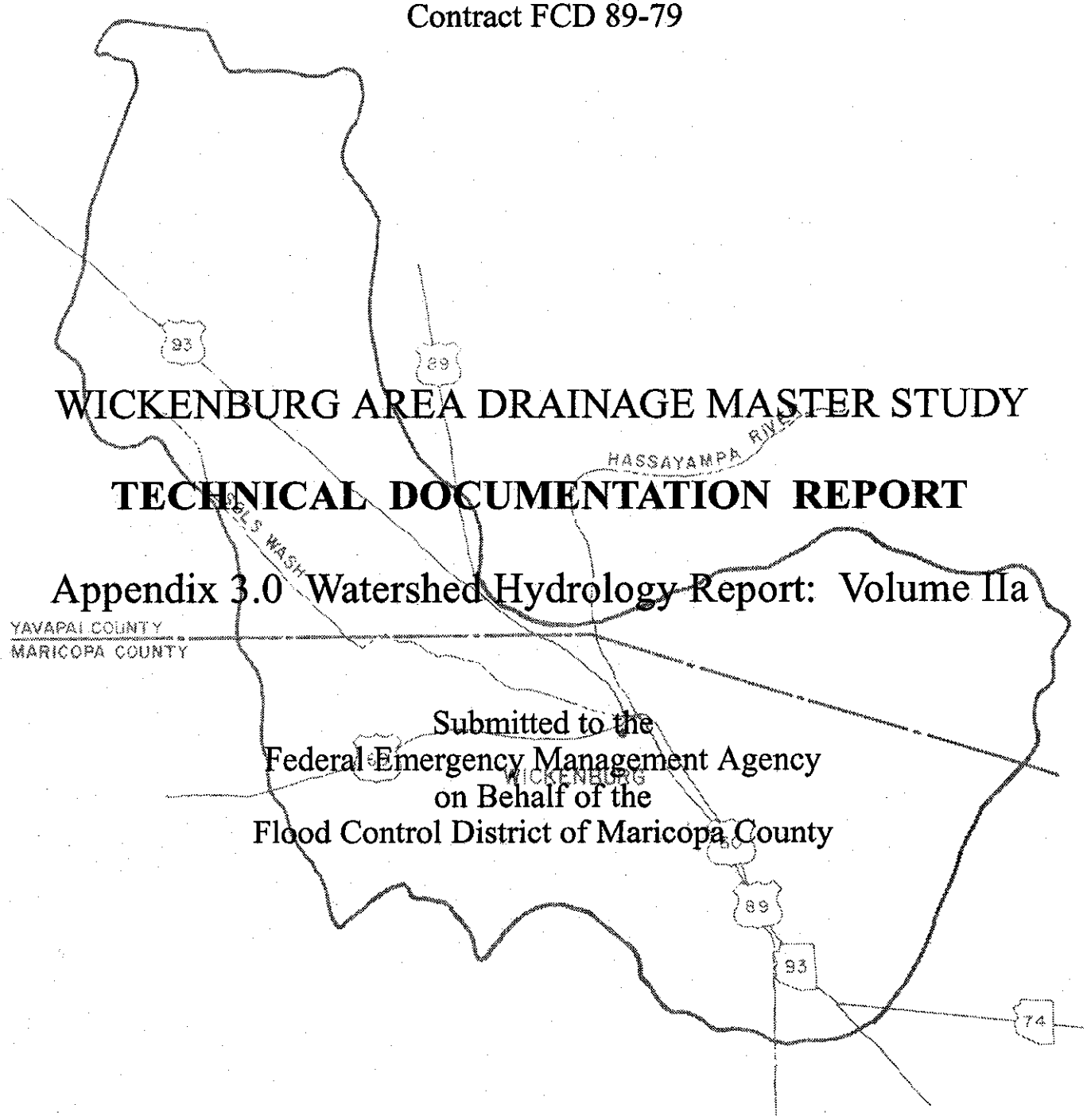
Flood Control District of Maricopa County
Contract FCD 89-79



WICKENBURG AREA DRAINAGE MASTER STUDY

TECHNICAL DOCUMENTATION REPORT

Appendix 3.0 Watershed Hydrology Report: Volume IIa

Submitted to the
Federal Emergency Management Agency
on Behalf of the
Flood Control District of Maricopa County

BLACK & VEATCH
PROGRESS BY DESIGN

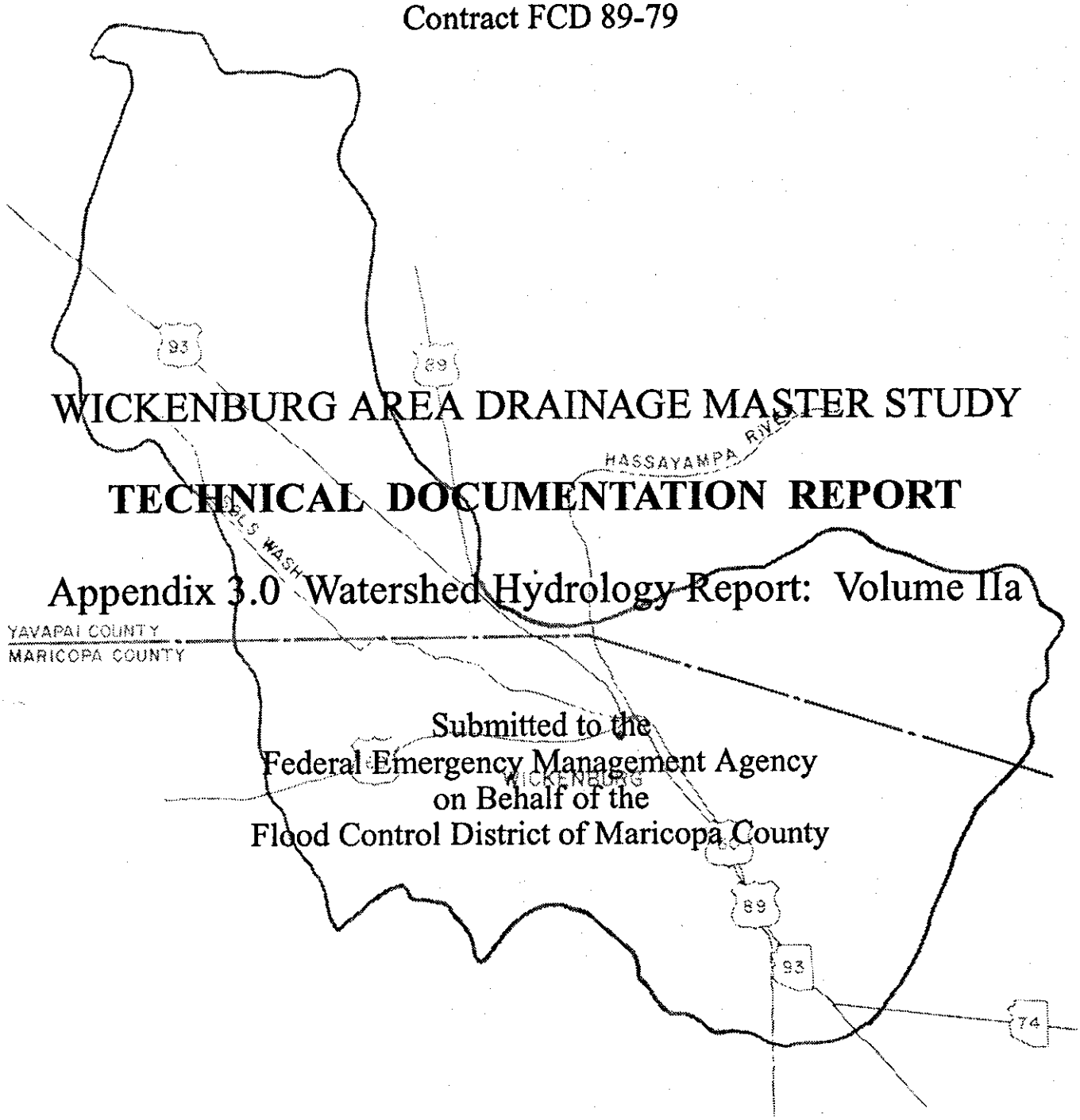
Project No. 17676

COE & VAN LOO
PLANNING • ENGINEERING
LANDSCAPE ARCHITECTURE

CVL No. 1197-02

May 1994

Flood Control District of Maricopa County
Contract FCD 89-79



WICKENBURG AREA DRAINAGE MASTER STUDY

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PROGRESS BY DESIGN

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LANDSCAPE ARCHITECTURE

CVL No. 1197-02

May 1994

Wickenburg Area Drainage Master Study

Volume IIa: HEC-1 Output
Sols Wash Area
West Tributaries Area

Contents

Sols Wash Area - Including the following washes:

Wash Name	Designation
Amir Wash	A
Flying E Wash	AB
Unnamed Tributaries	AH
Hartman Wash	AI
Ponding	AJ

Section No.	Return Period (years)
1	2
2	10
3	25
4	50
5	100

West Tributaries Area - Including the following washes:

Wash Name	Designation
Unnamed Wash # 14	Q
Cemetery Wash	R
Turtleback Wash	W
Sunset Wash	AD
Sunny Cove Wash	AE
Unnamed Wash # 10	AG

Section No.	Return Period (years)
1	2
2	10
3	25
4	50
5	100

HEC-1 OUTPUT
SOLS WASH AREA
2-YEAR RETURN PERIOD

```
****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*            FEBRUARY 1981             *
*          REVISED 02 AUG 88           *
*                                      *
* RUN DATE  10/20/1992  TIME  08:37:34 *
*                                      *
****************************************
```

```
****************************************
*                                      *
*    U.S. ARMY CORPS OF ENGINEERS      *
*  THE HYDROLOGIC ENGINEERING CENTER   *
*          609 SECOND STREET           *
*       DAVIS, CALIFORNIA 95616        *
*           (916) 551-1748             *
*                                      *
****************************************
```

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

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

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

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

  1           ID        WICKENBURG ADMS - CONTRACT FCD 89-79
  2           ID        BLACK & VEATCH PN 17676, COE & VAN LOO PN 1197-02
  3           ID        WASHES AH (SOLS WASH UNNAMED TRIBS), AB (FLYING E),
  4           ID        AI (HARTMAN), PORTIONS OF AJ (LOCAL PONDING AT AT&SF TRACKS), AND
  5           ID        A (AMIR)
  6           ID        SCS TYPE II STORM; 2-YR, 24-HR DEPTH; PHOENIX MOUNTAIN S-GRAPH
  7           ID        AREAL REDUCTION FACTORS PER NWS HYDRO-40
  8           ID        SOLS WASH AREA
              *DIAGRAM
  9           IT     15                    300
 10           IO      5
 11           IN     30
 12           JD    1.6     .01
 13           PC   .000    .005    .011    .016    .022    .028    .035    .041    .048    .056
 14           PC   .068    .071    .080    .089    .098    .109    .120    .133    .147    .163
 15           PC   .181    .204    .235    .283    .663    .735    .772    .799    .820    .838
 16           PC   .854    .868    .880    .891    .902    .912    .921    .929    .937    .945
 17           PC   .952    .959    .965    .972    .978    .984    .989    .995   1.000
 18           JD   1.57     3.0
 19           JD   1.54    10.0
 20           JD   1.47    20.0
 21           JD   1.44    30.0
 22           JD   1.41    50.0
 23           JD   1.36   100.0
 24           JD   1.33   150.0

 25           KK      SA AMIR WASH
 26           KM        SUB-BASIN A:  AMIR WASH
 27           BA   2.19
 28           LG    .15     .34    4.25     .42    1.40
 29           UI   279.   1025.   1571.    936.    654.    417.    274.    180.    115.     81.
 30           UI    37.     32.     32.      0.      0.      0.      0.      0.      0.      0.
 31           UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 32           KK   SAH65 UNNAMED SOLS WASH TRIB AH2
 33           KM        SUB-BASIN AH65:  UNNAMED SOLS WASH TRIB AH2
 34           BA   10.27
 35           LG    .35     .30    3.51     .25    1.30
 36           UI   511.   1918.   3474.   5192.   3753.   2768.   2209.   1652.   1241.    976.
 37           UI   690.    553.    392.    294.    250.    163.     98.     98.     98.     98.
 38           UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 39           UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 40           KK   SAH80 SOLS WASH TRIB AH3 ABOVE US 60
 41           KM        SUB-BASIN AH80:  BEGIN UNNAMED SOLS WASH TRIB AH3
 42           BA   2.23
 43           LG    .15     .29    3.59     .27    4.50
 44           UI   318.   1151.   1630.    943.    629.    407.    246.    163.    102.     67.
 45           UI    34.     34.      0.      0.      0.      0.      0.      0.      0.      0.
 46           UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  47          KK   RAH81
  48          KM        ROUTE SAH80 TO CAH86
  49          RS       2    FLOW      -1
  50          RC   0.035   0.030   0.035   22500  0.0076
  51          RX     200     435     485     490     510     515     565     700
  52          RY       8       7       5       0       0       5       7       8

  53          KK   SAH85
  54          KM        SUB-BASIN AH85
  55          BA    2.54
  56          LG     .35     .32    3.85     .32    3.90
  57          UI    237.    900.   1591.   1179.    819.    578.    397.    270.    192.    129.
  58          UI     83.     62.     32.     32.     32.      0.      0.      0.      0.      0.
  59          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

  60          KK   CAH86 SOLS WASH TRIB AH3 FROM SMALL RB TRIBUTARY TO HWY 60
  61          KM        COMBINE RAH81 AND SAH85:  Q ABOVE TRIBUTARY, BELOW HWY 60 BRIDGE
  62          HC       2

  63          KK   SAH90
  64          KM        SUB-BASIN AH90: RIGHT BANK TRIB TO AH3
  65          BA    1.52
  66          LG     .15     .30    3.87     .24    6.50
  67          UI    478.   1489.    903.    500.    264.    142.     75.     33.     33.      0.
  68          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
  69          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

  70          KK   CAH91
  71          KM        COMBINE HYDROGRAPHS CAH86 & SAH90:  Q JUST BELOW TRIBUTARY
  72          HC       2

  73          KK   RAH92
  74          KM        ROUTE HYDROGRAPH CAH91 TO CAH96
  75          RS       1    FLOW      -1
  76          RC   0.040   0.030   0.040    7000  0.0114
  77          RX     375     400     465     475     525     535     600     625
  78          RY      10       6       3       0       0       3       6      10

  79          KK   SAH95
  80          KM        SUB-BASIN AH95
  81          BA     .89
  82          LG     .15     .32    4.06     .36    2.00
  83          UI    405.    974.    486.    231.    110.     50.     23.      0.      0.      0.
  84          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

  85          KK   CAH96 SOLS WASH TRIB AH3 MOUTH TO RB TRIB
  86          KM        COMBINE HYDROGRAPHS SAH95 & RAH92:  DISCHARGE TO SOLS WASH
  87          HC       2
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 88         KK  SAH100 SOLS WASH TRIB AH4
 89         KM        SUB-BASIN AH100:  UNNAMED SOLS WASH TRIB AH4
 90         BA     .94
 91         LG     .15     .32    3.79     .30    1.30
 92         UI    216.    773.    606.    358.    206.    116.     66.     40.     18.     18.
 93         UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 94         UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 95         KK    NULL
 96         KM        COMBINE WASHES A, AH2, AH3, AH4 TO REDUCE NUMBER OF FREE HYDROGRAPHS
 97         HC       4

 98         KK  SAH120 SOLS WASH TRIB AH5
 99         KM        SUB-BASIN AH120:  UNNAMED SOLS WASH TRIB AH5
100         BA    2.89
101         LG     .15     .31    3.64     .28    5.20
102         UI    253.    954.   1675.   1425.    943.    685.    463.    336.    221.    159.
103         UI    108.     90.     35.     35.     35.     35.      0.      0.      0.      0.
104         UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

105         KK  SAH125
106         KM        SUB-BASIN AH125:  UNNAMED SOLS WASH TRIB - NOT STUDIED
107         BA     .81
108         LG     .15     .32    3.81     .31     .00
109         UI    273.    815.    476.    257.    132.     68.     35.     18.      0.      0.
110         UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

111         KK  SAJ140
112         KM        SUB-BASIN AJ140:  PONDING NEAR AT&SF RR TRACKS
113         BA     .34
114         LG     .15     .32    4.01     .35     .00
115         UI    264.    388.    142.     53.     19.     11.      0.      0.      0.      0.
116         UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

117         KK    NULL
118         KM        COMBINE PREVIOUS NULL W/AH5, UNSTUDIED, AND PONDING HYDROGRAPHS
119         HC       4

120         KK  SAI150
121         KM        SUB-BASIN SAI150:  BEGIN HARTMAN WASH
122         BA    1.98
123         LG     .15     .30    3.65     .29    7.70
124         UI    365.   1300.   1423.    806.    484.    297.    178.    106.     65.     34.
125         UI     34.      0.      0.      0.      0.      0.      0.      0.      0.      0.
126         UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

127         KK  SAI155
128         KM        SUB-BASIN SAI155:  HARTMAN WASH
129         BA    1.51
130         LG     .15     .29    3.51     .26    8.00
131         UI    350.   1253.    969.    572.    329.    186.    104.     63.     29.     29.
132         UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
133         UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 134          KK  CAI157
 135          KM        COMBINE HYDROGRAPHS SAI150 & SAI155
 136          HC       2

