
1224          KM   SUB-BASIN 457
1225          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1226          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1227          KM     L = 1.01  Kb = .045  Adj. Slope =  308.8
1228          BA    .190
1229          LG    .270    .000   3.950    .460   6.000
1230          UC    .225    .184
1231          UA       0       5      16      30      65      77      84      90      94      97
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1232          UA     100
              * DDM   ***** Preserved *****

1233          KK    C101
1234          KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 50 AND 51
1235          HC       2
              * DDM   ***** Preserved *****

1236          KK    DIV3
1237          KM        RESERVOIR AT THE EDGE OF THE PROPERTY   FLOW FROM CHANNEL
1238          KM        DIVERTED  INTO OFFLINE BASIN A 25' WEIR SET AT ELEVATION 1808 FT
              *      1
1239          DT  BASIN2
1240          DI       0      36      70     110     180   313.5     402   500.9
1241          DQ       0       0       0       0       0    67.5     124   190.9
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 33

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


1242          KK  RTDIV3
1243          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1244          DR  BASIN2
              * DDM   ***** Preserved *****

1245          KK  RFDIV3
1246          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1247          KM     5.0 ACRE-FEETx43560/36x3600=1.7cfs
1248          RS       1    STOR       0
1249          SV       0     .01       5
1250          SQ       0     1.7     1.7
              * DDM   ***** Preserved *****

1251          KK   CDIV3
1252          KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1253          HC       2
              * DDM   ***** Preserved *****

1254          KK    R101
1255          KM        ROUTE FLOW FROM SUBBASIN C101 TO C103
1256          RS       1    FLOW      -1
1257          RC     .05    .035     .05    1450     .05
1258          RX    1000    1010    1020    1036    1041    1057    1067    1077
1259          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Updated *****

1260          KK     458
1261          KM   SUB-BASIN 458
1262          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1263          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1264          KM     L =  .76  Kb = .048  Adj. Slope =  299.0
1265          BA    .190
1266          LG    .290    .000   5.800    .190   6.000
1267          UC    .200    .128
1268          UA       0       5      16      30      65      77      84      90      94      97
1269          UA     100
              * DDM   ***** Preserved *****

1270          KK    C103
1271          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 55 AND C101
1272          HC       2
              * DDM   ***** Preserved *****

1273          KK    R103
1274          KM        ROUTE FLOW FROM SUBBASIN C103 TO C106
1275          RS       1    FLOW      -1
1276          RC     .05    .035     .05     900     .03
1277          RX    1000    1010    1020    1030    1050    1060    1070    1080
1278          RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 34

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


1279          KK    RT30
1280          KM        RETRIEVE DIVERTED FLOW FOR WASH BELOW 30 INCH PIPE
1281          DR    WA30
              * DDM   ***** Preserved *****

1282          KK     R30
1283          KM        ROUTE FLOW FROM WASH DIVERSION TO COMBINE C52
1284          RS       1    FLOW      -1
1285          RC     .05    .035     .05    1630     .05
1286          RX    1000    1010    1020    1036    1041    1057    1067    1077
1287          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Preserved *****

1288          KK    RTB1
1289          KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
              *      1        2
1290          DR  BASIN1
              * DDM   ***** Preserved *****

1291          KK      B1
1292          KM        ROUTE FLOW THROUGH OFFLINE DETENTION BASIN
1293          KM        FLOW OUTLETS THROUGH A 30 INCH OUTLET PIPE
              *      1        2
1294          RS       1    ELEV       0
1295          SV              .7     1.4     2.3     2.7     3.2
1296          SQ       0       5      16      28    32.5      37
1297          SE       0       1       2       3     3.5       4
              * DDM   ***** Preserved *****

1298          KK     RB1
1299          KM        ROUTE FLOW FROM BASIN DIVERSION TO COMBINE C52
1300          RS       2    FLOW      -1
1301          RC     .05    .035     .05    1720     .05
1302          RX    1000    1010    1020    1036    1041    1057    1067    1077
1303          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Preserved *****
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1304          KK    CDIV
1305          KM        COMBINE FLOWS FROM WA30 AND BASIN 1
1306          HC       2      .12
              * DDM   ***** Updated *****

1307          KK     459
1308          KM   SUB-BASIN 459
1309          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1310          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1311          KM     L =  .35  Kb = .052  Adj. Slope =  251.6
1312          BA    .030
1313          LG    .220    .000   3.330    .710   8.000
1314          UC    .154    .148
1315          UA       0       5      16      30      65      77      84      90      94      97
1316          UA     100
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 35

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

1317          KK     C52
1318          KM        COMBINE FLOWS FROM SUB-BASIN 52 WA30 AND BASIN 1
1319          HC       2
              * DDM   ***** Preserved *****

1320          KK     R52
1321          KM        ROUTE FLOW FROM SUBBASIN 52 TO C102
1322          RS       2    FLOW      -1
1323          RC     .05    .035     .05    2000     .05
1324          RX    1000    1010    1020    1036    1041    1057    1067    1077
1325          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Updated *****

1326          KK     460
1327          KM   SUB-BASIN 460
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  .999
1330          KM     L =  .62  Kb = .058  Adj. Slope =  194.0
1331          BA    .140
1332          LG    .250    .000   3.740    .690  27.000
1333          UC    .233    .154
1334          UA       0       5      16      30      65      77      84      90      94      97
1335          UA     100
              * DDM   ***** Preserved *****

1336          KK    C102
1337          KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 52 AND 53
1338          HC       2
              * DDM   ***** Preserved *****

1339          KK  BASIN3
1340          KM        RESERVOIR AT CLUBHOUSE LOCATION 1-30 INCH PIPE AT OUTFALL
1341          KM        BOTTOM OF BASIN AT 6 FEET ABOVE 1795 ELEVATION
1342          RS       1    ELEV       0
1343          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
1344          SQ       0      22      45    47.4      48      51      57      62      67      73
1345          SE    1795  1797.5    1800  1800.4  1800.5    1801    1802    1803    1804  1805.5
              * DDM   ***** Preserved *****

1346          KK      R3
1347          KM        ROUTE FLOW FROM C102 to C106
1348          RS       4    FLOW      -1
1349          RC     .05     .03     .05    2750   .0375
1350          RX    1000    1010    1020    1052    1086    1118    1128    1138
1351          RY    19.2    18.4      18      10      10      18    18.4    19.2
              * DDM   ***** Updated *****

1352          KK     461
1353          KM   SUB-BASIN 461
1354          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1355          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1356          KM     L =  .83  Kb = .052  Adj. Slope =  181.0
1357          BA    .120
1                                        HEC-1 INPUT                                          PAGE 36

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

1358          LG    .270    .000   4.250    .450  21.000
1359          UC    .258    .238
1360          UA       0       5      16      30      65      77      84      90      94      97
1361          UA     100
              * DDM   ***** Preserved *****

1362          KK    C104
1363          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 54 AND R102
1364          HC       2
              * DDM   ***** Preserved *****

1365          KK    C106
1366          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN C103 AND C104
1367          HC       2
              * DDM   ***** Preserved *****

1368          KK    R106
1369          KM        ROUTE FLOW FROM C106 TO C49
1370          RS       2    FLOW      -1
1371          RC     .05    .035     .05    3950    .033
1372          RX    1000    1010    1020    1030    1050    1060    1070    1080
1373          RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
              * DDM   ***** Updated *****

1374          KK     462
1375          KM   SUB-BASIN 462
1376          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1377          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1378          KM     L =  .97  Kb = .045  Adj. Slope =  297.7
1379          BA    .301
1380          LG    .300    .000   5.300    .240  12.000
1381          UC    .221    .134
1382          UA       0       5      16      30      65      77      84      90      94      97
1383          UA     100
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                * DDM   ***** Preserved *****

1384            KK     C56
1385            KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 56 AND C106
                *      1       2
1386            HC       2
                * DDM   ***** Updated *****

1387            KK     480
1388            KM   SUB-BASIN 480
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  .996
1391            KM     L = 1.21  Kb = .042  Adj. Slope =  165.0
1392            BA    .731
1393            LG    .270    .000   3.580    .730  27.000
1394            UC    .304    .137
1395            UA       0       5      16      30      65      77      84      90      94      97
1396            UA     100
                * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                          PAGE 37

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


1397            KK    D480
1398            KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1399            KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1400            KM   FOR BASIN #: 18 & 26
1401            KM        MAXIMUM VOLUME DIVERSION = 16.5 acre-feet
                *      1
1402            DT   BS480    16.5
1403            DI       0   10000
1404            DQ       0   10000
                * DDM   ***** Preserved *****

1405            KK   RT480
1406            KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1407            DR   BS480
                * DDM   ***** Preserved *****

1408            KK   SR480
1409            KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1410            KM    16.5 ACRE-FEETx43560/36x3600=5.5cfs
1411            RS       1    STOR       0
1412            SV       0     .01    16.5
1413            SQ       0     5.6     5.6
                * DDM   ***** Preserved *****

1414            KK    C480
1415            KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1416            HC       2
                * DDM   ***** Preserved *****

1417            KK    480C
1418            KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1419            HC       3    2.09
                * DDM   ***** Preserved *****

1420            KK    R480
1421            KM   ROUTE FLOW FROM SUB-BASIN 480 TO RR480
1422            RS       1    FLOW      -1
1423            RC    .025    .025    .025    1800     .05
1424            RX       0       1      20      32      62      74      93      94
1425            RY      13      12      12       0       0      12      12      13
                * DDM   ***** Preserved *****

1426            KK   RR480
1427            KM   ROUTE FLOW FROM SUB-BASIN 480 TO SUB-BASIN 500
1428            RS       3    FLOW      -1
1429            RC    .055     .05    .055    6500     .05
1430            RX       0       1       2      28      58      84      85      86
1431            RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
                * DDM   ***** Updated *****
1                                          HEC-1 INPUT                                          PAGE 38

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


1432            KK     500
1433            KM   SUB-BASIN 500
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  .994
1436            KM     L = 2.77  Kb = .042  Adj. Slope =  286.8
1437            BA    .930
1438            LG    .350    .000   6.000    .170   9.000
1439            UC    .396    .311
1440            UA       0       3       5       8      12      20      43      75      90      96
1441            UA     100
                * DDM   ***** Preserved *****

1442            KK    500C
1443            KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1444            HC       2    3.02
1445            ZZ
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SCHEMATIC DIAGRAM OF STREAM NETWORK

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INPUT
 LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