 137          KK  RAI159
 138          KM        ROUTE HYDROGRAPH CAI157 THROUGH AI160 TO CAI162
 139          RS       1    FLOW      -1
 140          RC   0.033   0.025   0.033 13992.0   0.010
 141          RX       0     0.5    60.5    63.5    93.5    96.5   156.5     157
 142          RY       5     3.6     3.0       0       0     3.0     3.6       5

 143          KK  SAI160
 144          KM        SUB-BASIN SAI160
 145          BA    1.92
 146          LG     .15     .31    4.02     .35    1.10
 147          UI    399.   1438.   1313.    755.    443.    252.    157.     89.     41.     35.
 148          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 149          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 150          KK  CAI162 HARTMAN WASH AT US 60
 151          KM        COMBINE HYDROGRAPHS SAI160 & RAI159 (HARTMAN WASH AT US HIGHWAY 60)
 152          HC       2

 153          KK  RAI164
 154          KM        ROUTE HYDROGRAPH CAI162 TO OUTLET OF AI165 (CAI167)
 155          RS       1    FLOW      -1
 156          RC   0.033   0.025   0.033  6019.2  0.0140
 157          RX       0     0.5    80.5    83.5   123.5   126.5   206.5     207
 158          RY       5     3.8     3.0     0.0     0.0     3.0     3.8       5

 159          KK  SAI165
 160          KM        SUB-BASIN SAI165
 161          BA     .55
 162          LG     .15     .32    3.94     .34     .00
 163          UI    392.    634.    244.     94.     35.     17.      0.      0.      0.      0.
 164          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 165          KK  CAI167 HARTMAN WASH NR SPEC PROB AREA
 166          KM        COMBINE HYDROGRAPHS SAI165 & RAI164
 167          HC       2

 168          KK  RAI169
 169          KM        ROUTE HYDROGRAPH CAI167 THROUGH AI170 TO CAI171
 170          RS       1    FLOW      -1
 171          RC   0.033   0.025   0.033 13992.0  0.0140
 172          RX       0      10     110     113     163     166     266     276
 173          RY       5       4     3.0     0.0     0.0     3.0       4       5

 174          KK  SAI170
 175          KM        SUB-BASIN SAI170
 176          BA    1.28
 177          LG     .14     .32    4.28     .42    7.20
 178          UI    151.    562.    902.    552.    392.    252.    174.    111.     75.     46.
 179          UI     31.     18.     18.     18.      0.      0.      0.      0.      0.      0.
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 180          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 181          KK  CAI171 HARTMAN WASH AT SOLS
 182          KM        COMBINE HYDROGRAPHS SAI170 & RAI169:  END HARTMAN WASH
 183          HC       2

 184          KK  SAJ175
 185          KM        SUB-BASIN AJ175: PONDING AT AT&SF TRACKS
 186          BA     .97
 187          LG     .14     .32    3.85     .32    8.10
 188          UI    504.   1090.    503.    228.    101.     43.     26.      0.      0.      0.
 189          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 190          KK    NULL
 191          KM        COMBINE HARTMAN AND PONDING W/NULL TO REDUCE NUMBER OF FREE HYDROGRAPHS
 192          HC       3

 193          KK  SAB180
 194          KM        SUB-BASIN AB180:  BEGIN TWIN PEAKS WASH
 195          BA    1.09
 196          LG     .15     .29    3.81     .25   10.90
 197          UI    365.   1093.    641.    347.    179.     93.     48.     24.      0.      0.
 198          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 199          KK  RAB182
 200          KM        ROUTE SAB180 DOWNSTREAM THROUGH SAB185 TO CAB186
 201          RS       1    FLOW      -1
 202          RC   0.040   0.025   0.040   12500  0.0120
 203          RX     400     435     475     480     520     525     565     600
 204          RY       8       6       3       0       0       3       6       8

 205          KK  SAB185
 206          KM        SUB-BASIN SAB185
 207          BA    1.31
 208          LG     .15     .30    3.51     .26    5.80
 209          UI    251.    896.    930.    528.    314.    189.    113.     67.     38.     23.
 210          UI     23.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 211          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 212          KK  CAB186 LOWER TWIN PEAKS WASH
 213          KM        COMBINE SAB185, & RAB182
 214          HC       2

 215          KK  SAB190
 216          KM        SUB-BASIN SAB190:  YUCCA TANK INFLOW
 217          BA    1.90
 218          LG     .15     .28    4.51     .23    9.70
 219          UI    555.   1806.   1142.    647.    355.    191.    106.     43.     40.      0.
 220          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 221          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 222          KK  RAB192
 223          KM        ROUTE SAB190 THROUGH SAB195 TO CAB193
 224          RS       1    FLOW      -1
 225          RC    .035    .030   0.035    6500   .0077
 226          RX     400     460     485     490     510     515     540     600
 227          RY       8       6       2       0       0       2       6       8

 228          KK  CAB193
 229          KM        COMBINE CAB186, & RAB192
 230          HC       2

 231          KK  RAB194
 232          KM        ROUTE CAB193 THRU SAB195 TO JUNCTURE NEAR TRAILER PARK CAB196
 233          RS       1    FLOW      -1
 234          RC    .035    .030    .035    9000   .0167
 235          RX     400     460     485     490     510     515     540     600
 236          RY       8       6       4       0       0       4       6       8

 237          KK  SAB195
 238          KM        SUB-BASIN SAB195
 239          BA    2.18
 240          LG     .15     .31    3.86     .32    5.20
 241          UI    432.   1547.   1527.    871.    513.    304.    183.    108.     57.     39.
 242          UI     39.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 243          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 244          KK  CAB196
 245          KM        COMBINE SAB195, & RAB194
 246          HC       2

 247          KK  SAB200
 248          KM        SUB-BASIN SAB200:  LAKE GEORGE INFLOW
 249          BA    0.81
 250          LG     .15     .29    3.58     .27    7.70
 251          UI    263.    803.    479.    262.    137.     72.     38.     18.     18.      0.
 252          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 253          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 254          KK  RAB201
 255          KM        ROUTE DOWNSTREAM FROM LAKE GEORGE TO FLYING E TANK CAB206
 256          RS       1    FLOW      -1
 257          RC    .030    .035    .030    5000    .016
 258          RX     425     450     490     495     505     510     550     575
 259          RY       6       5       2       0       0       2       5       6

 260          KK  SAB205
 261          KM        SUB-BASIN SAB205:  HOLLY WASH
 262          BA    1.25
 263          LG     .15     .29    3.54     .26    9.20
 264          UI    357.   1175.    755.    431.    237.    128.     71.     31.     26.      0.
 265          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 266          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 267          KK  CAB206
 268          KM        COMBINE RAB201 & SAB205 AT FLYING E TANK
 269          HC       2

 270          KK  RAB207
 271          KM        ROUTE CAB206 DOWNSTREAM FROM FLYING E TANK TO TRAILER PARK CAB208
 272          RS       1    FLOW      -1
 273          RC    .035    .030    .035    5000    .016
 274          RX     400     460     485     490     510     515     540     600
 275          RY       8       6       3       0       0       3       6       8

 276          KK  CAB208 FLYING E WASH ABOVE US 60
 277          KM        COMBINE CAB196, & RAB207:  FLYING E WASH ABOVE US 60
 278          HC       2

 279          KK  RAB209
 280          KM        ROUTE CAB208 THROUGH SAB210 TO CAB211
 281          RS       1    FLOW      -1
 282          RC    .040    .030    .040   10000   .0155
 283          RX     400     425     475     480     520     525     575     600
 284          RY       9       6       3       0       0       3       6       9

 285          KK  SAB210
 286          KM        SUB-BASIN SAB210
 287          BA    2.19
 288          LG     .14     .32    4.09     .37    4.00
 289          UI    227.    867.   1480.    964.    691.    463.    326.    207.    144.     96.
 290          UI     75.     30.     29.     29.      0.      0.      0.      0.      0.      0.
 291          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 292          KK  CAB211
 293          KM        COMBINE SAB210 & RAB209 AT CAB211:  FLYING E DISCHARGE TO SOLS WASH
 294          HC       2

 295          KK  SAJ215
 296          KM        SUB-BASIN AJ215:  PONDING AT AT&SF RR TRACKS
 297          BA     .47
 298          LG     .14     .32    4.04     .36    6.00
 299          UI    708.    390.     91.     23.      0.      0.      0.      0.      0.      0.
 300          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 301          ZZ
```

SCHEMATIC DIAGRAM OF STREAM NETWORK

```
INPUT
 LINE     (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

  [illegible].  (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

   25        SA
              .
              .
   32         .       SAH65
              .          .
              .          .
   40         .          .      SAH80
              .          .         V
              .          .         V
   47         .          .      RAH81
              .          .         .
              .          .         .
   53         .          .         .      SAH85
              .          .         .         .
              .          .         .         .
   60         .          .      CAH86............
              .          .         .
              .          .         .
   63         .          .         .      SAH90
              .          .         .         .
              .          .         .         .
   70         .          .      CAH91............
              .          .         V
              .          .         V
   [illegible]73         .          .      RAH92
              .          .         .
              .          .         .
   79         .          .         .      SAH95
              .          .         .         .
              .          .         .         .
   85         .          .      CAH96............
              .          .         .
              .          .         .
   88         .          .         .     SAH100
              .          .         .         .
              .          .         .         .
   95      NULL.................................
              .
              .
   98         .      SAH120
              .          .
              .          .
  105         .          .     SAH125
              .          .         .
              .          .         .
  111         .          .         .     SAJ140
              .          .         .         .
              .          .         .         .
   [illegible]7      NULL.................................
              .
              .
  120         .      SAI150
              .          .
```

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        .         .
127     .         .     SAI155
        .         .         .
        .         .         .
134     .     CAI157............
        .         V
        .         V
137     .     RAI159
        .         .
        .         .
143     .         .     SAI160
        .         .         .
        .         .         .
150     .     CAI162............
        .         V
        .         V
153     .     RAI164
        .         .
        .         .
159     .         .     SAI165
        .         .         .
        .         .         .
165     .     CAI167............
        .         V
        .         V
168     .     RAI169
        .         .
        .         .
174     .         .     SAI170
        .         .         .
        .         .         .
181     .     CAI171............
        .         .
        .         .
184     .         .     SAJ175
        .         .         .
        .         .         .
190   NULL........................
        .
        .
193     .     SAB180
        .         V
        .         V
199     .     RAB182
        .         .
        .         .
205     .         .     SAB185
        .         .         .
        .         .         .
212     .     CAB186............
        .         .
        .         .
215     .         .     SAB190
        .         .         V
        .         .         V
222     .         .     RAB192
        .         .         .
        .         .         .
228     .     CAB193............
        .         V
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            .          V
231         .      RAB194
            .          .
            .          .
237         .          .      SAB195
            .          .          .
            .          .          .
244         .      CAB196............
            .          .
            .          .
247         .          .      SAB200
            .          .          V
            .          .          V
254         .          .      RAB201
            .          .          .
            .          .          .
260         .          .          .      SAB205
            .          .          .           .
            .          .          .           .
267         .          .      CAB206............
            .          .          V
            .          .          V
270         .          .      RAB207
            .          .          .
            .          .          .
276         .      CAB208............
            .          V
            .          V
279         .      RAB209
            .          .
            .          .
285         .          .      SAB210
            .          .          .
            .          .          .
292         .      CAB211............
            .          .
            .          .
295         .          .      SAJ215
```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

```
****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*            FEBRUARY 1981             *
*          REVISED 02 AUG 88           *
*                                      *
*  RUN DATE  10/20/1992  TIME  08:37:34 *
*                                      *
****************************************
```

```
****************************************
*                                      *
*    U.S. ARMY CORPS OF ENGINEERS      *
*  THE HYDROLOGIC ENGINEERING CENTER   *
*          609 SECOND STREET           *
*       DAVIS, CALIFORNIA 95616        *
*           (916) 551-1748             *
*                                      *
****************************************
```

```
                    WICKENBURG ADMS - CONTRACT FCD 89-79
                    BLACK & VEATCH PN 17676, COE & VAN LOO PN 1197-02
                    WASHES AH (SOLS WASH UNNAMED TRIBS), AB (FLYING E),
                    AI (HARTMAN), PORTIONS OF AJ (LOCAL PONDING AT AT&SF TRACKS), AND
                    A (AMIR)
                    SCS TYPE II STORM; 2-YR, 24-HR DEPTH; PHOENIX MOUNTAIN S-GRAPH
                    AREAL REDUCTION FACTORS PER NWS HYDRO-40
                    SOLS WASH AREA

 10 IO        OUTPUT CONTROL VARIABLES
                   IPRNT          5  PRINT CONTROL
                   IPLOT          0  PLOT CONTROL
                   QSCAL         0.  HYDROGRAPH PLOT SCALE

   IT         HYDROGRAPH TIME DATA
                    NMIN         15  MINUTES IN COMPUTATION INTERVAL
                   IDATE     1    0  STARTING DATE
                   ITIME       0000  STARTING TIME
                      NQ        300  NUMBER OF HYDROGRAPH ORDINATES
                  NDDATE     4    0  ENDING DATE
                  NDTIME       0245  ENDING TIME
                   ICENT         19  CENTURY MARK

              COMPUTATION INTERVAL     .25 HOURS
                   TOTAL TIME BASE   74.75 HOURS

        ENGLISH UNITS
             DRAINAGE AREA         SQUARE MILES
             PRECIPITATION DEPTH   INCHES
             LENGTH, ELEVATION     FEET
             FLOW                  CUBIC FEET PER SECOND
             STORAGE VOLUME        ACRE-FEET
             SURFACE AREA          ACRES
             TEMPERATURE           DEGREES FAHRENHEIT

 12 JD        INDEX STORM NO. 1
                   STRM       1.60  PRECIPITATION DEPTH
                   TRDA        .01  TRANSPOSITION DRAINAGE AREA

 13 PI         PRECIPITATION PATTERN
                  .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                  .00      .00      .00      .00      .00      .00      .00      .00      .01      .01
                  .00      .00      .00      .00      .00      .00      .00      .00      .01      .01
                  .01      .01      .01      .01      .01      .01      .01      .01      .01      .01
                  .01      .01      .02      .02      .02      .02      .19      .19      .04      .04
                  .02      .02      .01      .01      .01      .01      .01      .01      .01      .01
```

.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00				

JD INDEX STORM NO. 2

STRM 1.57 PRECIPITATION DEPTH

TRDA 3.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.19	.19	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00				

19 JD INDEX STORM NO. 3

STRM 1.54 PRECIPITATION DEPTH

TRDA 10.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.19	.19	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00				

20 JD INDEX STORM NO. 4

STRM 1.47 PRECIPITATION DEPTH

TRDA 20.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.19	.19	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00				

21 JD INDEX STORM NO. 5

STRM 1.44 PRECIPITATION DEPTH

TRDA 30.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01

.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.19	.19	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00				

22 JD INDEX STORM NO. 6

STRM 1.41 PRECIPITATION DEPTH

TRDA 50.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.19	.19	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00				

23 JD INDEX STORM NO. 7

STRM 1.36 PRECIPITATION DEPTH

TRDA 100.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.19	.19	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00				

24 JD INDEX STORM NO. 8

STRM 1.33 PRECIPITATION DEPTH

TRDA 150.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.19	.19	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00				

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	SA	19.	12.50	5.	2.	1.	2.19		
+	HYDROGRAPH AT	SAH65	530.	12.75	122.	32.	11.	10.27		
+	HYDROGRAPH AT	SAH80	279.	12.50	52.	14.	5.	2.23		
+	ROUTED TO	RAH81	142.	13.25	50.	14.	5.	2.23		
+									.73	13.50
+	HYDROGRAPH AT	SAH85	87.	12.50	20.	6.	2.	2.54		
+	2 COMBINED AT	CAH86	174.	13.00	67.	20.	7.	4.77		
+	HYDROGRAPH AT	SAH90	282.	12.25	41.	12.	4.	1.52		
+	2 COMBINED AT	CAH91	338.	12.25	105.	31.	10.	6.29		
+	ROUTED TO	RAH92	261.	12.75	104.	31.	10.	6.29		
+									.59	12.75
+	HYDROGRAPH AT	SAH95	55.	12.25	7.	2.	1.	.89		
+	2 COMBINED AT	CAH96	279.	12.50	109.	32.	11.	7.18		
+	HYDROGRAPH AT	SAH100	89.	12.25	13.	3.	1.	.94		
+	4 COMBINED AT	NULL	636.	12.75	188.	54.	18.	20.58		
+	HYDROGRAPH AT	SAH120	282.	12.50	61.	17.	6.	2.89		
+	HYDROGRAPH AT	SAH125	77.	12.25	9.	2.	1.	.81		
+	HYDROGRAPH AT	SAJ140	22.	12.25	2.	1.	0.	.34		
	4 COMBINED AT									