  NO.      (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

  39         10
             V
             V
  49        R10
             V
             V
  55        R12
             .
             .
  61         .          20
             .           .
             .           .
  71        C20............
             V
             V
  74        R20
             .
             .
  80         .          40
             .           .
             .           .
  90         .           .          60
             .           .           .
             .           .           .
 100        60C........................
             V
             V
 103       SR60
             V
             V
 112        R60
             V
             V
 118       RR60
             .
             .
 124         .          80
             .           .
             .           .
 134        80C............
             V
             V
 137        R80
             .
             .
 143         .         100
             .           .
             .           .
 153       100C............
             V
             V
 156       R100
             .
             .
 162         .         120
             .           .
             .           .
 172       120C............
             V
             V
 175       R120
             .
             .
 181         .         140
             .           .
             .           .
 191         .           .         150
             .           .           V
             .           .           V
 201         .           .        R150
             .           .           V
             .           .           V
 207         .           .        R152
             .           .           .
             .           .           .
 213         .           .           .         160
             .           .           .           .
             .           .           .           .
 223         .           .           .           .         180
             .           .           .           .           .
             .           .           .           .           .
 233       180C.............................................
             .
             .
 236         .         210
             .           V
             .           V
 246         .        R210
             .           .
             .           .
 252         .           .         240
             .           .           .
             .           .           .
 262         .        240C............
             .           V
             .           V
 265         .       SR240
             .           .
             .           .
 272         .           .         220
             .           .           .
             .           .           .
 282         .        220C............
             .           V
             .           V
 285         .       SR220
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292          .           .
             .           .        190
             .           .          V
             .           .          V
302          .           .       R190
             .           .          V
             .           .          V
308          .           .       R192
             .           .          .
             .           .          .
314          .           .          .         200
             .           .          .           .
             .           .          .           .
324          .       200C.......................
             .           V
             .           V
327          .      SR200
             .           V
             .           V
334          .      200SR
             .           .
             .           .
341       C180............
             V
             V
344      SR180
             V
             V
353       R180
             .
             .
360          .        260
             .           .
             .           .
370       260C............
             V
             V
373       R260
             .
             .
380          .        280
             .           .
             .           .
390       280C............
             V
             V
393       R280
             .
             .
400          .        300
             .           .
             .           .
410       300C............
             V
             V
413       R300
             V
             V
420      RR300
             .
             .
427          .        350
             .           .
             .           .
440          .           .-------->   SF350
437          .       D350
             .           V
             .           V
443          .       350R
             .           .
             .           .
450          .           .        310
             .           .          .
             .           .          .
460          .       C310............
             .           V
             .           V
463          .       R310
             .           .
             .           .
470          .           .        320
             .           .          .
             .           .          .
485          .           .          .-------->   BS320
480          .           .       D320
             .           .          .
             .           .          .
490          .           .          .          .<--------   BS320
488          .           .          .      RT320
             .           .          .          V
             .           .          .          V
491          .           .          .      SR320
             .           .          .          .
             .           .          .          .
497       C320.................................
             .
             .
500          .        340
             .           .
             .           .
515          .           .-------->   BS340
510          .       D340
             .           .
             .           .
520          .           .          .<--------   BS340
518          .           .      RT340
             .           .          V
             .           .          V
521          .           .      SR340
             .           .          .
             .           .          .
527       C340......................
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532       .          .<-------   SF350
530       .      RT350
          .          V
          .          V
533       .      RR350
          .          .
          .          .
540       .          .         355
          .          .           .
          .          .           .
550       .       C355............
          .          V
          .          V
553       .       R355
          .          .
          .          .
560       .          .         360
          .          .           .
          .          .           .
574       .          .           .------->   BS360
570       .          .       D360
          .          .           .
          .          .           .
579       .          .           .           .<-------   BS360
577       .          .           .       RT360
          .          .           .           V
          .          .           .           V
580       .          .           .       SR360
          .          .           .           .
          .          .           .           .
586    360C...................................
          .
          .
589       .        370
          .          .
          .          .
599       .          .         395
          .          .           .
          .          .           .
609       .       370C............
          .          V
          .          V
612       .       R370
          .          .
          .          .
619       .          .         380
          .          .           .
          .          .           .
633       .          .           .------->   BS380
629       .          .       D380
          .          .           .
          .          .           .
638       .          .           .           .<-------   BS380
636       .          .           .       RT380
          .          .           .           V
          .          .           .           V
639       .          .           .       SR380
          .          .           .           .
          .          .           .           .
645    380C...................................
          .
          .
648       .        390
          .          .
          .          .
662       .          .-------->   BS390
658       .       D390
          .          .
          .          .
667       .          .           .<-------   BS390
665       .          .       RT390
          .          .           V
          .          .           V
668       .          .       SR390
          .          .           .
          .          .           .
674       .       390C............
          .          V
          .          V
677       .      RR390
          .          .
          .          .
684       .          .         400
          .          .           .
          .          .           .
698       .          .           .------->   BS400
694       .          .       D400
          .          .           .
          .          .           .
703       .          .           .           .<-------   BS400
701       .          .           .       RT400
          .          .           .           V
          .          .           .           V
704       .          .           .       SR400
          .          .           .           .
          .          .           .           .
710       .          .       C400............
          .          .           .
          .          .           .
713    400C......................
          .
          .
716       .        385
          .          .
          .          .
728       .          .-------->   SF385
726       .       D385
          .          V
          .          V
731       .       385R
          .          .
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738                 420
                      .
                      .
752                   .-------> BS420
748               D420
                      .
                      .
757                   .        .<-------  BS420
755                   .     RT420
                      .        V
                      .        V
758                   .     SR420
                      .        .
                      .        .
764        420C.................................
                 .
767              440
                   V
                   V
777              R70
                   .
                   .
783                441
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793            C108............
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798                .-------> SPLIT
796            DIV4
                   V
                   V
801            R108
                   .
                   .
807                442
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                      .
817             C67............
                   .
                   .
823                .-------> BASIN4
820            DIV6
                   .
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828                   .<-------  BASIN4
826                .  RTDIV6
                      V
                      V
829                .  RFDIV6
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835           CDIV6............
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                   .
838                443
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                      .
851                   .-------> WSH66
848                .   DIV66
                      V
                      V
854                .   R113
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860            C114............
                   .
                   .
863                444
                      V
                      V
873                R58
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879                   .        445
                      .          .
                      .          .
889                .  C107............
                      V
                      V
892                .  R107
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900                   .        .<-------  SPLIT
898                   .     RTB2
                      .        V
                      .        V
901                   .   RSPLIT
                      .        .
                      .        .
907                   .        .        446
                      .        .          .
                      .        .          .
917                .  C109.......................
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923                   .-------> WSH404
920                .  DIV5
                      V
                      V
926                .  R109
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932                   .        447
                      .          .
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944                   .        .        .<-------  WSH404
942                   .        .     RT404
                      .        .        V
                      .        .        V
945                   .        .      R404
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 951            .          .       C110.......................
                .          .          V
                .          .          V
 954            .          .       R110
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 960            .       C115...........
                .          V
                .          V
 963            .       R115
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 970            .          .        448
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 980            .          .          .         449
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 990            .          .      C6364...........
                .          .          V
                .          .          V
 993            .          .      R6364
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 999            .          .          .         450
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1009            .          .          .           .         451
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1021            .          .          .           .           .          .<-------   WSH66
1019            .          .          .           .           .       RT66
                .          .          .           .           .          .
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1022            .          .          .           .           .          .         452
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1032            .          .          .           .           .      C6465...........
                .          .          .           .           .          V
                .          .          .           .           .          V
1035            .          .          .           .           .      R6566
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1041            .          .       C116.................................
                .          .          V
                .          .          V
1044            .          .     BASIN5
                .          .          V
                .          .          V
1051            .          .       R116
                .          .          .
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1057            .          .          .         453
                .          .          .           .
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1067            .          .       C117...........
                .          .          .
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1070            .       C118...........
                .          V
                .          V
1073            .       R118
                .          .
                .          .
1082            .          .-------> BASIN6
1079            .       DIV7
                .          .
                .          .
1087            .          .          .<-------  BASIN6
1085            .          .     RTDIV7
                .          .          V
                .          .          V
1088            .          .     RFDIV7
                .          .          .
                .          .          .
1094            .      CDIV7...........
                .          .
                .          .
1097            .          .        454
                .          .          .
                .          .          .
1107            .       C119...........
                .          V
                .          V
1110            .       R454
                .          .
                .          .
1117            .          .        415
                .          .          .
                .          .          .
1129            .          .          .           .<-------   SF385
1127            .          .          .       RT385
                .          .          .           V
                .          .          .           V
1130            .          .          .       RR385
                .          .          .           .
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1137            .       415C......................
                .          V
                .          V
1140            .       R415
                .          .
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1147            .          .        455
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                .          .          .
1162            .          .          .------->   BS455
1157            .          .       D455
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1167            .          .          .           .<-------   BS455
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1165          .           .           .       RT455
              .           .           .           V
              .           .           .           V
1168          .           .           .       SR455
              .           .           .           .
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1174          .           .       C455............
              .           .           .
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1177       455C......................
              V
              V
1180      SR440
              V
              V
1189      RR455
              .
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1195          .        456
              .           .
              .           .
1208          .           .-------> BASIN1
1205          .       DIV1
              .           .
              .           .
1214          .           .------->   WA30
1211          .       DIV2
              .           V
              .           V
1217          .       R456
              .           .
              .           .
1223          .           .        457
              .           .           .
              .           .           .
1233          .       C101............
              .           .
              .           .
1239          .           .-------> BASIN2
1236          .       DIV3
              .           .
              .           .
1244          .           .           .<-------  BASIN2
1242          .           .     RTDIV3
              .           .           V
              .           .           V
1245          .           .     RFDIV3
              .           .           .
              .           .           .
1251          .      CDIV3............
              .           V
              .           V
1254          .       R101
              .           .
              .           .
1260          .           .        458
              .           .           .
              .           .           .
1270          .       C103............
              .           V
              .           V
1273          .       R103
              .           .
              .           .
1281          .           .           .<-------   WA30
1279          .           .       RT30
              .           .           V
              .           .           V
1282          .           .        R30
              .           .           .
              .           .           .
1290          .           .           .           .<-------  BASIN1
1288          .           .           .       RTB1
              .           .           .           V
              .           .           .           V
1291          .           .           .          B1
              .           .           .           V
              .           .           .           V
1298          .           .           .         RB1
              .           .           .           .
              .           .           .           .
1304          .           .       CDIV............
              .           .           .
              .           .           .
1307          .           .           .        459
              .           .           .           .
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1317          .           .        C52............
              .           .           V
              .           .           V
1320          .           .        R52
              .           .           .
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1326          .           .           .        460
              .           .           .           .
              .           .           .           .
1336          .           .       C102............
              .           .           V
              .           .           V
1339          .           .     BASIN3
              .           .           V
              .           .           V
1346          .           .          R3
              .           .           .
              .           .           .
1352          .           .           .        461
              .           .           .           .
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1362          .           .       C104............
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1365          .       C106............
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                .          V
1368            .       R106
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1374            .          .        462
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1384            .        C56............
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1387            .          .        480
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1402            .          .          .-------->   BS480
1397            .          .       D480
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                .          .          .
1407            .          .          .           .<-------   BS480
1405            .          .          .       RT480
                .          .          .           V
                .          .          .           V
1408            .          .          .       SR480
                .          .          .           .
                .          .          .           .
1414            .          .       C480............
                .          .          .
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1417        480C........................
               V
               V
1420        R480
               V
               V
1426       RR480
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1432            .        500
                .          .
                .          .
1442        500C............
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(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