+		NULL	782.	12.75	229.	66.	22.	24.62	
	HYDROGRAPH AT								
+		SAI150	247.	12.25	46.	13.	4.	1.98	
	HYDROGRAPH AT								
+		SAI155	266.	12.25	44.	12.	4.	1.51	
	2 COMBINED AT								
+		CAI157	505.	12.25	89.	26.	9.	3.49	
	ROUTED TO								
+		RAI159	335.	12.75	87.	25.	9.	3.49	
+									.92 12.75
	HYDROGRAPH AT								
+		SAI160	96.	12.25	15.	4.	1.	1.92	
	2 COMBINED AT								
+		CAI162	400.	12.50	99.	29.	10.	5.41	
	ROUTED TO								
+		RAI164	382.	12.75	98.	29.	10.	5.41	
+									.67 13.00
	HYDROGRAPH AT								
+		SAI165	42.	12.25	4.	1.	0.	.55	
	2 COMBINED AT								
+		CAI167	384.	12.75	101.	29.	10.	5.96	
	ROUTED TO								
+		RAI169	283.	13.25	99.	29.	10.	5.96	
+									.46 13.50
	HYDROGRAPH AT								
+		SAI170	45.	12.50	12.	4.	1.	1.28	
	2 COMBINED AT								
+		CAI171	297.	13.25	108.	33.	11.	7.24	
	HYDROGRAPH AT								
+		SAJ175	128.	12.25	18.	6.	2.	.97	
	3 COMBINED AT								
+		NULL	855.	12.75	300.	90.	30.	32.83	
	HYDROGRAPH AT								
+		SAB180	221.	12.25	34.	10.	3.	1.09	
	ROUTED TO								
+		RAB182	118.	12.50	34.	10.	3.	1.09	
+									.36 12.75
	HYDROGRAPH AT								
		SAB185	197.	12.25	34.	9.	3.	1.31	
	2 COMBINED AT								
+		CAB186	287.	12.50	67.	19.	6.	2.40	

```
        HYDROGRAPH AT
+                   SAB190     360.  12.25      56.      16.      5.     1.90
        ROUTED TO
                    RAB192     280.  12.50      56.      16.      5.     1.90
                                                                             1.28     12.50
        2 COMBINED AT
+                   CAB193     553.  12.50     121.      35.     12.     4.30
        ROUTED TO
+                   RAB194     481.  12.75     120.      35.     12.     4.30
+                                                                             1.44     12.75
        HYDROGRAPH AT
+                   SAB195     191.  12.25      34.      10.      3.     2.18
        2 COMBINED AT
+                   CAB196     612.  12.50     150.      44.     15.     6.48
        HYDROGRAPH AT
+                   SAB200     148.  12.25      22.       6.      2.      .81
        ROUTED TO
+                   RAB201     118.  12.50      22.       6.      2.      .81
+                                                                              .98     12.50
        HYDROGRAPH AT
+                   SAB205     239.  12.25      37.      11.      4.     1.25
        2 COMBINED AT
+                   CAB206     345.  12.25      59.      17.      6.     2.06
        ROUTED TO
+                   RAB207     308.  12.50      59.      17.      6.     2.06
+                                                                             1.11     12.50
        2 COMBINED AT
+                   CAB208     889.  12.50     203.      59.     20.     8.54
        ROUTED TO
+                   RAB209     777.  12.75     202.      59.     20.     8.54
+                                                                             1.23     13.00
        HYDROGRAPH AT
+                   SAB210      91.  12.50      19.       6.      2.     2.19
        2 COMBINED AT
+                   CAB211     806.  12.75     214.      63.     21.    10.73
        HYDROGRAPH AT
+                   SAJ215      54.  12.00       6.       2.      1.      .47

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

HEC-1 OUTPUT
SOLS WASH AREA
10-YEAR RETURN PERIOD

```
*****************************************
*                                       *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *
*            FEBRUARY 1981              *
*          REVISED 02 AUG 88            *
*                                       *
*  RUN DATE  10/20/1992  TIME  08:16:15 *
*                                       *
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****************************************
*                                      *
*    U.S. ARMY CORPS OF ENGINEERS      *
*  THE HYDROLOGIC ENGINEERING CENTER   *
*          609 SECOND STREET           *
*       DAVIS, CALIFORNIA 95616        *
*           (916) 551-1748             *
*                                      *
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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

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

  1           ID        WICKENBURG ADMS - CONTRACT FCD 89-79
  2           ID        BLACK & VEATCH PN 17676, COE & VAN LOO PN 1197-02
  3           ID        WASHES AH (SOLS WASH UNNAMED TRIBS), AB (FLYING E),
  4           ID        AI (HARTMAN), PORTIONS OF AJ (LOCAL PONDING AT AT&SF TRACKS), AND
  5           ID        A (AMIR)
  6           ID        SCS TYPE II STORM; 10-YR, 24-HR DEPTH; PHOENIX MOUNTAIN S-GRAPH
  7           ID        AREAL REDUCTION FACTORS PER NWS HYDRO-40
  8           ID        SOLS WASH AREA
              *DIAGRAM
  9           IT     15                    300
 10           IO      5
 11           IN     30
 12           JD    2.7     .01
 13           PC   .000    .005    .011    .016    .022    .028    .035    .041    .048    .056
 14           PC   .068    .071    .080    .089    .098    .109    .120    .133    .147    .163
 15           PC   .181    .204    .235    .283    .663    .735    .772    .799    .820    .838
 16           PC   .854    .868    .880    .891    .902    .912    .921    .929    .937    .945
 17           PC   .952    .959    .965    .972    .978    .984    .989    .995   1.000
 18           JD   2.65     3.0
 19           JD   2.59    10.0
 20           JD   2.48    20.0
 21           JD   2.43    30.0
 22           JD   2.38    50.0
 23           JD   2.30   100.0
 24           JD   2.24   150.0

 25           KK     SA AMIR WASH
 26           KM       SUB-BASIN A:  AMIR WASH
 27           BA   2.19
 28           LG    .15     .34    4.25     .42    1.40
 29           UI   279.   1025.   1571.    936.    654.    417.    274.    180.    115.     81.
 30           UI    37.     32.     32.      0.      0.      0.      0.      0.      0.      0.
 31           UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 32           KK   SAH65 UNNAMED SOLS WASH TRIB AH2
 33           KM       SUB-BASIN AH65:  UNNAMED SOLS WASH TRIB AH2
 34           BA  10.27
 35           LG    .35     .30    3.51     .25    1.30
 36           UI   511.   1918.   3474.   5192.   3753.   2768.   2209.   1652.   1241.    976.
 37           UI   690.    553.    392.    294.    250.    163.     98.     98.     98.     98.
 38           UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 39           UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 40           KK   SAH80 SOLS WASH TRIB AH3 ABOVE US 60
 41           KM       SUB-BASIN AH80:  BEGIN UNNAMED SOLS WASH TRIB AH3
 42           BA   2.23
 43           LG    .15     .29    3.59     .27    4.50
 44           UI   318.   1151.   1630.    943.    629.    407.    246.    163.    102.     67.
 45           UI    34.     34.      0.      0.      0.      0.      0.      0.      0.      0.
 46           UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 47           KK   RAH81
 48           KM        ROUTE SAH80 TO CAH86
 49           RS       2    FLOW      -1
 50           RC   0.035   0.030   0.035   22500  0.0076
 51           RX     200     435     485     490     510     515     565     700
 52           RY       8       7       5       0       0       5       7       8

 53           KK   SAH85
 54           KM        SUB-BASIN AH85
 55           BA    2.54
 56           LG     .35     .32    3.85     .32    3.90
 57           UI    237.    900.   1591.   1179.    819.    578.    397.    270.    192.    129.
 58           UI     83.     62.     32.     32.     32.      0.      0.      0.      0.      0.
 59           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 60           KK   CAH86 SOLS WASH TRIB AH3 FROM SMALL RB TRIBUTARY TO HWY 60
 61           KM        COMBINE RAH81 AND SAH85:  Q ABOVE TRIBUTARY, BELOW HWY 60 BRIDGE
 62           HC       2

 63           KK   SAH90
 64           KM        SUB-BASIN AH90: RIGHT BANK TRIB TO AH3
 65           BA    1.52
 66           LG     .15     .30    3.87     .24    6.50
 67           UI    478.   1489.    903.    500.    264.    142.     75.     33.     33.      0.
 68           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 69           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 70           KK   CAH91
 71           KM        COMBINE HYDROGRAPHS CAH86 & SAH90:  Q JUST BELOW TRIBUTARY
 72           HC       2

 73           KK   RAH92
 74           KM        ROUTE HYDROGRAPH CAH91 TO CAH96
 75           RS       1    FLOW      -1
 76           RC   0.040   0.030   0.040    7000  0.0114
 77           RX     375     400     465     475     525     535     600     625
 78           RY      10       6       3       0       0       3       6      10

 79           KK   SAH95
 80           KM        SUB-BASIN AH95
 81           BA     .89
 82           LG     .15     .32    4.06     .36    2.00
 83           UI    405.    974.    486.    231.    110.     50.     23.      0.      0.      0.
 84           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 85           KK   CAH96 SOLS WASH TRIB AH3 MOUTH TO RB TRIB
 86           KM        COMBINE HYDROGRAPHS SAH95 & RAH92:  DISCHARGE TO SOLS WASH
 87           HC       2
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 88           KK  SAH100 SOLS WASH TRIB AH4
 89           KM        SUB-BASIN AH100:  UNNAMED SOLS WASH TRIB AH4
 90           BA     .94
 91           LG     .15     .32    3.79     .30    1.30
 92           UI    216.    773.    606.    358.    206.    116.     66.     40.     18.     18.
 93           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 94           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 95           KK    NULL
 96           KM        COMBINE WASHES A, AH2, AH3, AH4 TO REDUCE NUMBER OF FREE HYDROGRAPHS
 97           HC       4

 98           KK  SAH120 SOLS WASH TRIB AH5
 99           KM        SUB-BASIN AH120:  UNNAMED SOLS WASH TRIB AH5
100           BA    2.89
101           LG     .15     .31    3.64     .28    5.20
102           UI    253.    954.   1675.   1425.    943.    685.    463.    336.    221.    159.
103           UI    108.     90.     35.     35.     35.     35.      0.      0.      0.      0.
104           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

105           KK  SAH125
106           KM        SUB-BASIN AH125:  UNNAMED SOLS WASH TRIB - NOT STUDIED
107           BA     .81
108           LG     .15     .32    3.81     .31     .00
109           UI    273.    815.    476.    257.    132.     68.     35.     18.      0.      0.
110           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

111           KK  SAJ140
112           KM        SUB-BASIN AJ140:  PONDING NEAR AT&SF RR TRACKS
113           BA     .34
114           LG     .15     .32    4.01     .35     .00
115           UI    264.    388.    142.     53.     19.     11.      0.      0.      0.      0.
116           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

117           KK    NULL
118           KM        COMBINE PREVIOUS NULL W/AH5, UNSTUDIED, AND PONDING HYDROGRAPHS
119           HC       4

120           KK  SAI150
121           KM        SUB-BASIN SAI150:  BEGIN HARTMAN WASH
122           BA    1.98
123           LG     .15     .30    3.65     .29    7.70
124           UI    365.   1300.   1423.    806.    484.    297.    178.    106.     65.     34.
125           UI     34.      0.      0.      0.      0.      0.      0.      0.      0.      0.
126           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

127           KK  SAI155
128           KM        SUB-BASIN SAI155:  HARTMAN WASH
129           BA    1.51
130           LG     .15     .29    3.51     .26    8.00
131           UI    350.   1253.    969.    572.    329.    186.    104.     63.     29.     29.
132           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
133           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 134          KK  CAI157
 135          KM        COMBINE HYDROGRAPHS SAI150 & SAI155
 136          HC       2

 137          KK  RAI159
 138          KM        ROUTE HYDROGRAPH CAI157 THROUGH AI160 TO CAI162
 139          RS       1    FLOW      -1
 140          RC   0.033   0.025   0.033 13992.0   0.010
 141          RX       0     0.5    60.5    63.5    93.5    96.5   156.5     157
 142          RY       5     3.6     3.0       0       0     3.0     3.6       5

 143          KK  SAI160
 144          KM        SUB-BASIN SAI160
 145          BA    1.92
 146          LG     .15     .31    4.02     .35    1.10
 147          UI    399.   1438.   1313.    755.    443.    252.    157.     89.     41.     35.
 148          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 149          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 150          KK  CAI162 HARTMAN WASH AT US 60
 151          KM        COMBINE HYDROGRAPHS SAI160 & RAI159 (HARTMAN WASH AT US HIGHWAY 60)
 152          HC       2

 153          KK  RAI164
 154          KM        ROUTE HYDROGRAPH CAI162 TO OUTLET OF AI165 (CAI167)
 155          RS       1    FLOW      -1
 156          RC   0.033   0.025   0.033  6019.2  0.0140
 157          RX       0     0.5    80.5    83.5   123.5   126.5   206.5     207
 158          RY       5     3.8     3.0     0.0     0.0     3.0     3.8       5

 159          KK  SAI165
 160          KM        SUB-BASIN SAI165
 161          BA     .55
 162          LG     .15     .32    3.94     .34     .00
 163          UI    392.    634.    244.     94.     35.     17.      0.      0.      0.      0.
 164          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 165          KK  CAI167 HARTMAN WASH NR SPEC PROB AREA
 166          KM        COMBINE HYDROGRAPHS SAI165 & RAI164
 167          HC       2

 168          KK  RAI169
 169          KM        ROUTE HYDROGRAPH CAI167 THROUGH AI170 TO CAI171
 170          RS       1    FLOW      -1
 171          RC   0.033   0.025   0.033 13992.0  0.0140
 172          RX       0      10     110     113     163     166     266     276
 173          RY       5       4     3.0     0.0     0.0     3.0       4       5

 174          KK  SAI170
 175          KM        SUB-BASIN SAI170
 176          BA    1.28
 177          LG     .14     .32    4.28     .42    7.20
 178          UI    151.    562.    902.    552.    392.    252.    174.    111.     75.     46.
 179          UI     31.     18.     18.     18.      0.      0.      0.      0.      0.      0.
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 180          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 181          KK  CAI171 HARTMAN WASH AT SOLS
 182          KM        COMBINE HYDROGRAPHS SAI170 & RAI169:  END HARTMAN WASH
 183          HC       2

 184          KK  SAJ175
 185          KM        SUB-BASIN AJ175: PONDING AT AT&SF TRACKS
 186          BA     .97
 187          LG     .14     .32    3.85     .32    8.10
 188          UI    504.   1090.    503.    228.    101.     43.     26.      0.      0.      0.
 189          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 190          KK    NULL
 191          KM        COMBINE HARTMAN AND PONDING W/NULL TO REDUCE NUMBER OF FREE HYDROGRAPHS
 192          HC       3

 193          KK  SAB180
 194          KM        SUB-BASIN AB180:  BEGIN TWIN PEAKS WASH
 195          BA    1.09
 196          LG     .15     .29    3.81     .25   10.90
 197          UI    365.   1093.    641.    347.    179.     93.     48.     24.      0.      0.
 198          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 199          KK  RAB182
 200          KM        ROUTE SAB180 DOWNSTREAM THROUGH SAB185 TO CAB186
 201          RS       1    FLOW      -1
 202          RC   0.040   0.025   0.040   12500  0.0120
 203          RX     400     435     475     480     520     525     565     600
 204          RY       8       6       3       0       0       3       6       8

 205          KK  SAB185
 206          KM        SUB-BASIN SAB185
 207          BA    1.31
 208          LG     .15     .30    3.51     .26    5.80
 209          UI    251.    896.    930.    528.    314.    189.    113.     67.     38.     23.
 210          UI     23.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 211          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 212          KK  CAB186 LOWER TWIN PEAKS WASH
 213          KM        COMBINE SAB185, & RAB182
 214          HC       2

 215          KK  SAB190
 216          KM        SUB-BASIN SAB190:  YUCCA TANK INFLOW
 217          BA    1.90
 218          LG     .15     .28    4.51     .23    9.70
 219          UI    555.   1806.   1142.    647.    355.    191.    106.     43.     40.      0.
 220          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 221          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 222          KK  RAB192
 223          KM        ROUTE SAB190 THROUGH SAB195 TO CAB193
 224          RS       1    FLOW      -1
 225          RC    .035    .030   0.035    6500   .0077
 226          RX     400     460     485     490     510     515     540     600
 227          RY       8       6       2       0       0       2       6       8

 228          KK  CAB193
 229          KM        COMBINE CAB186, & RAB192
 230          HC       2

 231          KK  RAB194
 232          KM        ROUTE CAB193 THRU SAB195 TO JUNCTURE NEAR TRAILER PARK CAB196
 233          RS       1    FLOW      -1
 234          RC    .035    .030    .035    9000   .0167
 235          RX     400     460     485     490     510     515     540     600
 236          RY       8       6       4       0       0       4       6       8

 237          KK  SAB195
 238          KM        SUB-BASIN SAB195
 239          BA    2.18
 240          LG     .15     .31    3.86     .32    5.20
 241          UI    432.   1547.   1527.    871.    513.    304.    183.    108.     57.     39.
 242          UI     39.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 243          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 244          KK  CAB196
 245          KM        COMBINE SAB195, & RAB194
 246          HC       2