1

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	1087.	12.23	164.	44.	16.	.70		
+	ROUTED TO	R10	1020.	12.40	164.	44.	16.	.70		
+	ROUTED TO	R12	968.	12.57	164.	44.	16.	.70		
+	HYDROGRAPH AT	20	1346.	12.37	200.	50.	18.	1.12		
+	2 COMBINED AT	C20	2082.	12.50	362.	94.	34.	1.82		
+	ROUTED TO	R20	2080.	12.53	362.	94.	34.	1.82		
+	HYDROGRAPH AT	40	3402.	12.27	359.	93.	33.	2.23		
+	HYDROGRAPH AT	60	2051.	12.37	326.	86.	31.	1.75		
+	3 COMBINED AT	60C	6964.	12.30	1038.	271.	98.	5.80		
+	ROUTED TO	SR60	500.	13.67	280.	157.	96.	5.80		
+	ROUTED TO	R60	499.	13.73	280.	157.	96.	5.80		
+	ROUTED TO	RR60	498.	13.83	280.	157.	96.	5.80		
+	HYDROGRAPH AT	80	2359.	12.23	260.	67.	24.	1.48		
+	2 COMBINED AT	80C	2446.	12.23	526.	222.	121.	1.48		
+	ROUTED TO	R80	2424.	12.27	526.	222.	121.	1.48		
+	HYDROGRAPH AT	100	534.	12.20	79.	20.	7.	.48		
+	2 COMBINED AT	100C	2932.	12.27	601.	240.	128.	1.96		
+	ROUTED TO	R100	2929.	12.27	601.	240.	128.	1.96		
+	HYDROGRAPH AT	120	3732.	12.23	459.	122.	44.	2.20		
+	2 COMBINED AT	120C	6596.	12.27	1032.	353.	171.	4.16		
+	ROUTED TO	R120	6556.	12.27	1032.	353.	171.	4.16		
+	HYDROGRAPH AT	140	841.	12.13	84.	22.	8.	.60		
+	HYDROGRAPH AT	150	712.	12.17	69.	18.	7.	.41		
+	ROUTED TO	R150	689.	12.20	69.	18.	7.	.41		
+	ROUTED TO	R152	651.	12.30	69.	18.	7.	.41		
+	HYDROGRAPH AT	160	335.	12.33	50.	13.	5.	.37		
+	HYDROGRAPH AT	180	1197.	12.30	134.	34.	12.	1.00		
+	5 COMBINED AT	180C	9201.	12.27	1345.	432.	199.	6.54		
+	HYDROGRAPH AT	210	1034.	12.17	123.	32.	11.	.58		
+	ROUTED TO	R210	975.	12.23	123.	32.	11.	.58		
+	HYDROGRAPH AT	240	1895.	12.27	232.	59.	21.	1.40		
+	2 COMBINED AT	240C	2854.	12.27	353.	90.	32.	1.98		
+	ROUTED TO	SR240	1013.	12.73	305.	79.	28.	1.98		
+	HYDROGRAPH AT	220	1326.	12.17	152.	39.	14.	.73		
+	2 COMBINED AT	220C	1595.	12.20	446.	117.	42.	2.71		

+	ROUTED TO SR220	1385.	12.50	443.	115.	41.	2.71
+	HYDROGRAPH AT 190	1731.	12.17	171.	45.	16.	.92
	ROUTED TO R190	1671.	12.20	171.	45.	16.	.92
+	ROUTED TO R192	1617.	12.27	171.	45.	16.	.92
+	HYDROGRAPH AT 200	984.	12.17	100.	27.	10.	.54
+	3 COMBINED AT 200C	3544.	12.27	705.	184.	67.	4.16
+	ROUTED TO SR200	3361.	12.33	701.	181.	65.	4.16
+	ROUTED TO 200SR	3000.	12.47	581.	150.	54.	4.16
+	2 COMBINED AT C180	10107.	12.37	1827.	558.	244.	10.69
+	ROUTED TO SR180	138.	22.47	138.	138.	111.	10.69
+	ROUTED TO R180	138.	22.70	138.	138.	111.	10.69
+	HYDROGRAPH AT 260	462.	12.10	54.	15.	5.	.27
+	2 COMBINED AT 260C	469.	12.10	169.	148.	119.	.27
+	ROUTED TO R260	453.	12.20	168.	148.	118.	.27
+	HYDROGRAPH AT 280	555.	12.10	53.	15.	5.	.30
+	2 COMBINED AT 280C	958.	12.13	216.	160.	123.	.57
+	ROUTED TO R280	921.	12.20	215.	160.	123.	.57
+	HYDROGRAPH AT 300	1221.	12.17	149.	39.	14.	.99
	2 COMBINED AT 300C	2122.	12.20	359.	197.	137.	1.56
+	ROUTED TO R300	2091.	12.23	359.	196.	136.	1.56
+	ROUTED TO RR300	2058.	12.30	358.	196.	136.	1.56
+	HYDROGRAPH AT 350	1574.	12.20	146.	38.	14.	.97
+	DIVERSION TO SF350	787.	12.20	73.	19.	7.	.97
+	HYDROGRAPH AT D350	787.	12.20	73.	19.	7.	.97
+	ROUTED TO 350R	722.	12.37	73.	19.	7.	.97
+	HYDROGRAPH AT 310	572.	12.27	72.	18.	7.	.56
+	2 COMBINED AT C310	1262.	12.33	145.	37.	13.	.94
+	ROUTED TO R310	1144.	12.63	145.	37.	13.	.94
+	HYDROGRAPH AT 320	1258.	12.17	157.	43.	16.	.97
+	DIVERSION TO BS320	405.	11.87	21.	6.	2.	.97
+	HYDROGRAPH AT D320	1258.	12.17	143.	37.	13.	.97
+	HYDROGRAPH AT RT320	405.	11.87	21.	6.	2.	.97
+	ROUTED TO SR320	4.	4.07	4.	4.	2.	.97
+	4 COMBINED AT C320	3399.	12.27	646.	273.	164.	3.47
	HYDROGRAPH AT 340	1934.	12.17	230.	66.	24.	1.45
	DIVERSION TO BS340	1911.	12.13	104.	28.	10.	1.45
+	HYDROGRAPH AT D340	1883.	12.20	142.	38.	14.	1.45
+	HYDROGRAPH AT RT340	1911.	12.13	104.	28.	10.	1.45