 247          KK  SAB200
 248          KM        SUB-BASIN SAB200:  LAKE GEORGE INFLOW
 249          BA    0.81
 250          LG     .15     .29    3.58     .27    7.70
 251          UI    263.    803.    479.    262.    137.     72.     38.     18.     18.      0.
 252          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 253          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 254          KK  RAB201
 255          KM        ROUTE DOWNSTREAM FROM LAKE GEORGE TO FLYING E TANK CAB206
 256          RS       1    FLOW      -1
 257          RC    .030    .035    .030    5000    .016
 258          RX     425     450     490     495     505     510     550     575
 259          RY       6       5       2       0       0       2       5       6

 260          KK  SAB205
 261          KM        SUB-BASIN SAB205:  HOLLY WASH
 262          BA    1.25
 263          LG     .15     .29    3.54     .26    9.20
 264          UI    357.   1175.    755.    431.    237.    128.     71.     31.     26.      0.
 265          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 266          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 267          KK  CAB206
 268          KM        COMBINE RAB201 & SAB205 AT FLYING E TANK
 269          HC       2

 270          KK  RAB207
 271          KM        ROUTE CAB206 DOWNSTREAM FROM FLYING E TANK TO TRAILER PARK CAB208
 272          RS       1    FLOW      -1
 273          RC    .035    .030    .035    5000    .016
 274          RX     400     460     485     490     510     515     540     600
 275          RY       8       6       3       0       0       3       6       8

 276          KK  CAB208 FLYING E WASH ABOVE US 60
 277          KM        COMBINE CAB196, & RAB207:  FLYING E WASH ABOVE US 60
 278          HC       2

 279          KK  RAB209
 280          KM        ROUTE CAB208 THROUGH SAB210 TO CAB211
 281          RS       1    FLOW      -1
 282          RC    .040    .030    .040   10000   .0155
 283          RX     400     425     475     480     520     525     575     600
 284          RY       9       6       3       0       0       3       6       9

 285          KK  SAB210
 286          KM        SUB-BASIN SAB210
 287          BA    2.19
 288          LG     .14     .32    4.09     .37    4.00
 289          UI    227.    867.   1480.    964.    691.    463.    326.    207.    144.     96.
 290          UI     75.     30.     29.     29.      0.      0.      0.      0.      0.      0.
 291          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 292          KK  CAB211
 293          KM        COMBINE SAB210 & RAB209 AT CAB211:  FLYING E DISCHARGE TO SOLS WASH
 294          HC       2

 295          KK  SAJ215
 296          KM        SUB-BASIN AJ215:  PONDING AT AT&SF RR TRACKS
 297          BA     .47
 298          LG     .14     .32    4.04     .36    6.00
 299          UI    708.    390.     91.     23.      0.      0.      0.      0.      0.      0.
 300          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 301          ZZ
```

SCHEMATIC DIAGRAM OF STREAM NETWORK

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

 25         SA
             .
             .
 32          .       SAH65
             .          .
             .          .
 40          .          .      SAH80
             .          .         V
             .          .         V
 47          .          .      RAH81
             .          .         .
             .          .         .
 53          .          .         .      SAH85
             .          .         .         .
             .          .         .         .
 60          .          .      CAH86............
             .          .         .
             .          .         .
 63          .          .         .      SAH90
             .          .         .         .
             .          .         .         .
 70          .          .      CAH91............
             .          .         V
             .          .         V
 73          .          .      RAH92
             .          .         .
             .          .         .
 79          .          .         .      SAH95
             .          .         .         .
             .          .         .         .
 85          .          .      CAH96............
             .          .         .
             .          .         .
 88          .          .         .     SAH100
             .          .         .         .
             .          .         .         .
 95       NULL.................................
             .
             .
 98          .      SAH120
             .          .
             .          .
105          .          .     SAH125
             .          .         .
             .          .         .
111          .          .         .     SAJ140
             .          .         .         .
             .          .         .         .
117       NULL.................................
             .
             .
120          .      SAI150
             .          .
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          .          .
127       .          .      SAI155
          .          .          .
          .          .          .
          .     CAI157............
          .          V
          .          V
137       .     RAI159
          .          .
          .          .
143       .          .      SAI160
          .          .          .
          .          .          .
150       .     CAI162............
          .          V
          .          V
153       .     RAI164
          .          .
          .          .
159       .          .      SAI165
          .          .          .
          .          .          .
165       .     CAI167............
          .          V
          .          V
168       .     RAI169
          .          .
          .          .
174       .          .      SAI170
          .          .          .
          .          .          .
181       .     CAI171............
          .          .
          .          .
184       .          .      SAJ175
          .          .          .
          .          .          .
190       NULL........................
          .
          .
193       .     SAB180
          .          V
          .          V
199       .     RAB182
          .          .
          .          .
205       .          .      SAB185
          .          .          .
          .          .          .
212       .     CAB186............
          .          .
          .          .
215       .          .      SAB190
          .          .          V
          .          .          V
          .          .      RAB192
          .          .          .
          .          .          .
228       .     CAB193............
          .          V
```

```
          .        V
231       .    RAB194
          .        .
          .        .
237       .        .     SAB195
          .        .        .
          .        .        .
244       .    CAB196............
          .        .
          .        .
247       .        .     SAB200
          .        .        V
          .        .        V
254       .        .     RAB201
          .        .        .
          .        .        .
260       .        .        .     SAB205
          .        .        .        .
          .        .        .        .
267       .        .     CAB206............
          .        .        V
          .        .        V
270       .        .     RAB207
          .        .        .
          .        .        .
276       .    CAB208............
          .        V
          .        V
279       .    RAB209
          .        .
          .        .
285       .        .     SAB210
          .        .        .
          .        .        .
292       .    CAB211............
          .        .
          .        .
295       .        .     SAJ215
```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

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*****************************************
*                                       *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *
*            FEBRUARY 1981              *
*          REVISED 02 AUG 88            *
*                                       *
*  RUN DATE  10/20/1992  TIME  08:16:15 *
*                                       *
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****************************************
*                                      *
*    U.S. ARMY CORPS OF ENGINEERS      *
*  THE HYDROLOGIC ENGINEERING CENTER   *
*          609 SECOND STREET           *
*       DAVIS, CALIFORNIA 95616        *
*          (916) 551-1748              *
*                                      *
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                    WICKENBURG ADMS - CONTRACT FCD 89-79
                    BLACK & VEATCH PN 17676, COE & VAN LOO PN 1197-02
                    WASHES AH (SOLS WASH UNNAMED TRIBS), AB (FLYING E),
                    AI (HARTMAN), PORTIONS OF AJ (LOCAL PONDING AT AT&SF TRACKS), AND
                    A (AMIR)
                    SCS TYPE II STORM; 10-YR, 24-HR DEPTH; PHOENIX MOUNTAIN S-GRAPH
                    AREAL REDUCTION FACTORS PER NWS HYDRO-40
                    SOLS WASH AREA

 10 IO        OUTPUT CONTROL VARIABLES
                    IPRNT          5  PRINT CONTROL
                    IPLOT          0  PLOT CONTROL
                    QSCAL         0.  HYDROGRAPH PLOT SCALE

    IT        HYDROGRAPH TIME DATA
                     NMIN         15  MINUTES IN COMPUTATION INTERVAL
                    IDATE      1    0  STARTING DATE
                    ITIME       0000  STARTING TIME
                       NQ        300  NUMBER OF HYDROGRAPH ORDINATES
                   NDDATE      4    0  ENDING DATE
                   NDTIME       0245  ENDING TIME
                    ICENT         19  CENTURY MARK

              COMPUTATION INTERVAL     .25 HOURS
                   TOTAL TIME BASE   74.75 HOURS

         ENGLISH UNITS
              DRAINAGE AREA         SQUARE MILES
              PRECIPITATION DEPTH   INCHES
              LENGTH, ELEVATION     FEET
              FLOW                  CUBIC FEET PER SECOND
              STORAGE VOLUME        ACRE-FEET
              SURFACE AREA          ACRES
              TEMPERATURE           DEGREES FAHRENHEIT

 12 JD        INDEX STORM NO. 1
                    STRM       2.70  PRECIPITATION DEPTH
                    TRDA        .01  TRANSPOSITION DRAINAGE AREA

 13 PI          PRECIPITATION PATTERN
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .01      .01
                   .00      .00      .00      .00      .00      .00      .00      .00      .01      .01
                   .01      .01      .01      .01      .01      .01      .01      .01      .01      .01
                   .01      .01      .02      .02      .02      .02      .19      .19      .04      .04
                   .02      .02      .01      .01      .01      .01      .01      .01      .01      .01
```

.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00				

8 JD INDEX STORM NO. 2

STRM 2.65 PRECIPITATION DEPTH

TRDA 3.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.19	.19	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00				

19 JD INDEX STORM NO. 3

STRM 2.59 PRECIPITATION DEPTH

TRDA 10.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.19	.19	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00				

20 JD INDEX STORM NO. 4

STRM 2.48 PRECIPITATION DEPTH

TRDA 20.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.19	.19	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00				

21 JD INDEX STORM NO. 5

STRM 2.43 PRECIPITATION DEPTH

TRDA 30.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01

.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.19	.19	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00				

22 JD INDEX STORM NO. 6

STRM 2.38 PRECIPITATION DEPTH

TRDA 50.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.19	.19	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00				

23 JD INDEX STORM NO. 7

STRM 2.30 PRECIPITATION DEPTH

TRDA 100.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.19	.19	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00				

24 JD INDEX STORM NO. 8

STRM 2.24 PRECIPITATION DEPTH

TRDA 150.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.19	.19	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00				

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	SA	593.	12.50	110.	28.	9.	2.19		
+	HYDROGRAPH AT	SAH65	2838.	12.75	701.	178.	59.	10.27		
+	HYDROGRAPH AT	SAH80	979.	12.25	177.	46.	15.	2.23		
+	ROUTED TO	RAH81	651.	13.00	174.	46.	15.	2.23		
+									2.73	13.00
+	HYDROGRAPH AT	SAH85	785.	12.50	159.	42.	14.	2.54		
+	2 COMBINED AT	CAH86	1177.	12.75	326.	86.	29.	4.77		
+	HYDROGRAPH AT	SAH90	877.	12.25	127.	34.	11.	1.52		
+	2 COMBINED AT	CAH91	1646.	12.50	445.	118.	40.	6.29		
+	ROUTED TO	RAH92	1606.	12.50	444.	118.	40.	6.29		
+									2.25	12.50
+	HYDROGRAPH AT	SAH95	417.	12.25	55.	14.	5.	.89		
+	2 COMBINED AT	CAH96	1795.	12.50	494.	131.	44.	7.18		
+	HYDROGRAPH AT	SAH100	441.	12.25	65.	17.	6.	.94		
+	4 COMBINED AT	NULL	4808.	12.50	1234.	319.	107.	20.58		
+	HYDROGRAPH AT	SAH120	1070.	12.50	225.	59.	20.	2.89		
+	HYDROGRAPH AT	SAH125	404.	12.25	53.	13.	4.	.81		
+	HYDROGRAPH AT	SAJ140	182.	12.00	21.	5.	2.	.34		
	4 COMBINED AT									

+		NULL	5885.	12.50	1468.	381.	127.	24.62	
	HYDROGRAPH AT								
+		SAI150	942.	12.25	159.	43.	14.	1.98	
	HYDROGRAPH AT								
+		SAI155	819.	12.25	129.	35.	12.	1.51	
	2 COMBINED AT								
+		CAI157	1747.	12.25	286.	77.	26.	3.49	
	ROUTED TO								
+		RAI159	1323.	12.50	284.	77.	26.	3.49	
+									2.85 12.50
	HYDROGRAPH AT								
+		SAI160	789.	12.25	119.	30.	10.	1.92	
	2 COMBINED AT								
+		CAI162	1897.	12.50	396.	105.	35.	5.41	
	ROUTED TO								
+		RAI164	1921.	12.50	396.	105.	35.	5.41	
+									2.62 12.50
	HYDROGRAPH AT								
+		SAI165	293.	12.00	34.	9.	3.	.55	
	2 COMBINED AT								
+		CAI167	2013.	12.50	427.	113.	38.	5.96	
	ROUTED TO								
+		RAI169	1785.	12.75	424.	113.	38.	5.96	
+									2.14 12.75
	HYDROGRAPH AT								
+		SAI170	387.	12.50	79.	22.	7.	1.28	
	2 COMBINED AT								
+		CAI171	2018.	12.75	495.	133.	44.	7.24	
	HYDROGRAPH AT								
+		SAJ175	523.	12.25	74.	20.	7.	.97	
	3 COMBINED AT								
+		NULL	7445.	12.50	1913.	502.	168.	32.83	
	HYDROGRAPH AT								
+		SAB180	650.	12.25	96.	27.	9.	1.09	
	ROUTED TO								
+		RAB182	458.	12.50	96.	27.	9.	1.09	
+									1.13 12.50
	HYDROGRAPH AT								
+		SAB185	659.	12.25	108.	28.	10.	1.31	
	2 COMBINED AT								
+		CAB186	1022.	12.25	203.	55.	18.	2.40	

	HYDROGRAPH AT								
+		SAB190	1095.	12.25	166.	45.	15.	1.90	
	ROUTED TO								
		RAB192	891.	12.25	165.	45.	15.	1.90	
								2.98	12.50
	2 COMBINED AT								
+		CAB193	1886.	12.25	363.	99.	33.	4.30	
	ROUTED TO								
+		RAB194	1856.	12.50	363.	99.	33.	4.30	
+								4.03	12.50
	HYDROGRAPH AT								
+		SAB195	974.	12.25	158.	42.	14.	2.18	
	2 COMBINED AT								
+		CAB196	2587.	12.50	511.	138.	46.	6.48	
	HYDROGRAPH AT								
+		SAB200	466.	12.25	68.	18.	6.	.81	
	ROUTED TO								
+		RAB201	411.	12.25	68.	18.	6.	.81	
+								2.36	12.25
	HYDROGRAPH AT								
+		SAB205	716.	12.25	108.	29.	10.	1.25	
	2 COMBINED AT								
+		CAB206	1124.	12.25	176.	48.	16.	2.06	
	ROUTED TO								
+		RAB207	1031.	12.25	176.	48.	16.	2.06	
+								2.80	12.25
	2 COMBINED AT								
+		CAB208	3494.	12.50	676.	183.	61.	8.54	
	ROUTED TO								
+		RAB209	3159.	12.50	675.	183.	61.	8.54	
+								3.72	12.50
	HYDROGRAPH AT								
+		SAB210	695.	12.50	138.	36.	12.	2.19	
	2 COMBINED AT								
+		CAB211	3771.	12.50	796.	215.	72.	10.73	
	HYDROGRAPH AT								
+		SAJ215	326.	12.00	32.	9.	3.	.47	

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

HEC-1 OUTPUT
SOLS WASH AREA
25-YEAR RETURN PERIOD

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****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*            FEBRUARY 1981             *
*           REVISED 02 AUG 88          *
*                                      *
* RUN DATE  10/20/1992  TIME  08:36:05 *
*                                      *
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*                                      *
*    U.S. ARMY CORPS OF ENGINEERS      *
*  THE HYDROLOGIC ENGINEERING CENTER   *
*          609 SECOND STREET           *
*       DAVIS, CALIFORNIA 95616        *
*           (916) 551-1748             *
*                                      *
****************************************
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X     X  XXXXXXX   XXXXX          X
X     X  X        X     X        XX
X     X  X        X              X
XXXXXXX  XXXX     X       XXXXX  X
X     X  X        X              X
X     X  X        X     X        X
X     X  XXXXXXX   XXXXX         XXX
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THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

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

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

  1           ID        WICKENBURG ADMS - CONTRACT FCD 89-79
  2           ID        BLACK & VEATCH PN 17676, COE & VAN LOO PN 1197-02
  3           ID        WASHES AH (SOLS WASH UNNAMED TRIBS), AB (FLYING E),
  4           ID        AI (HARTMAN), PORTIONS OF AJ (LOCAL PONDING AT AT&SF TRACKS), AND
  5           ID        A (AMIR)
  6           ID        SCS TYPE II STORM; 25-YR, 24-HR DEPTH; PHOENIX MOUNTAIN S-GRAPH
  7           ID        AREAL REDUCTION FACTORS PER NWS HYDRO-40
  8           ID        SOLS WASH AREA
              *DIAGRAM
  9           IT      15                    300
 10           IO       5
 11           IN      30
 12           JD     3.3     .01
 13           PC    .000    .005    .011    .016    .022    .028    .035    .041    .048    .056
 14           PC    .068    .071    .080    .089    .098    .109    .120    .133    .147    .163
 15           PC    .181    .204    .235    .283    .663    .735    .772    .799    .820    .838
 16           PC    .854    .868    .880    .891    .902    .912    .921    .929    .937    .945
 17           PC    .952    .959    .965    .972    .978    .984    .989    .995   1.000
 18           JD    3.23     3.0
 19           JD    3.17    10.0
 20           JD    3.04    20.0
 21           JD    2.97    30.0
 22           JD    2.90    50.0
 23           JD    2.81   100.0
 24           JD    2.74   150.0

 25           KK      SA AMIR WASH
 26           KM        SUB-BASIN A:  AMIR WASH
 27           BA    2.19
 28           LG     .15     .34    4.25     .42    1.40
 29           UI    279.   1025.   1571.    936.    654.    417.    274.    180.    115.     81.
 30           UI     37.     32.     32.      0.      0.      0.      0.      0.      0.      0.
 31           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 32           KK   SAH65 UNNAMED SOLS WASH TRIB AH2
 33           KM        SUB-BASIN AH65:  UNNAMED SOLS WASH TRIB AH2
 34           BA   10.27
 35           LG     .35     .30    3.51     .25    1.30
 36           UI    511.   1918.   3474.   5192.   3753.   2768.   2209.   1652.   1241.    976.
 37           UI    690.    553.    392.    294.    250.    163.     98.     98.     98.     98.
 38           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 39           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 40           KK   SAH80 SOLS WASH TRIB AH3 ABOVE US 60
 41           KM        SUB-BASIN AH80:  BEGIN UNNAMED SOLS WASH TRIB AH3
 42           BA    2.23
 43           LG     .15     .29    3.59     .27    4.50
 44           UI    318.   1151.   1630.    943.    629.    407.    246.    163.    102.     67.
 45           UI     34.     34.      0.      0.      0.      0.      0.      0.      0.      0.
 46           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 47           KK   RAH81
 48           KM        ROUTE SAH80 TO CAH86
 49           RS       2    FLOW      -1
 50           RC   0.035   0.030   0.035   22500  0.0076
 51           RX     200     435     485     490     510     515     565     700
 52           RY       8       7       5       0       0       5       7       8

 53           KK   SAH85
 54           KM        SUB-BASIN AH85
 55           BA    2.54
 56           LG     .35     .32    3.85     .32    3.90
 57           UI    237.    900.   1591.   1179.    819.    578.    397.    270.    192.    129.
 58           UI     83.     62.     32.     32.     32.      0.      0.      0.      0.      0.
 59           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 60           KK   CAH86 SOLS WASH TRIB AH3 FROM SMALL RB TRIBUTARY TO HWY 60
 61           KM        COMBINE RAH81 AND SAH85:  Q ABOVE TRIBUTARY, BELOW HWY 60 BRIDGE
 62           HC       2

 63           KK   SAH90
 64           KM        SUB-BASIN AH90: RIGHT BANK TRIB TO AH3
 65           BA    1.52
 66           LG     .15     .30    3.87     .24    6.50
 67           UI    478.   1489.    903.    500.    264.    142.     75.     33.     33.      0.
 68           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 69           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 70           KK   CAH91
 71           KM        COMBINE HYDROGRAPHS CAH86 & SAH90:  Q JUST BELOW TRIBUTARY
 72           HC       2

 73           KK   RAH92
 74           KM        ROUTE HYDROGRAPH CAH91 TO CAH96
 75           RS       1    FLOW      -1
 76           RC   0.040   0.030   0.040    7000  0.0114
 77           RX     375     400     465     475     525     535     600     625
 78           RY      10       6       3       0       0       3       6      10

 79           KK   SAH95
 80           KM        SUB-BASIN AH95
 81           BA     .89
 82           LG     .15     .32    4.06     .36    2.00
 83           UI    405.    974.    486.    231.    110.     50.     23.      0.      0.      0.
 84           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 85           KK   CAH96 SOLS WASH TRIB AH3 MOUTH TO RB TRIB
 86           KM        COMBINE HYDROGRAPHS SAH95 & RAH92:  DISCHARGE TO SOLS WASH
 87           HC       2
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 88           KK  SAH100 SOLS WASH TRIB AH4
 89           KM        SUB-BASIN AH100:  UNNAMED SOLS WASH TRIB AH4
 90           BA     .94
 91           LG     .15     .32    3.79     .30    1.30
 92           UI    216.    773.    606.    358.    206.    116.     66.     40.     18.     18.
 93           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 94           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 95           KK    NULL
 96           KM        COMBINE WASHES A, AH2, AH3, AH4 TO REDUCE NUMBER OF FREE HYDROGRAPHS
 97           HC       4

 98           KK  SAH120 SOLS WASH TRIB AH5
 99           KM        SUB-BASIN AH120:  UNNAMED SOLS WASH TRIB AH5
100           BA    2.89
101           LG     .15     .31    3.64     .28    5.20
102           UI    253.    954.   1675.   1425.    943.    685.    463.    336.    221.    159.
103           UI    108.     90.     35.     35.     35.     35.      0.      0.      0.      0.
104           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

105           KK  SAH125
106           KM        SUB-BASIN AH125:  UNNAMED SOLS WASH TRIB - NOT STUDIED
107           BA     .81
108           LG     .15     .32    3.81     .31     .00
109           UI    273.    815.    476.    257.    132.     68.     35.     18.      0.      0.
110           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

111           KK  SAJ140
112           KM        SUB-BASIN AJ140:  PONDING NEAR AT&SF RR TRACKS
113           BA     .34
114           LG     .15     .32    4.01     .35     .00
115           UI    264.    388.    142.     53.     19.     11.      0.      0.      0.      0.
116           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

117           KK    NULL
118           KM        COMBINE PREVIOUS NULL W/AH5, UNSTUDIED, AND PONDING HYDROGRAPHS
119           HC       4

120           KK  SAI150
121           KM        SUB-BASIN SAI150:  BEGIN HARTMAN WASH
122           BA    1.98
123           LG     .15     .30    3.65     .29    7.70
124           UI    365.   1300.   1423.    806.    484.    297.    178.    106.     65.     34.
125           UI     34.      0.      0.      0.      0.      0.      0.      0.      0.      0.
126           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

127           KK  SAI155
128           KM        SUB-BASIN SAI155:  HARTMAN WASH
129           BA    1.51
130           LG     .15     .29    3.51     .26    8.00
131           UI    350.   1253.    969.    572.    329.    186.    104.     63.     29.     29.
132           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
133           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
```

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

 134          KK  CAI157
 135          KM        COMBINE HYDROGRAPHS SAI150 & SAI155
 136          HC       2

 137          KK  RAI159
 138          KM        ROUTE HYDROGRAPH CAI157 THROUGH AI160 TO CAI162
 139          RS       1    FLOW      -1
 140          RC   0.033   0.025   0.033 13992.0   0.010
 141          RX       0     0.5    60.5    63.5    93.5    96.5   156.5     157
 142          RY       5     3.6     3.0       0       0     3.0     3.6       5

 143          KK  SAI160
 144          KM        SUB-BASIN SAI160
 145          BA    1.92
 146          LG     .15     .31    4.02     .35    1.10
 147          UI    399.   1438.   1313.    755.    443.    252.    157.     89.     41.     35.
 148          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 149          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 150          KK  CAI162 HARTMAN WASH AT US 60
 151          KM        COMBINE HYDROGRAPHS SAI160 & RAI159 (HARTMAN WASH AT US HIGHWAY 60)
 152          HC       2

 153          KK  RAI164
 154          KM        ROUTE HYDROGRAPH CAI162 TO OUTLET OF AI165 (CAI167)
 155          RS       1    FLOW      -1
 156          RC   0.033   0.025   0.033  6019.2  0.0140
 157          RX       0     0.5    80.5    83.5   123.5   126.5   206.5     207
 158          RY       5     3.8     3.0     0.0     0.0     3.0     3.8       5

 159          KK  SAI165
 160          KM        SUB-BASIN SAI165
 161          BA     .55
 162          LG     .15     .32    3.94     .34     .00
 163          UI    392.    634.    244.     94.     35.     17.      0.      0.      0.      0.
 164          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 165          KK  CAI167 HARTMAN WASH NR SPEC PROB AREA
 166          KM        COMBINE HYDROGRAPHS SAI165 & RAI164
 167          HC       2

 168          KK  RAI169
 169          KM        ROUTE HYDROGRAPH CAI167 THROUGH AI170 TO CAI171
 170          RS       1    FLOW      -1
 171          RC   0.033   0.025   0.033 13992.0  0.0140
 172          RX       0      10     110     113     163     166     266     276
 173          RY       5       4     3.0     0.0     0.0     3.0       4       5

 174          KK  SAI170
 175          KM        SUB-BASIN SAI170
 176          BA    1.28
 177          LG     .14     .32    4.28     .42    7.20
 178          UI    151.    562.    902.    552.    392.    252.    174.    111.     75.     46.
 179          UI     31.     18.     18.     18.      0.      0.      0.      0.      0.      0.
```

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

 180          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 181          KK  CAI171 HARTMAN WASH AT SOLS
 182          KM        COMBINE HYDROGRAPHS SAI170 & RAI169:  END HARTMAN WASH
 183          HC       2

 184          KK  SAJ175
 185          KM        SUB-BASIN AJ175: PONDING AT AT&SF TRACKS
 186          BA     .97
 187          LG     .14     .32    3.85     .32    8.10
 188          UI    504.   1090.    503.    228.    101.     43.     26.      0.      0.      0.
 189          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 190          KK    NULL
 191          KM        COMBINE HARTMAN AND PONDING W/NULL TO REDUCE NUMBER OF FREE HYDROGRAPHS
 192          HC       3

 193          KK  SAB180
 194          KM        SUB-BASIN AB180:  BEGIN TWIN PEAKS WASH
 195          BA    1.09
 196          LG     .15     .29    3.81     .25   10.90
 197          UI    365.   1093.    641.    347.    179.     93.     48.     24.      0.      0.
 198          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 199          KK  RAB182
 200          KM        ROUTE SAB180 DOWNSTREAM THROUGH SAB185 TO CAB186
 201          RS       1    FLOW      -1
 202          RC   0.040   0.025   0.040   12500  0.0120
 203          RX     400     435     475     480     520     525     565     600
 204          RY       8       6       3       0       0       3       6       8

 205          KK  SAB185
 206          KM        SUB-BASIN SAB185
 207          BA    1.31
 208          LG     .15     .30    3.51     .26    5.80
 209          UI    251.    896.    930.    528.    314.    189.    113.     67.     38.     23.
 210          UI     23.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 211          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 212          KK  CAB186 LOWER TWIN PEAKS WASH
 213          KM        COMBINE SAB185, & RAB182
 214          HC       2

 215          KK  SAB190
 216          KM        SUB-BASIN SAB190:  YUCCA TANK INFLOW
 217          BA    1.90
 218          LG     .15     .28    4.51     .23    9.70
 219          UI    555.   1806.   1142.    647.    355.    191.    106.     43.     40.      0.
 220          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 221          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
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```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 222          KK  RAB192
 223          KM        ROUTE SAB190 THROUGH SAB195 TO CAB193
 224          RS      1    FLOW      -1
 225          RC   .035    .030   0.035    6500   .0077
 226          RX    400     460     485     490     510     515     540     600
 227          RY      8       6       2       0       0       2       6       8

 228          KK  CAB193
 229          KM        COMBINE CAB186, & RAB192
 230          HC      2

 231          KK  RAB194
 232          KM        ROUTE CAB193 THRU SAB195 TO JUNCTURE NEAR TRAILER PARK CAB196
 233          RS      1    FLOW      -1
 234          RC   .035    .030    .035    9000   .0167
 235          RX    400     460     485     490     510     515     540     600
 236          RY      8       6       4       0       0       4       6       8

 237          KK  SAB195
 238          KM        SUB-BASIN SAB195
 239          BA   2.18
 240          LG    .15     .31    3.86     .32    5.20
 241          UI   432.   1547.   1527.    871.    513.    304.    183.    108.     57.     39.
 242          UI    39.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 243          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 244          KK  CAB196
 245          KM        COMBINE SAB195, & RAB194
 246          HC      2

 247          KK  SAB200
 248          KM        SUB-BASIN SAB200:  LAKE GEORGE INFLOW
 249          BA   0.81
 250          LG    .15     .29    3.58     .27    7.70
 251          UI   263.    803.    479.    262.    137.     72.     38.     18.     18.      0.
 252          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 253          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 254          KK  RAB201
 255          KM        ROUTE DOWNSTREAM FROM LAKE GEORGE TO FLYING E TANK CAB206
 256          RS      1    FLOW      -1
 257          RC   .030    .035    .030    5000    .016
 258          RX    425     450     490     495     505     510     550     575
 259          RY      6       5       2       0       0       2       5       6

 260          KK  SAB205
 261          KM        SUB-BASIN SAB205:  HOLLY WASH
 262          BA   1.25
 263          LG    .15     .29    3.54     .26    9.20
 264          UI   357.   1175.    755.    431.    237.    128.     71.     31.     26.      0.
 265          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 266          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 267          KK  CAB206
 268          KM        COMBINE RAB201 & SAB205 AT FLYING E TANK
 269          HC       2

 270          KK  RAB207
 271          KM        ROUTE CAB206 DOWNSTREAM FROM FLYING E TANK TO TRAILER PARK CAB208
 272          RS       1    FLOW      -1
 273          RC    .035    .030    .035    5000    .016
 274          RX     400     460     485     490     510     515     540     600
 275          RY       8       6       3       0       0       3       6       8

 276          KK  CAB208 FLYING E WASH ABOVE US 60
 277          KM        COMBINE CAB196, & RAB207:  FLYING E WASH ABOVE US 60
 278          HC       2

 279          KK  RAB209
 280          KM        ROUTE CAB208 THROUGH SAB210 TO CAB211
 281          RS       1    FLOW      -1
 282          RC    .040    .030    .040   10000   .0155
 283          RX     400     425     475     480     520     525     575     600
 284          RY       9       6       3       0       0       3       6       9

 285          KK  SAB210
 286          KM        SUB-BASIN SAB210
 287          BA    2.19
 288          LG     .14     .32    4.09     .37    4.00
 289          UI    227.    867.   1480.    964.    691.    463.    326.    207.    144.     96.
 290          UI     75.     30.     29.     29.      0.      0.      0.      0.      0.      0.
 291          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 292          KK  CAB211
 293          KM        COMBINE SAB210 & RAB209 AT CAB211:  FLYING E DISCHARGE TO SOLS WASH
 294          HC       2

 295          KK  SAJ215
 296          KM        SUB-BASIN AJ215:  PONDING AT AT&SF RR TRACKS
 297          BA     .47
 298          LG     .14     .32    4.04     .36    6.00
 299          UI    708.    390.     91.     23.      0.      0.      0.      0.      0.      0.
 300          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 301          ZZ
```

SCHEMATIC DIAGRAM OF STREAM NETWORK

```
INPUT
LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

NO.       (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

 25         SA
             .
             .
 32          .      SAH65
             .          .
             .          .
 40          .          .      SAH80
             .          .          V
             .          .          V
 47          .          .      RAH81
             .          .          .
             .          .          .
 53          .          .          .      SAH85
             .          .          .          .
             .          .          .          .
 60          .          .      CAH86............
             .          .          .
             .          .          .
 63          .          .          .      SAH90
             .          .          .          .
             .          .          .          .
 70          .          .      CAH91............
             .          .          V
             .          .          V
 73          .          .      RAH92
             .          .          .
             .          .          .
 79          .          .          .      SAH95
             .          .          .          .
             .          .          .          .
 85          .          .      CAH96............
             .          .          .
             .          .          .
 88          .          .          .      SAH100
             .          .          .          .
             .          .          .          .
 95       NULL.................................
             .
             .
 98          .      SAH120
             .          .
             .          .
105          .          .      SAH125
             .          .          .
             .          .          .
111          .          .          .      SAJ140
             .          .          .          .
             .          .          .          .
117       NULL.................................
             .
             .
120          .      SAI150
             .          .
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          .          .
127       .          .      SAI155
          .          .          .
          .          .          .
134       .     CAI157............
          .          V
          .          V
137       .     RAI159
          .          .
          .          .
143       .          .      SAI160
          .          .          .
          .          .          .
150       .     CAI162............
          .          V
          .          V
153       .     RAI164
          .          .
          .          .
159       .          .      SAI165
          .          .          .
          .          .          .
165       .     CAI167............
          .          V
          .          V
168       .     RAI169
          .          .
          .          .
174       .          .      SAI170
          .          .          .
          .          .          .
181       .     CAI171............
          .          .
          .          .
184       .          .      SAJ175
          .          .          .
          .          .          .
190     NULL........................
          .
          .
193       .     SAB180
          .          V
          .          V
199       .     RAB182
          .          .
          .          .
205       .          .      SAB185
          .          .          .
          .          .          .
212       .     CAB186............
          .          .
          .          .
215       .          .      SAB190
          .          .          V
          .          .          V
192       .          .      RAB192
          .          .          .
          .          .          .
228       .     CAB193............
          .          V
```

```
                .          V
231             .     RAB194
                .          .
                .          .
237             .          .     SAB195
                .          .          .
                .          .          .
244             .     CAB196............
                .          .
                .          .
247             .          .     SAB200
                .          .          V
                .          .          V
254             .          .     RAB201
                .          .          .
                .          .          .
260             .          .          .     SAB205
                .          .          .          .
                .          .          .          .
267             .          .     CAB206............
                .          .          V
                .          .          V
270             .          .     RAB207
                .          .          .
                .          .          .
276             .     CAB208............
                .          V
                .          V
279             .     RAB209
                .          .
                .          .
285             .          .     SAB210
                .          .          .
                .          .          .
292             .     CAB211............
                .          .
                .          .
295             .          .     SAJ215
```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

```
****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*            FEBRUARY 1981             *
*          REVISED 02 AUG 88           *
*                                      *
* RUN DATE  10/20/1992  TIME  08:36:05 *
*                                      *
****************************************
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****************************************
*                                      *
*   U.S. ARMY CORPS OF ENGINEERS       *
* THE HYDROLOGIC ENGINEERING CENTER    *
*         609 SECOND STREET            *
*      DAVIS, CALIFORNIA 95616         *
*          (916) 551-1748              *
*                                      *
****************************************
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                    WICKENBURG ADMS - CONTRACT FCD 89-79
                    BLACK & VEATCH PN 17676, COE & VAN LOO PN 1197-02
                    WASHES AH (SOLS WASH UNNAMED TRIBS), AB (FLYING E),
                    AI (HARTMAN), PORTIONS OF AJ (LOCAL PONDING AT AT&SF TRACKS), AND
                    A (AMIR)
                    SCS TYPE II STORM; 25-YR, 24-HR DEPTH; PHOENIX MOUNTAIN S-GRAPH
                    AREAL REDUCTION FACTORS PER NWS HYDRO-40
                    SOLS WASH AREA

 10 IO        OUTPUT CONTROL VARIABLES
                    IPRNT          5  PRINT CONTROL
                    IPLOT          0  PLOT CONTROL
                    QSCAL         0.  HYDROGRAPH PLOT SCALE

   IT         HYDROGRAPH TIME DATA
                     NMIN         15  MINUTES IN COMPUTATION INTERVAL
                    IDATE     1    0  STARTING DATE
                    ITIME       0000  STARTING TIME
                       NQ        300  NUMBER OF HYDROGRAPH ORDINATES
                   NDDATE     4    0  ENDING DATE
                   NDTIME       0245  ENDING TIME
                    ICENT         19  CENTURY MARK

              COMPUTATION INTERVAL     .25 HOURS
                   TOTAL TIME BASE   74.75 HOURS

        ENGLISH UNITS
             DRAINAGE AREA          SQUARE MILES
             PRECIPITATION DEPTH    INCHES
             LENGTH, ELEVATION      FEET
             FLOW                   CUBIC FEET PER SECOND
             STORAGE VOLUME         ACRE-FEET
             SURFACE AREA           ACRES
             TEMPERATURE            DEGREES FAHRENHEIT

 12 JD        INDEX STORM NO. 1
                    STRM       3.30  PRECIPITATION DEPTH
                    TRDA        .01  TRANSPOSITION DRAINAGE AREA

 13 PI          PRECIPITATION PATTERN
                   .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                   .00       .00       .00       .00       .00       .00       .00       .00       .01       .01
                   .00       .00       .00       .00       .00       .00       .00       .00       .01       .01
                   .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                   .01       .01       .02       .02       .02       .02       .19       .19       .04       .04
                   .02       .02       .01       .01       .01       .01       .01       .01       .01       .01
```