+	ROUTED TO	SR340	19.	8.77	19.	19.	10.	1.45
+	3 COMBINED AT	C340	5138.	12.23	803.	329.	188.	4.92
+	HYDROGRAPH AT	RT350	787.	12.20	73.	19.	7.	.97
+	ROUTED TO	RR350	718.	12.40	73.	19.	7.	.97
+	HYDROGRAPH AT	355	707.	12.30	97.	25.	9.	.66
+	2 COMBINED AT	C355	1373.	12.37	169.	44.	16.	1.24
+	ROUTED TO	R355	1264.	12.63	169.	44.	16.	1.24
+	HYDROGRAPH AT	360	689.	12.20	104.	30.	11.	.67
+	DIVERSION TO	BS360	689.	12.20	54.	14.	5.	.67
+	HYDROGRAPH AT	D360	590.	12.37	58.	16.	6.	.67
+	HYDROGRAPH AT	RT360	689.	12.20	54.	14.	5.	.67
+	ROUTED TO	SR360	10.	9.67	10.	10.	5.	.67
+	4 COMBINED AT	360C	5370.	12.37	1023.	392.	212.	6.83
+	HYDROGRAPH AT	370	779.	12.27	106.	28.	10.	.67
+	HYDROGRAPH AT	395	235.	12.23	33.	9.	3.	.20
+	2 COMBINED AT	370C	1007.	12.27	138.	37.	13.	.87
+	ROUTED TO	R370	912.	12.60	138.	37.	13.	.87
+	HYDROGRAPH AT	380	1009.	12.20	135.	36.	13.	.97
+	DIVERSION TO	BS380	1009.	12.20	56.	14.	5.	.97
+	HYDROGRAPH AT	D380	949.	12.30	83.	21.	8.	.97
+	HYDROGRAPH AT	RT380	1009.	12.20	56.	14.	5.	.97
+	ROUTED TO	SR380	10.	11.20	10.	10.	5.	.97
+	4 COMBINED AT	380C	6645.	12.53	1225.	451.	235.	8.67
+	HYDROGRAPH AT	390	527.	12.03	41.	11.	4.	.24
+	DIVERSION TO	BS390	118.	11.70	6.	2.	1.	.24
+	HYDROGRAPH AT	D390	527.	12.03	37.	10.	3.	.24
+	HYDROGRAPH AT	RT390	118.	11.70	6.	2.	1.	.24
+	ROUTED TO	SR390	1.	.73	1.	1.	1.	.24
+	2 COMBINED AT	390C	529.	12.03	38.	11.	4.	.24
+	ROUTED TO	RR390	394.	12.47	38.	11.	4.	.24
+	HYDROGRAPH AT	400	598.	12.17	69.	18.	7.	.62
+	DIVERSION TO	BS400	294.	11.97	10.	3.	1.	.62
+	HYDROGRAPH AT	D400	598.	12.17	61.	16.	6.	.62
+	HYDROGRAPH AT	RT400	294.	11.97	10.	3.	1.	.62
+	ROUTED TO	SR400	2.	8.57	2.	2.	1.	.62
+	2 COMBINED AT	C400	600.	12.17	63.	18.	7.	.62
+	3 COMBINED AT	400C	7225.	12.50	1312.	475.	244.	9.53
+	HYDROGRAPH AT	385	732.	12.23	97.	26.	9.	.52