.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00				

JD INDEX STORM NO. 2

STRM 3.23 PRECIPITATION DEPTH

TRDA 3.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.19	.19	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00				

19 JD INDEX STORM NO. 3

STRM 3.17 PRECIPITATION DEPTH

TRDA 10.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.19	.19	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00				

20 JD INDEX STORM NO. 4

STRM 3.04 PRECIPITATION DEPTH

TRDA 20.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.19	.19	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00				

21 JD INDEX STORM NO. 5

STRM 2.97 PRECIPITATION DEPTH

TRDA 30.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01

.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.19	.19	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00				

22 JD INDEX STORM NO. 6

STRM 2.90 PRECIPITATION DEPTH

TRDA 50.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.19	.19	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00				

23 JD INDEX STORM NO. 7

STRM 2.81 PRECIPITATION DEPTH

TRDA 100.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.19	.19	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00				

24 JD INDEX STORM NO. 8

STRM 2.74 PRECIPITATION DEPTH

TRDA 150.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.19	.19	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00				

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	SA	935.	12.25	174.	44.	15.	2.19		
+	HYDROGRAPH AT	SAH65	4026.	12.75	998.	253.	84.	10.27		
+	HYDROGRAPH AT	SAH80	1330.	12.25	238.	62.	21.	2.23		
+	ROUTED TO	RAH81	923.	12.75	235.	62.	21.	2.23		
+									3.47	13.00
+	HYDROGRAPH AT	SAH85	1164.	12.50	236.	62.	21.	2.54		
+	2 COMBINED AT	CAH86	1753.	12.50	464.	122.	41.	4.77		
+	HYDROGRAPH AT	SAH90	1176.	12.25	170.	45.	15.	1.52		
+	2 COMBINED AT	CAH91	2428.	12.50	627.	165.	55.	6.29		
+	ROUTED TO	RAH92	2379.	12.50	626.	165.	55.	6.29		
+									2.98	12.50
+	HYDROGRAPH AT	SAH95	607.	12.25	80.	20.	7.	.89		
+	2 COMBINED AT	CAH96	2662.	12.50	701.	184.	62.	7.18		
+	HYDROGRAPH AT	SAH100	618.	12.25	91.	23.	8.	.94		
+	4 COMBINED AT	NULL	7257.	12.50	1814.	467.	156.	20.58		
+	HYDROGRAPH AT	SAH120	1463.	12.50	306.	80.	27.	2.89		
+	HYDROGRAPH AT	SAH125	570.	12.25	76.	19.	6.	.81		
+	HYDROGRAPH AT	SAJ140	269.	12.00	30.	8.	3.	.34		
	4 COMBINED AT									

+		NULL	8794.	12.50	2150.	554.	185.	24.62	
	HYDROGRAPH AT								
+		SAI150	1287.	12.25	216.	58.	19.	1.98	
	HYDROGRAPH AT								
+		SAI155	1096.	12.25	172.	46.	15.	1.51	
	2 COMBINED AT								
+		CAI157	2369.	12.25	385.	103.	34.	3.49	
	ROUTED TO								
+		RAI159	1667.	12.50	383.	103.	34.	3.49	
+									3.36 12.50
	HYDROGRAPH AT								
+		SAI160	1148.	12.25	173.	44.	15.	1.92	
	2 COMBINED AT								
+		CAI162	2509.	12.50	549.	145.	48.	5.41	
	ROUTED TO								
+		RAI164	2451.	12.50	549.	145.	48.	5.41	
+									3.26 12.50
	HYDROGRAPH AT								
+		SAI165	429.	12.00	50.	12.	4.	.55	
	2 COMBINED AT								
+		CAI167	2587.	12.50	596.	157.	52.	5.96	
	ROUTED TO								
+		RAI169	2407.	12.75	592.	156.	52.	5.96	
+									2.79 12.75
	HYDROGRAPH AT								
+		SAI170	579.	12.50	117.	32.	11.	1.28	
	2 COMBINED AT								
+		CAI171	2772.	12.75	702.	186.	62.	7.24	
	HYDROGRAPH AT								
+		SAJ175	726.	12.25	102.	28.	9.	.97	
	3 COMBINED AT								
+		NULL	11289.	12.50	2802.	729.	244.	32.83	
	HYDROGRAPH AT								
+		SAB180	866.	12.25	128.	35.	12.	1.09	
	ROUTED TO								
+		RAB182	634.	12.50	127.	35.	12.	1.09	
+									1.43 12.50
	HYDROGRAPH AT								
+		SAB185	889.	12.25	144.	38.	13.	1.31	
	2 COMBINED AT								
+		CAB186	1424.	12.25	270.	73.	24.	2.40	

	HYDROGRAPH AT								
+		SAB190	1464.	12.25	220.	60.	20.	1.90	
	ROUTED TO								
		RAB192	1216.	12.25	220.	60.	20.	1.90	
+									3.53 12.25
	2 COMBINED AT								
+		CAB193	2613.	12.25	486.	131.	44.	4.30	
	ROUTED TO								
+		RAB194	2503.	12.50	485.	131.	44.	4.30	
+									4.82 12.50
	HYDROGRAPH AT								
+		SAB195	1370.	12.25	220.	58.	19.	2.18	
	2 COMBINED AT								
+		CAB196	3541.	12.50	696.	187.	62.	6.48	
	HYDROGRAPH AT								
+		SAB200	627.	12.25	91.	24.	8.	.81	
	ROUTED TO								
+		RAB201	555.	12.25	91.	24.	8.	.81	
+									2.74 12.25
	HYDROGRAPH AT								
+		SAB205	957.	12.25	144.	39.	13.	1.25	
	2 COMBINED AT								
+		CAB206	1506.	12.25	234.	63.	21.	2.06	
	ROUTED TO								
+		RAB207	1402.	12.25	234.	63.	21.	2.06	
+									3.42 12.25
	2 COMBINED AT								
+		CAB208	4769.	12.50	920.	247.	82.	8.54	
	ROUTED TO								
+		RAB209	4385.	12.50	918.	247.	82.	8.54	
+									4.50 12.50
	HYDROGRAPH AT								
+		SAB210	1013.	12.50	201.	52.	17.	2.19	
	2 COMBINED AT								
+		CAB211	5312.	12.50	1102.	295.	99.	10.73	
	HYDROGRAPH AT								
+		SAJ215	468.	12.00	46.	12.	4.	.47	

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

HEC-1 OUTPUT
SOLS WASH AREA
50-YEAR RETURN PERIOD

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****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*            FEBRUARY 1981             *
*          REVISED 02 AUG 88           *
*                                      *
*  RUN DATE  10/20/1992  TIME  08:40:13 *
*                                      *
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*                                      *
*    U.S. ARMY CORPS OF ENGINEERS      *
*  THE HYDROLOGIC ENGINEERING CENTER   *
*          609 SECOND STREET           *
*       DAVIS, CALIFORNIA 95616        *
*           (916) 551-1748             *
*                                      *
****************************************
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X     X  XXXXXXX   XXXXX           X
X     X  X        X     X         XX
X     X  X        X               X
XXXXXXX  XXXX     X       XXXXX   X
X     X  X        X               X
X     X  X        X     X         X
X     X  XXXXXXX   XXXXX          XXX
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THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

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

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

  1           ID        WICKENBURG ADMS - CONTRACT FCD 89-79
  2           ID        BLACK & VEATCH PN 17676, COE & VAN LOO PN 1197-02
  3           ID        WASHES AH (SOLS WASH UNNAMED TRIBS), AB (FLYING E),
  4           ID        AI (HARTMAN), PORTIONS OF AJ (LOCAL PONDING AT AT&SF TRACKS), AND
  5           ID        A (AMIR)
  6           ID        SCS TYPE II STORM; 50-YR, 24-HR DEPTH; PHOENIX MOUNTAIN S-GRAPH
  7           ID        AREAL REDUCTION FACTORS PER NWS HYDRO-40
  8           ID        SOLS WASH AREA
              *DIAGRAM
  9           IT      15                    300
 10           IO       5
 11           IN      30
 12           JD     3.8     .01
 13           PC    .000    .005    .011    .016    .022    .028    .035    .041    .048    .056
 14           PC    .068    .071    .080    .089    .098    .109    .120    .133    .147    .163
 15           PC    .181    .204    .235    .283    .663    .735    .772    .799    .820    .838
 16           PC    .854    .868    .880    .891    .902    .912    .921    .929    .937    .945
 17           PC    .952    .959    .965    .972    .978    .984    .989    .995   1.000
 18           JD    3.72     3.0
 19           JD    3.65    10.0
 20           JD    3.50    20.0
 21           JD    3.42    30.0
 22           JD    3.34    50.0
 23           JD    3.23   100.0
 24           JD    3.15   150.0

 25           KK      SA AMIR WASH
 26           KM        SUB-BASIN A:  AMIR WASH
 27           BA    2.19
 28           LG     .15     .34    4.25     .42    1.40
 29           UI    279.   1025.   1571.    936.    654.    417.    274.    180.    115.     81.
 30           UI     37.     32.     32.      0.      0.      0.      0.      0.      0.      0.
 31           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 32           KK   SAH65 UNNAMED SOLS WASH TRIB AH2
 33           KM        SUB-BASIN AH65:  UNNAMED SOLS WASH TRIB AH2
 34           BA   10.27
 35           LG     .35     .30    3.51     .25    1.30
 36           UI    511.   1918.   3474.   5192.   3753.   2768.   2209.   1652.   1241.    976.
 37           UI    690.    553.    392.    294.    250.    163.     98.     98.     98.     98.
 38           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 39           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 40           KK   SAH80 SOLS WASH TRIB AH3 ABOVE US 60
 41           KM        SUB-BASIN AH80:  BEGIN UNNAMED SOLS WASH TRIB AH3
 42           BA    2.23
 43           LG     .15     .29    3.59     .27    4.50
 44           UI    318.   1151.   1630.    943.    629.    407.    246.    163.    102.     67.
 45           UI     34.     34.      0.      0.      0.      0.      0.      0.      0.      0.
 46           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 47           KK   RAH81
 48           KM        ROUTE SAH80 TO CAH86
 49           RS       2    FLOW      -1
 50           RC   0.035   0.030   0.035   22500  0.0076
 51           RX     200     435     485     490     510     515     565     700
 52           RY       8       7       5       0       0       5       7       8

 53           KK   SAH85
 54           KM        SUB-BASIN AH85
 55           BA    2.54
 56           LG     .35     .32    3.85     .32    3.90
 57           UI    237.    900.   1591.   1179.    819.    578.    397.    270.    192.    129.
 58           UI     83.     62.     32.     32.     32.      0.      0.      0.      0.      0.
 59           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 60           KK   CAH86 SOLS WASH TRIB AH3 FROM SMALL RB TRIBUTARY TO HWY 60
 61           KM        COMBINE RAH81 AND SAH85:  Q ABOVE TRIBUTARY, BELOW HWY 60 BRIDGE
 62           HC       2

 63           KK   SAH90
 64           KM        SUB-BASIN AH90: RIGHT BANK TRIB TO AH3
 65           BA    1.52
 66           LG     .15     .30    3.87     .24    6.50
 67           UI    478.   1489.    903.    500.    264.    142.     75.     33.     33.      0.
 68           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 69           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 70           KK   CAH91
 71           KM        COMBINE HYDROGRAPHS CAH86 & SAH90:  Q JUST BELOW TRIBUTARY
 72           HC       2

 73           KK   RAH92
 74           KM        ROUTE HYDROGRAPH CAH91 TO CAH96
 75           RS       1    FLOW      -1
 76           RC   0.040   0.030   0.040    7000  0.0114
 77           RX     375     400     465     475     525     535     600     625
 78           RY      10       6       3       0       0       3       6      10

 79           KK   SAH95
 80           KM        SUB-BASIN AH95
 81           BA     .89
 82           LG     .15     .32    4.06     .36    2.00
 83           UI    405.    974.    486.    231.    110.     50.     23.      0.      0.      0.
 84           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 85           KK   CAH96 SOLS WASH TRIB AH3 MOUTH TO RB TRIB
 86           KM        COMBINE HYDROGRAPHS SAH95 & RAH92:  DISCHARGE TO SOLS WASH
 87           HC       2
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 88           KK  SAH100 SOLS WASH TRIB AH4
 89           KM        SUB-BASIN AH100:  UNNAMED SOLS WASH TRIB AH4
 90           BA     .94
 91           LG     .15     .32    3.79     .30    1.30
 92           UI    216.    773.    606.    358.    206.    116.     66.     40.     18.     18.
 93           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 94           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 95           KK    NULL
 96           KM        COMBINE WASHES A, AH2, AH3, AH4 TO REDUCE NUMBER OF FREE HYDROGRAPHS
 97           HC       4

 98           KK  SAH120 SOLS WASH TRIB AH5
 99           KM        SUB-BASIN AH120:  UNNAMED SOLS WASH TRIB AH5
100           BA    2.89
101           LG     .15     .31    3.64     .28    5.20
102           UI    253.    954.   1675.   1425.    943.    685.    463.    336.    221.    159.
103           UI    108.     90.     35.     35.     35.     35.      0.      0.      0.      0.
104           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

105           KK  SAH125
106           KM        SUB-BASIN AH125:  UNNAMED SOLS WASH TRIB - NOT STUDIED
107           BA     .81
108           LG     .15     .32    3.81     .31     .00
109           UI    273.    815.    476.    257.    132.     68.     35.     18.      0.      0.
110           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

111           KK  SAJ140
112           KM        SUB-BASIN AJ140:  PONDING NEAR AT&SF RR TRACKS
113           BA     .34
114           LG     .15     .32    4.01     .35     .00
115           UI    264.    388.    142.     53.     19.     11.      0.      0.      0.      0.
116           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

117           KK    NULL
118           KM        COMBINE PREVIOUS NULL W/AH5, UNSTUDIED, AND PONDING HYDROGRAPHS
119           HC       4

120           KK  SAI150
121           KM        SUB-BASIN SAI150:  BEGIN HARTMAN WASH
122           BA    1.98
123           LG     .15     .30    3.65     .29    7.70
124           UI    365.   1300.   1423.    806.    484.    297.    178.    106.     65.     34.
125           UI     34.      0.      0.      0.      0.      0.      0.      0.      0.      0.
126           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

127           KK  SAI155
128           KM        SUB-BASIN SAI155:  HARTMAN WASH
129           BA    1.51
130           LG     .15     .29    3.51     .26    8.00
131           UI    350.   1253.    969.    572.    329.    186.    104.     63.     29.     29.
132           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
133           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 134          KK  CAI157
 135          KM        COMBINE HYDROGRAPHS SAI150 & SAI155
 136          HC       2