+	DIVERSION TO	SF385	439.	12.23	58.	16.	6.	.52
+	HYDROGRAPH AT	D385	293.	12.23	39.	10.	4.	.52
	ROUTED TO	385R	241.	12.77	39.	10.	4.	.52
+	HYDROGRAPH AT	420	1042.	12.17	120.	33.	12.	.85
+	DIVERSION TO	BS420	284.	11.87	15.	4.	2.	.85
+	HYDROGRAPH AT	D420	1042.	12.17	111.	29.	10.	.85
+	HYDROGRAPH AT	RT420	284.	11.87	15.	4.	2.	.85
+	ROUTED TO	SR420	13.	10.97	12.	4.	2.	.85
+	4 COMBINED AT	420C	7879.	12.30	1449.	511.	258.	10.87
+	HYDROGRAPH AT	440	196.	12.03	17.	5.	2.	.08
+	ROUTED TO	R70	192.	12.07	17.	5.	2.	.08
+	HYDROGRAPH AT	441	18.	12.03	2.	0.	0.	.01
+	2 COMBINED AT	C108	209.	12.07	19.	5.	2.	.09
+	DIVERSION TO	SPLIT	105.	12.07	9.	2.	1.	.09
+	HYDROGRAPH AT	DIV4	105.	12.07	9.	2.	1.	.09
+	ROUTED TO	R108	98.	12.13	9.	2.	1.	.09
+	HYDROGRAPH AT	442	138.	12.07	12.	3.	1.	.10
+	2 COMBINED AT	C67	231.	12.10	21.	6.	2.	.19
	DIVERSION TO	BASIN4	154.	12.10	9.	2.	1.	.19
+	HYDROGRAPH AT	DIV6	78.	12.10	12.	3.	1.	.19
+	HYDROGRAPH AT	RTDIV6	154.	12.10	9.	2.	1.	.19
+	ROUTED TO	RFDIV6	1.	11.80	1.	1.	1.	.19
+	2 COMBINED AT	CDIV6	79.	12.10	13.	4.	2.	.19
+	HYDROGRAPH AT	443	157.	12.03	19.	5.	2.	.08
+	DIVERSION TO	WSH66	78.	11.87	16.	4.	2.	.08
+	HYDROGRAPH AT	DIV66	79.	12.03	3.	1.	0.	.08
+	ROUTED TO	R113	78.	12.07	3.	1.	0.	.08
+	2 COMBINED AT	C114	155.	12.07	16.	5.	2.	.27
+	HYDROGRAPH AT	444	93.	12.03	6.	2.	1.	.04
+	ROUTED TO	R58	87.	12.07	6.	2.	1.	.04
+	HYDROGRAPH AT	445	366.	12.03	24.	6.	2.	.19
+	2 COMBINED AT	C107	450.	12.03	30.	8.	3.	.23
+	ROUTED TO	R107	444.	12.03	30.	8.	3.	.23
+	HYDROGRAPH AT	RTB2	105.	12.07	9.	2.	1.	.09
	ROUTED TO	RSPLIT	104.	12.07	9.	2.	1.	.09
	HYDROGRAPH AT	446	74.	12.03	7.	2.	1.	.04
+	3 COMBINED AT	C109	617.	12.07	46.	12.	4.	.27
+	DIVERSION TO	WSH404	35.	11.63	9.	3.	1.	.27

+	HYDROGRAPH AT DIV5	582.	12.07	37.	9.	3.	.27
+	ROUTED TO R109	574.	12.07	37.	9.	3.	.27
+	HYDROGRAPH AT 447	165.	12.03	14.	4.	2.	.09
+	HYDROGRAPH AT RT404	35.	11.63	9.	3.	1.	.27
+	ROUTED TO R404	35.	11.80	9.	3.	1.	.27
+	3 COMBINED AT C110	769.	12.07	60.	16.	6.	.36
+	ROUTED TO R110	767.	12.07	60.	16.	6.	.36
+	2 COMBINED AT C115	919.	12.07	76.	21.	8.	.63
+	ROUTED TO R115	914.	12.07	76.	21.	8.	.63
+	HYDROGRAPH AT 448	100.	12.00	7.	2.	1.	.05
+	HYDROGRAPH AT 449	97.	12.03	7.	2.	1.	.05
+	2 COMBINED AT C6364	196.	12.03	14.	4.	1.	.09
+	ROUTED TO R6364	168.	12.17	14.	4.	1.	.09
+	HYDROGRAPH AT 450	87.	12.17	9.	2.	1.	.07
+	HYDROGRAPH AT 451	27.	12.17	3.	1.	0.	.03
+	HYDROGRAPH AT RT66	78.	11.87	16.	4.	2.	.08
+	HYDROGRAPH AT 452	75.	12.03	6.	2.	1.	.04
+	2 COMBINED AT C6465	153.	12.03	22.	6.	2.	.04
+	ROUTED TO R6566	148.	12.10	22.	6.	2.	.04
+	4 COMBINED AT C116	420.	12.13	47.	12.	4.	.23
+	ROUTED TO BASIN5	201.	12.43	47.	12.	4.	.23
+	ROUTED TO R116	199.	12.50	47.	12.	4.	.23
+	HYDROGRAPH AT 453	81.	12.07	8.	2.	1.	.06
+	2 COMBINED AT C117	223.	12.43	55.	15.	5.	.29
+	2 COMBINED AT C118	1043.	12.10	130.	36.	13.	.92
+	ROUTED TO R118	1041.	12.10	130.	36.	13.	.92
+	DIVERSION TO BASIN6	362.	12.10	17.	4.	2.	.92
+	HYDROGRAPH AT DIV7	679.	12.10	113.	31.	12.	.92
+	HYDROGRAPH AT RTDIV7	362.	12.10	17.	4.	2.	.92
+	ROUTED TO RFDIV7	1.	11.83	1.	1.	1.	.92
+	2 COMBINED AT CDIV7	680.	12.10	114.	32.	13.	.92
+	HYDROGRAPH AT 454	212.	12.13	27.	7.	3.	.18
+	2 COMBINED AT C119	886.	12.10	140.	39.	16.	1.10
+	ROUTED TO R454	860.	12.17	140.	39.	15.	1.10
+	HYDROGRAPH AT 415	725.	12.13	96.	27.	10.	.61
+	HYDROGRAPH AT RT385	439.	12.23	58.	16.	6.	.52
+	ROUTED TO RR385	398.	12.53	58.	16.	6.	.52
+	3 COMBINED AT 415C	1778.	12.17	292.	81.	31.	1.71