 137          KK  RAI159
 138          KM        ROUTE HYDROGRAPH CAI157 THROUGH AI160 TO CAI162
 139          RS       1    FLOW      -1
 140          RC   0.033   0.025   0.033 13992.0   0.010
 141          RX       0     0.5    60.5    63.5    93.5    96.5   156.5     157
 142          RY       5     3.6     3.0       0       0     3.0     3.6       5

 143          KK  SAI160
 144          KM        SUB-BASIN SAI160
 145          BA    1.92
 146          LG     .15     .31    4.02     .35    1.10
 147          UI    399.   1438.   1313.    755.    443.    252.    157.     89.     41.     35.
 148          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 149          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 150          KK  CAI162 HARTMAN WASH AT US 60
 151          KM        COMBINE HYDROGRAPHS SAI160 & RAI159 (HARTMAN WASH AT US HIGHWAY 60)
 152          HC       2

 153          KK  RAI164
 154          KM        ROUTE HYDROGRAPH CAI162 TO OUTLET OF AI165 (CAI167)
 155          RS       1    FLOW      -1
 156          RC   0.033   0.025   0.033  6019.2  0.0140
 157          RX       0     0.5    80.5    83.5   123.5   126.5   206.5     207
 158          RY       5     3.8     3.0     0.0     0.0     3.0     3.8       5

 159          KK  SAI165
 160          KM        SUB-BASIN SAI165
 161          BA     .55
 162          LG     .15     .32    3.94     .34     .00
 163          UI    392.    634.    244.     94.     35.     17.      0.      0.      0.      0.
 164          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 165          KK  CAI167 HARTMAN WASH NR SPEC PROB AREA
 166          KM        COMBINE HYDROGRAPHS SAI165 & RAI164
 167          HC       2

 168          KK  RAI169
 169          KM        ROUTE HYDROGRAPH CAI167 THROUGH AI170 TO CAI171
 170          RS       1    FLOW      -1
 171          RC   0.033   0.025   0.033 13992.0  0.0140
 172          RX       0      10     110     113     163     166     266     276
 173          RY       5       4     3.0     0.0     0.0     3.0       4       5

 174          KK  SAI170
 175          KM        SUB-BASIN SAI170
 176          BA    1.28
 177          LG     .14     .32    4.28     .42    7.20
 178          UI    151.    562.    902.    552.    392.    252.    174.    111.     75.     46.
 179          UI     31.     18.     18.     18.      0.      0.      0.      0.      0.      0.
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 180          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 181          KK  CAI171 HARTMAN WASH AT SOLS
 182          KM        COMBINE HYDROGRAPHS SAI170 & RAI169:  END HARTMAN WASH
 183          HC       2

 184          KK  SAJ175
 185          KM        SUB-BASIN AJ175: PONDING AT AT&SF TRACKS
 186          BA     .97
 187          LG     .14     .32    3.85     .32    8.10
 188          UI    504.   1090.    503.    228.    101.     43.     26.      0.      0.      0.
 189          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 190          KK    NULL
 191          KM        COMBINE HARTMAN AND PONDING W/NULL TO REDUCE NUMBER OF FREE HYDROGRAPHS
 192          HC       3

 193          KK  SAB180
 194          KM        SUB-BASIN AB180:  BEGIN TWIN PEAKS WASH
 195          BA    1.09
 196          LG     .15     .29    3.81     .25   10.90
 197          UI    365.   1093.    641.    347.    179.     93.     48.     24.      0.      0.
 198          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 199          KK  RAB182
 200          KM        ROUTE SAB180 DOWNSTREAM THROUGH SAB185 TO CAB186
 201          RS       1    FLOW      -1
 202          RC   0.040   0.025   0.040   12500  0.0120
 203          RX     400     435     475     480     520     525     565     600
 204          RY       8       6       3       0       0       3       6       8

 205          KK  SAB185
 206          KM        SUB-BASIN SAB185
 207          BA    1.31
 208          LG     .15     .30    3.51     .26    5.80
 209          UI    251.    896.    930.    528.    314.    189.    113.     67.     38.     23.
 210          UI     23.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 211          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 212          KK  CAB186 LOWER TWIN PEAKS WASH
 213          KM        COMBINE SAB185, & RAB182
 214          HC       2

 215          KK  SAB190
 216          KM        SUB-BASIN SAB190:  YUCCA TANK INFLOW
 217          BA    1.90
 218          LG     .15     .28    4.51     .23    9.70
 219          UI    555.   1806.   1142.    647.    355.    191.    106.     43.     40.      0.
 220          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 221          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
```

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

 222          KK  RAB192
 223          KM        ROUTE SAB190 THROUGH SAB195 TO CAB193
 224          RS       1    FLOW      -1
 225          RC    .035    .030   0.035    6500   .0077
 226          RX     400     460     485     490     510     515     540     600
 227          RY       8       6       2       0       0       2       6       8

 228          KK  CAB193
 229          KM        COMBINE CAB186, & RAB192
 230          HC       2

 231          KK  RAB194
 232          KM        ROUTE CAB193 THRU SAB195 TO JUNCTURE NEAR TRAILER PARK CAB196
 233          RS       1    FLOW      -1
 234          RC    .035    .030    .035    9000   .0167
 235          RX     400     460     485     490     510     515     540     600
 236          RY       8       6       4       0       0       4       6       8

 237          KK  SAB195
 238          KM        SUB-BASIN SAB195
 239          BA    2.18
 240          LG     .15     .31    3.86     .32    5.20
 241          UI    432.   1547.   1527.    871.    513.    304.    183.    108.     57.     39.
 242          UI     39.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 243          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 244          KK  CAB196
 245          KM        COMBINE SAB195, & RAB194
 246          HC       2

 247          KK  SAB200
 248          KM        SUB-BASIN SAB200:  LAKE GEORGE INFLOW
 249          BA    0.81
 250          LG     .15     .29    3.58     .27    7.70
 251          UI    263.    803.    479.    262.    137.     72.     38.     18.     18.      0.
 252          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 253          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 254          KK  RAB201
 255          KM        ROUTE DOWNSTREAM FROM LAKE GEORGE TO FLYING E TANK CAB206
 256          RS       1    FLOW      -1
 257          RC    .030    .035    .030    5000    .016
 258          RX     425     450     490     495     505     510     550     575
 259          RY       6       5       2       0       0       2       5       6

 260          KK  SAB205
 261          KM        SUB-BASIN SAB205:  HOLLY WASH
 262          BA    1.25
 263          LG     .15     .29    3.54     .26    9.20
 264          UI    357.   1175.    755.    431.    237.    128.     71.     31.     26.      0.
 265          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 266          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
```

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

 267          KK  CAB206
 268          KM        COMBINE RAB201 & SAB205 AT FLYING E TANK
 269          HC       2

 270          KK  RAB207
 271          KM        ROUTE CAB206 DOWNSTREAM FROM FLYING E TANK TO TRAILER PARK CAB208
 272          RS       1    FLOW      -1
 273          RC    .035    .030    .035    5000    .016
 274          RX     400     460     485     490     510     515     540     600
 275          RY       8       6       3       0       0       3       6       8

 276          KK  CAB208 FLYING E WASH ABOVE US 60
 277          KM        COMBINE CAB196, & RAB207:  FLYING E WASH ABOVE US 60
 278          HC       2

 279          KK  RAB209
 280          KM        ROUTE CAB208 THROUGH SAB210 TO CAB211
 281          RS       1    FLOW      -1
 282          RC    .040    .030    .040   10000   .0155
 283          RX     400     425     475     480     520     525     575     600
 284          RY       9       6       3       0       0       3       6       9

 285          KK  SAB210
 286          KM        SUB-BASIN SAB210
 287          BA    2.19
 288          LG     .14     .32    4.09     .37    4.00
 289          UI    227.    867.   1480.    964.    691.    463.    326.    207.    144.     96.
 290          UI     75.     30.     29.     29.      0.      0.      0.      0.      0.      0.
 291          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 292          KK  CAB211
 293          KM        COMBINE SAB210 & RAB209 AT CAB211:  FLYING E DISCHARGE TO SOLS WASH
 294          HC       2

 295          KK  SAJ215
 296          KM        SUB-BASIN AJ215:  PONDING AT AT&SF RR TRACKS
 297          BA     .47
 298          LG     .14     .32    4.04     .36    6.00
 299          UI    708.    390.     91.     23.      0.      0.      0.      0.      0.      0.
 300          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 301          ZZ
```

SCHEMATIC DIAGRAM OF STREAM NETWORK

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

  25        SA
             .
             .
  32         .       SAH65
             .          .
             .          .
  40         .          .      SAH80
             .          .         V
             .          .         V
  47         .          .      RAH81
             .          .         .
             .          .         .
  53         .          .         .       SAH85
             .          .         .          .
             .          .         .          .
  60         .          .      CAH86............
             .          .         .
             .          .         .
  63         .          .         .       SAH90
             .          .         .          .
             .          .         .          .
  70         .          .      CAH91............
             .          .         V
             .          .         V
  73         .          .      RAH92
             .          .         .
             .          .         .
  79         .          .         .       SAH95
             .          .         .          .
             .          .         .          .
  85         .          .      CAH96............
             .          .         .
             .          .         .
  88         .          .         .      SAH100
             .          .         .          .
             .          .         .          .
  95      NULL.................................
             .
             .
  98         .      SAH120
             .          .
             .          .
 105         .          .     SAH125
             .          .         .
             .          .         .
 111         .          .         .      SAJ140
             .          .         .          .
             .          .         .          .
 117      NULL.................................
             .
             .
 120         .      SAI150
             .          .
```

```
          .          .
127       .          .      SAI155
          .          .          .
          .          .          .
          .     CAI157............
          .          V
          .          V
137       .     RAI159
          .          .
          .          .
143       .          .      SAI160
          .          .          .
          .          .          .
150       .     CAI162............
          .          V
          .          V
153       .     RAI164
          .          .
          .          .
159       .          .      SAI165
          .          .          .
          .          .          .
165       .     CAI167............
          .          V
          .          V
168       .     RAI169
          .          .
          .          .
174       .          .      SAI170
          .          .          .
          .          .          .
181       .     CAI171............
          .          .
          .          .
184       .          .      SAJ175
          .          .          .
          .          .          .
190     NULL........................
          .
          .
193       .     SAB180
          .          V
          .          V
199       .     RAB182
          .          .
          .          .
205       .          .      SAB185
          .          .          .
          .          .          .
212       .     CAB186............
          .          .
          .          .
215       .          .      SAB190
          .          .          V
          .          .          V
          .          .      RAB192
          .          .          .
          .          .          .
228       .     CAB193............
          .          V
```

```
          .        V
231       .    RAB194
          .        .
          .        .
237       .        .     SAB195
          .        .        .
          .        .        .
244       .    CAB196............
          .        .
          .        .
247       .        .     SAB200
          .        .        V
          .        .        V
254       .        .     RAB201
          .        .        .
          .        .        .
260       .        .        .     SAB205
          .        .        .        .
          .        .        .        .
267       .        .     CAB206............
          .        .        V
          .        .        V
270       .        .     RAB207
          .        .        .
          .        .        .
276       .    CAB208............
          .        V
          .        V
279       .    RAB209
          .        .
          .        .
285       .        .     SAB210
          .        .        .
          .        .        .
292       .    CAB211............
          .        .
          .        .
295       .        .     SAJ215
```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

```
****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*            FEBRUARY 1981             *
*          REVISED 02 AUG 88           *
*                                      *
*  RUN DATE  10/20/1992  TIME  08:40:13 *
*                                      *
****************************************
```

```
****************************************
*                                      *
*    U.S. ARMY CORPS OF ENGINEERS      *
*  THE HYDROLOGIC ENGINEERING CENTER   *
*          609 SECOND STREET           *
*       DAVIS, CALIFORNIA 95616        *
*          (916) 551-1748              *
*                                      *
****************************************
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                    WICKENBURG ADMS - CONTRACT FCD 89-79
                    BLACK & VEATCH PN 17676, COE & VAN LOO PN 1197-02
                    WASHES AH (SOLS WASH UNNAMED TRIBS), AB (FLYING E),
                    AI (HARTMAN), PORTIONS OF AJ (LOCAL PONDING AT AT&SF TRACKS), AND
                    A (AMIR)
                    SCS TYPE II STORM; 50-YR, 24-HR DEPTH; PHOENIX MOUNTAIN S-GRAPH
                    AREAL REDUCTION FACTORS PER NWS HYDRO-40
                    SOLS WASH AREA

 10 IO        OUTPUT CONTROL VARIABLES
                    IPRNT          5  PRINT CONTROL
                    IPLOT          0  PLOT CONTROL
                    QSCAL         0.  HYDROGRAPH PLOT SCALE

    IT        HYDROGRAPH TIME DATA
                     NMIN         15  MINUTES IN COMPUTATION INTERVAL
                    IDATE      1    0  STARTING DATE
                    ITIME       0000  STARTING TIME
                       NQ        300  NUMBER OF HYDROGRAPH ORDINATES
                   NDDATE      4    0  ENDING DATE
                   NDTIME       0245  ENDING TIME
                    ICENT         19  CENTURY MARK

              COMPUTATION INTERVAL     .25 HOURS
                   TOTAL TIME BASE   74.75 HOURS

         ENGLISH UNITS
              DRAINAGE AREA          SQUARE MILES
              PRECIPITATION DEPTH    INCHES
              LENGTH, ELEVATION      FEET
              FLOW                   CUBIC FEET PER SECOND
              STORAGE VOLUME         ACRE-FEET
              SURFACE AREA           ACRES
              TEMPERATURE            DEGREES FAHRENHEIT

 12 JD        INDEX STORM NO. 1
                    STRM       3.80  PRECIPITATION DEPTH
                    TRDA        .01  TRANSPOSITION DRAINAGE AREA

 13 PI          PRECIPITATION PATTERN
                   .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                   .00       .00       .00       .00       .00       .00       .00       .00       .01       .01
                   .00       .00       .00       .00       .00       .00       .00       .00       .01       .01
                   .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                   .01       .01       .02       .02       .02       .02       .19       .19       .04       .04
                   .02       .02       .01       .01       .01       .01       .01       .01       .01       .01
```

```
      .01    .01    .01    .01    .01    .01    .01    .01    .00    .00
      .00    .00    .00    .00    .00    .00    .00    .00    .00    .00
      .00    .00    .00    .00    .00    .00    .00    .00    .00    .00
      .00    .00    .00    .00    .00    .00
```

8 JD INDEX STORM NO. 2

```
      STRM      3.72  PRECIPITATION DEPTH
      TRDA      3.00  TRANSPOSITION DRAINAGE AREA
```

0 PI PRECIPITATION PATTERN

```
      .00    .00    .00    .00    .00    .00    .00    .00    .00    .00
      .00    .00    .00    .00    .00    .00    .00    .00    .01    .01
      .00    .00    .00    .00    .00    .00    .00    .00    .01    .01
      .01    .01    .01    .01    .01    .01    .01    .01    .01    .01
      .01    .01    .02    .02    .02    .02    .19    .19    .04    .04
      .02    .02    .01    .01    .01    .01    .01    .01    .01    .01
      .01    .01    .01    .01    .01    .01    .01    .01    .00    .00
      .00    .00    .00    .00    .00    .00    .00    .00    .00    .00
      .00    .00    .00    .00    .00    .00    .00    .00    .00    .00
      .00    .00    .00    .00    .00    .00
```

19 JD INDEX STORM NO. 3

```
      STRM      3.65  PRECIPITATION DEPTH
      TRDA     10.00  TRANSPOSITION DRAINAGE AREA
```

0 PI PRECIPITATION PATTERN

```
      .00    .00    .00    .00    .00    .00    .00    .00    .00    .00
      .00    .00    .00    .00    .00    .00    .00    .00    .01    .01
      .00    .00    .00    .00    .00    .00    .00    .00    .01    .01
      .01    .01    .01    .01    .01    .01    .01    .01    .01    .01
      .01    .01    .02    .02    .02    .02    .19    .19    .04    .04
      .02    .02    .01    .01    .01    .01    .01    .01    .01    .01
      .01    .01    .01    .01    .01    .01    .01    .01    .00    .00
      .00    .00    .00    .00    .00    .00    .00    .00    .00    .00
      .00    .00    .00    .00    .00    .00    .00    .00    .00    .00
      .00    .00    .00    .00    .00    .00
```

20 JD INDEX STORM NO. 4

```
      STRM      3.50  PRECIPITATION DEPTH
      TRDA     20.00  TRANSPOSITION DRAINAGE AREA
```

0 PI PRECIPITATION PATTERN

```
      .00    .00    .00    .00    .00    .00    .00    .00    .00    .00
      .00    .00    .00    .00    .00    .00    .00    .00    .01    .01
      .00    .00    .00    .00    .00    .00    .00    .00    .01    .01
      .01    .01    .01    .01    .01    .01    .01    .01    .01    .01
      .01    .01    .02    .02    .02    .02    .19    .19    .04    .04
      .02    .02    .01    .01    .01    .01    .01    .01    .01    .01
      .01    .01    .01    .01    .01    .01    .01    .01    .00    .00
      .00    .00    .00    .00    .00    .00    .00    .00    .00    .00
      .00    .00    .00    .00    .00    .00    .00    .00    .00    .00
      .00    .00    .00    .00    .00    .00
```