+	ROUTED TO R415	1752.	12.23	292.	81.	31.	1.71
+	HYDROGRAPH AT 455	1702.	12.13	174.	51.	18.	1.11
	DIVERSION TO BS455	1702.	12.13	141.	37.	13.	1.11
+	HYDROGRAPH AT D455	623.	12.40	47.	14.	5.	1.11
+	HYDROGRAPH AT RT455	1702.	12.13	141.	37.	13.	1.11
+	ROUTED TO SR455	25.	10.40	25.	25.	13.	1.11
+	2 COMBINED AT C455	648.	12.40	72.	39.	18.	1.11
+	3 COMBINED AT 455C	9501.	12.50	1766.	615.	303.	13.69
+	ROUTED TO SR440	448.	14.60	428.	347.	212.	13.69
+	ROUTED TO RR455	448.	15.00	428.	346.	210.	13.69
+	HYDROGRAPH AT 456	542.	12.03	49.	13.	5.	.26
+	DIVERSION TO BASIN1	227.	12.03	12.	3.	1.	.26
+	HYDROGRAPH AT DIV1	315.	12.03	38.	10.	4.	.26
+	DIVERSION TO WA30	61.	12.03	13.	4.	1.	.26
+	HYDROGRAPH AT DIV2	253.	12.03	25.	6.	2.	.26
+	ROUTED TO R456	240.	12.10	25.	6.	2.	.26
+	HYDROGRAPH AT 457	331.	12.07	27.	7.	3.	.19
+	2 COMBINED AT C101	561.	12.07	52.	13.	5.	.45
	DIVERSION TO BASIN2	231.	12.07	12.	3.	1.	.45
+	HYDROGRAPH AT DIV3	329.	12.07	40.	10.	4.	.45
+	HYDROGRAPH AT RTDIV3	231.	12.07	12.	3.	1.	.45
+	ROUTED TO RFDIV3	2.	11.83	2.	2.	1.	.45
+	2 COMBINED AT CDIV3	331.	12.07	41.	12.	5.	.45
+	ROUTED TO R101	329.	12.10	41.	12.	5.	.45
+	HYDROGRAPH AT 458	407.	12.03	35.	9.	3.	.19
+	2 COMBINED AT C103	719.	12.07	76.	21.	8.	.64
+	ROUTED TO R103	717.	12.07	76.	21.	8.	.64
+	HYDROGRAPH AT RT30	61.	12.03	13.	4.	1.	.26
+	ROUTED TO R30	60.	12.10	13.	4.	1.	.26
+	HYDROGRAPH AT RTB1	227.	12.03	12.	3.	1.	.26
+	ROUTED TO B1	49.	12.27	11.	3.	1.	.26
+	ROUTED TO RB1	49.	12.30	11.	3.	1.	.26
+	2 COMBINED AT CDIV	100.	12.20	24.	7.	3.	.12
+	HYDROGRAPH AT 459	55.	12.03	4.	1.	0.	.03
+	2 COMBINED AT C52	136.	12.07	28.	8.	3.	.15
	ROUTED TO R52	135.	12.13	28.	8.	3.	.15
+	HYDROGRAPH AT 460	253.	12.07	23.	7.	2.	.14
+	2 COMBINED AT C102	377.	12.07	50.	15.	5.	.29

+	ROUTED TO	BASIN3	76.	12.73	50.	15.	5.	.29
+	ROUTED TO	R3	76.	12.87	50.	15.	5.	.29
	HYDROGRAPH AT	461	191.	12.07	20.	6.	2.	.12
+	2 COMBINED AT	C104	246.	12.10	70.	20.	7.	.41
+	2 COMBINED AT	C106	960.	12.07	145.	40.	15.	1.05
+	ROUTED TO	R106	928.	12.13	145.	40.	15.	1.05
+	HYDROGRAPH AT	462	620.	12.07	54.	15.	5.	.30
+	2 COMBINED AT	C56	1478.	12.10	198.	55.	21.	1.35
+	HYDROGRAPH AT	480	1291.	12.07	116.	35.	12.	.73
+	DIVERSION TO	BS480	449.	11.83	27.	8.	3.	.73
+	HYDROGRAPH AT	D480	1291.	12.07	99.	26.	9.	.73
+	HYDROGRAPH AT	RT480	449.	11.83	27.	8.	3.	.73
+	ROUTED TO	SR480	6.	3.77	6.	6.	3.	.73
+	2 COMBINED AT	C480	1296.	12.07	104.	32.	12.	.73
+	3 COMBINED AT	480C	2754.	12.07	653.	439.	255.	2.09
+	ROUTED TO	R480	2755.	12.10	653.	439.	255.	2.09
+	ROUTED TO	RR480	2629.	12.17	650.	439.	254.	2.09
+	HYDROGRAPH AT	500	1359.	12.23	180.	47.	17.	.93
	2 COMBINED AT	500C	3898.	12.20	809.	479.	271.	3.02

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