21 JD INDEX STORM NO. 5

```
      STRM      3.42  PRECIPITATION DEPTH
      TRDA     30.00  TRANSPOSITION DRAINAGE AREA
```

0 PI PRECIPITATION PATTERN

```
      .00    .00    .00    .00    .00    .00    .00    .00    .00    .00
      .00    .00    .00    .00    .00    .00    .00    .00    .01    .01
```

.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.19	.19	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00				

22 JD INDEX STORM NO. 6

STRM 3.34 PRECIPITATION DEPTH

TRDA 50.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.19	.19	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00				

23 JD INDEX STORM NO. 7

STRM 3.23 PRECIPITATION DEPTH

TRDA 100.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.19	.19	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00				

24 JD INDEX STORM NO. 8

STRM 3.15 PRECIPITATION DEPTH

TRDA 150.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.19	.19	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00				

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	SA	1222.	12.25	226.	57.	19.	2.19		
+	HYDROGRAPH AT	SAH65	5001.	12.75	1249.	316.	105.	10.27		
+	HYDROGRAPH AT	SAH80	1620.	12.25	294.	77.	26.	2.23		
+	ROUTED TO	RAH81	1181.	12.75	291.	76.	26.	2.23		
+									4.01	12.75
+	HYDROGRAPH AT	SAH85	1469.	12.50	298.	77.	26.	2.54		
+	2 COMBINED AT	CAH86	2253.	12.50	580.	152.	51.	4.77		
+	HYDROGRAPH AT	SAH90	1429.	12.25	211.	56.	19.	1.52		
+	2 COMBINED AT	CAH91	3099.	12.50	782.	205.	69.	6.29		
+	ROUTED TO	RAH92	3003.	12.50	781.	205.	69.	6.29		
+									3.43	12.50
+	HYDROGRAPH AT	SAH95	762.	12.25	101.	26.	9.	.89		
+	2 COMBINED AT	CAH96	3360.	12.50	876.	229.	77.	7.18		
+	HYDROGRAPH AT	SAH100	763.	12.25	113.	29.	10.	.94		
+	4 COMBINED AT	NULL	9169.	12.50	2278.	585.	195.	20.58		
+	HYDROGRAPH AT	SAH120	1787.	12.50	375.	98.	33.	2.89		
+	HYDROGRAPH AT	SAH125	705.	12.25	94.	24.	8.	.81		
+	HYDROGRAPH AT	SAJ140	340.	12.00	38.	10.	3.	.34		
	4 COMBINED AT									

+		NULL	11085.	12.50	2695.	693.	231.	24.62	
	HYDROGRAPH AT								
+		SAI150	1570.	12.25	263.	70.	23.	1.98	
	HYDROGRAPH AT								
+		SAI155	1328.	12.25	212.	56.	19.	1.51	
	2 COMBINED AT								
+		CAI157	2882.	12.25	472.	126.	42.	3.49	
	ROUTED TO								
+		RAI159	2004.	12.50	470.	126.	42.	3.49	
+									3.60 12.50
	HYDROGRAPH AT								
+		SAI160	1440.	12.25	217.	55.	18.	1.92	
	2 COMBINED AT								
+		CAI162	3056.	12.50	679.	178.	60.	5.41	
	ROUTED TO								
+		RAI164	2926.	12.50	678.	178.	60.	5.41	
+									3.53 12.50
	HYDROGRAPH AT								
+		SAI165	540.	12.00	62.	16.	5.	.55	
	2 COMBINED AT								
+		CAI167	3096.	12.50	738.	193.	64.	5.96	
	ROUTED TO								
+		RAI169	2822.	12.75	734.	193.	64.	5.96	
+									3.14 12.75
	HYDROGRAPH AT								
+		SAI170	736.	12.50	148.	40.	13.	1.28	
	2 COMBINED AT								
+		CAI171	3312.	12.50	874.	230.	77.	7.24	
	HYDROGRAPH AT								
+		SAJ175	893.	12.25	125.	34.	11.	.97	
	3 COMBINED AT								
+		NULL	14227.	12.50	3517.	912.	304.	32.83	
	HYDROGRAPH AT								
+		SAB180	1049.	12.25	157.	43.	14.	1.09	
	ROUTED TO								
+		RAB182	794.	12.50	156.	43.	14.	1.09	
+									1.64 12.50
	HYDROGRAPH AT								
+		SAB185	1080.	12.25	179.	47.	16.	1.31	
	2 COMBINED AT								
+		CAB186	1759.	12.25	334.	89.	30.	2.40	

	HYDROGRAPH AT								
+		SAB190	1776.	12.25	272.	73.	25.	1.90	
	ROUTED TO								
		RAB192	1489.	12.25	272.	73.	25.	1.90	
+									3.92 12.25
	2 COMBINED AT								
+		CAB193	3216.	12.25	599.	161.	54.	4.30	
	ROUTED TO								
+		RAB194	3072.	12.50	599.	161.	54.	4.30	
+									5.30 12.50
	HYDROGRAPH AT								
+		SAB195	1693.	12.25	271.	71.	24.	2.18	
	2 COMBINED AT								
+		CAB196	4353.	12.50	858.	229.	76.	6.48	
	HYDROGRAPH AT								
+		SAB200	761.	12.25	112.	30.	10.	.81	
	ROUTED TO								
+		RAB201	676.	12.25	112.	30.	10.	.81	
+									2.98 12.25
	HYDROGRAPH AT								
+		SAB205	1159.	12.25	177.	48.	16.	1.25	
	2 COMBINED AT								
+		CAB206	1829.	12.25	288.	77.	26.	2.06	
	ROUTED TO								
+		RAB207	1701.	12.25	288.	77.	26.	2.06	
+									3.80 12.25
	2 COMBINED AT								
+		CAB208	5856.	12.50	1133.	303.	101.	8.54	
	ROUTED TO								
+		RAB209	5394.	12.50	1132.	303.	101.	8.54	
+									5.01 12.50
	HYDROGRAPH AT								
+		SAB210	1273.	12.50	252.	66.	22.	2.19	
	2 COMBINED AT								
+		CAB211	6569.	12.50	1363.	363.	121.	10.73	
	HYDROGRAPH AT								
+		SAJ215	584.	12.00	57.	15.	5.	.47	

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

HEC-1 OUTPUT
SOLS WASH AREA
100-YEAR RETURN PERIOD

```
*****************************************
*                                       *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *
*            FEBRUARY 1981              *
*          REVISED 02 AUG 88            *
*                                       *
*  RUN DATE  10/20/1992  TIME  08:14:48 *
*                                       *
*****************************************
```

```
****************************************
*                                      *
*    U.S. ARMY CORPS OF ENGINEERS      *
*  THE HYDROLOGIC ENGINEERING CENTER   *
*          609 SECOND STREET           *
*       DAVIS, CALIFORNIA 95616        *
*           (916) 551-1748             *
*                                      *
****************************************
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X     X  XXXXXXX   XXXXX          X
X     X  X        X     X        XX
X     X  X        X              X
XXXXXXX  XXXX     X       XXXXX  X
X     X  X        X              X
X     X  X        X     X        X
X     X  XXXXXXX   XXXXX         XXX
```

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

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

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

  1           ID        WICKENBURG ADMS - CONTRACT FCD 89-79
  2           ID        BLACK & VEATCH PN 17676, COE & VAN LOO PN 1197-02
  3           ID        WASHES AH (SOLS WASH UNNAMED TRIBS), AB (FLYING E),
  4           ID        AI (HARTMAN), PORTIONS OF AJ (LOCAL PONDING AT AT&SF TRACKS), AND
  5           ID        A (AMIR)
  6           ID        SCS TYPE II STORM; 100-YR, 24-HR DEPTH; PHOENIX MOUNTAIN S-GRAPH
  7           ID        AREAL REDUCTION FACTORS PER NWS HYDRO-40
  8           ID        SOLS WASH AREA
              *DIAGRAM
  9           IT      15                    300
 10           IO       5
 11           IN      30
 12           JD    4.30     .01
 13           PC    .000    .005    .011    .016    .022    .028    .035    .041    .048    .056
 14           PC    .068    .071    .080    .089    .098    .109    .120    .133    .147    .163
 15           PC    .181    .204    .235    .283    .663    .735    .772    .799    .820    .838
 16           PC    .854    .868    .880    .891    .902    .912    .921    .929    .937    .945
 17           PC    .952    .959    .965    .972    .978    .984    .989    .995   1.000
 18           JD    4.21     3.0
 19           JD    4.13    10.0
 20           JD    3.96    20.0
 21           JD    3.87    30.0
 22           JD    3.78    50.0
 23           JD    3.66   100.0
 24           JD    3.57   150.0

 25           KK      SA AMIR WASH
 26           KM        SUB-BASIN A:  AMIR WASH
 27           BA    2.19
 28           LG     .15     .34    4.25     .42    1.40
 29           UI    279.   1025.   1571.    936.    654.    417.    274.    180.    115.     81.
 30           UI     37.     32.     32.      0.      0.      0.      0.      0.      0.      0.
 31           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 32           KK   SAH65 UNNAMED SOLS WASH TRIB AH2
 33           KM        SUB-BASIN AH65:  UNNAMED SOLS WASH TRIB AH2
 34           BA   10.27
 35           LG     .35     .30    3.51     .25    1.30
 36           UI    511.   1918.   3474.   5192.   3753.   2768.   2209.   1652.   1241.    976.
 37           UI    690.    553.    392.    294.    250.    163.     98.     98.     98.     98.
 38           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 39           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 40           KK   SAH80 SOLS WASH TRIB AH3 ABOVE US 60
 41           KM        SUB-BASIN AH80:  BEGIN UNNAMED SOLS WASH TRIB AH3
 42           BA    2.23
 43           LG     .15     .29    3.59     .27    4.50
 44           UI    318.   1151.   1630.    943.    629.    407.    246.    163.    102.     67.
 45           UI     34.     34.      0.      0.      0.      0.      0.      0.      0.      0.
 46           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  47          KK   RAH81
  48          KM        ROUTE SAH80 TO CAH86
  49          RS       2    FLOW      -1
  50          RC   0.035   0.030   0.035   22500  0.0076
  51          RX     200     435     485     490     510     515     565     700
  52          RY       8       7       5       0       0       5       7       8

  53          KK   SAH85
  54          KM        SUB-BASIN AH85
  55          BA    2.54
  56          LG     .35     .32    3.85     .32    3.90
  57          UI    237.    900.   1591.   1179.    819.    578.    397.    270.    192.    129.
  58          UI     83.     62.     32.     32.     32.      0.      0.      0.      0.      0.
  59          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

  60          KK   CAH86 SOLS WASH TRIB AH3 FROM SMALL RB TRIBUTARY TO HWY 60
  61          KM        COMBINE RAH81 AND SAH85:  Q ABOVE TRIBUTARY, BELOW HWY 60 BRIDGE
  62          HC       2

  63          KK   SAH90
  64          KM        SUB-BASIN AH90: RIGHT BANK TRIB TO AH3
  65          BA    1.52
  66          LG     .15     .30    3.87     .24    6.50
  67          UI    478.   1489.    903.    500.    264.    142.     75.     33.     33.      0.
  68          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
  69          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

  70          KK   CAH91
  71          KM        COMBINE HYDROGRAPHS CAH86 & SAH90:  Q JUST BELOW TRIBUTARY
  72          HC       2

  73          KK   RAH92
  74          KM        ROUTE HYDROGRAPH CAH91 TO CAH96
  75          RS       1    FLOW      -1
  76          RC   0.040   0.030   0.040    7000  0.0114
  77          RX     375     400     465     475     525     535     600     625
  78          RY      10       6       3       0       0       3       6      10

  79          KK   SAH95
  80          KM        SUB-BASIN AH95
  81          BA     .89
  82          LG     .15     .32    4.06     .36    2.00
  83          UI    405.    974.    486.    231.    110.     50.     23.      0.      0.      0.
  84          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

  85          KK   CAH96 SOLS WASH TRIB AH3 MOUTH TO RB TRIB
  86          KM        COMBINE HYDROGRAPHS SAH95 & RAH92:  DISCHARGE TO SOLS WASH
  87          HC       2
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 88           KK  SAH100 SOLS WASH TRIB AH4
 89           KM        SUB-BASIN AH100:  UNNAMED SOLS WASH TRIB AH4
 90           BA     .94
 91           LG     .15     .32    3.79     .30    1.30
 92           UI    216.    773.    606.    358.    206.    116.     66.     40.     18.     18.
 93           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 94           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 95           KK    NULL
 96           KM        COMBINE WASHES A, AH2, AH3, AH4 TO REDUCE NUMBER OF FREE HYDROGRAPHS
 97           HC       4

 98           KK  SAH120 SOLS WASH TRIB AH5
 99           KM        SUB-BASIN AH120:  UNNAMED SOLS WASH TRIB AH5
100           BA    2.89
101           LG     .15     .31    3.64     .28    5.20
102           UI    253.    954.   1675.   1425.    943.    685.    463.    336.    221.    159.
103           UI    108.     90.     35.     35.     35.     35.      0.      0.      0.      0.
104           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

105           KK  SAH125
106           KM        SUB-BASIN AH125:  UNNAMED SOLS WASH TRIB - NOT STUDIED
107           BA     .81
108           LG     .15     .32    3.81     .31     .00
109           UI    273.    815.    476.    257.    132.     68.     35.     18.      0.      0.
110           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

111           KK  SAJ140
112           KM        SUB-BASIN AJ140:  PONDING NEAR AT&SF RR TRACKS
113           BA     .34
114           LG     .15     .32    4.01     .35     .00
115           UI    264.    388.    142.     53.     19.     11.      0.      0.      0.      0.
116           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

117           KK    NULL
118           KM        COMBINE PREVIOUS NULL W/AH5, UNSTUDIED, AND PONDING HYDROGRAPHS
119           HC       4

120           KK  SAI150
121           KM        SUB-BASIN SAI150:  BEGIN HARTMAN WASH
122           BA    1.98
123           LG     .15     .30    3.65     .29    7.70
124           UI    365.   1300.   1423.    806.    484.    297.    178.    106.     65.     34.
125           UI     34.      0.      0.      0.      0.      0.      0.      0.      0.      0.
126           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

127           KK  SAI155
128           KM        SUB-BASIN SAI155:  HARTMAN WASH
129           BA    1.51
130           LG     .15     .29    3.51     .26    8.00
131           UI    350.   1253.    969.    572.    329.    186.    104.     63.     29.     29.
132           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
133           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 134          KK  CAI157
 135          KM        COMBINE HYDROGRAPHS SAI150 & SAI155
 136          HC       2

 137          KK  RAI159
 138          KM        ROUTE HYDROGRAPH CAI157 THROUGH AI160 TO CAI162
 139          RS       1    FLOW      -1
 140          RC   0.033   0.025   0.033 13992.0   0.010
 141          RX       0     0.5    60.5    63.5    93.5    96.5   156.5     157
 142          RY       5     3.6     3.0       0       0     3.0     3.6       5

 143          KK  SAI160
 144          KM        SUB-BASIN SAI160
 145          BA    1.92
 146          LG     .15     .31    4.02     .35    1.10
 147          UI    399.   1438.   1313.    755.    443.    252.    157.     89.     41.     35.
 148          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 149          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 150          KK  CAI162 HARTMAN WASH AT US 60
 151          KM        COMBINE HYDROGRAPHS SAI160 & RAI159 (HARTMAN WASH AT US HIGHWAY 60)
 152          HC       2

 153          KK  RAI164
 154          KM        ROUTE HYDROGRAPH CAI162 TO OUTLET OF AI165 (CAI167)
 155          RS       1    FLOW      -1
 156          RC   0.033   0.025   0.033  6019.2  0.0140
 157          RX       0     0.5    80.5    83.5   123.5   126.5   206.5     207
 158          RY       5     3.8     3.0     0.0     0.0     3.0     3.8       5

 159          KK  SAI165
 160          KM        SUB-BASIN SAI165
 161          BA     .55
 162          LG     .15     .32    3.94     .34     .00
 163          UI    392.    634.    244.     94.     35.     17.      0.      0.      0.      0.
 164          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 165          KK  CAI167 HARTMAN WASH NR SPEC PROB AREA
 166          KM        COMBINE HYDROGRAPHS SAI165 & RAI164
 167          HC       2

 168          KK  RAI169
 169          KM        ROUTE HYDROGRAPH CAI167 THROUGH AI170 TO CAI171
 170          RS       1    FLOW      -1
 171          RC   0.033   0.025   0.033 13992.0  0.0140
 172          RX       0      10     110     113     163     166     266     276
 173          RY       5       4     3.0     0.0     0.0     3.0       4       5

 174          KK  SAI170
 175          KM        SUB-BASIN SAI170
 176          BA    1.28
 177          LG     .14     .32    4.28     .42    7.20
 178          UI    151.    562.    902.    552.    392.    252.    174.    111.     75.     46.
 179          UI     31.     18.     18.     18.      0.      0.      0.      0.      0.      0.
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 180          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 181          KK  CAI171 HARTMAN WASH AT SOLS
 182          KM        COMBINE HYDROGRAPHS SAI170 & RAI169:  END HARTMAN WASH
 183          HC       2

 184          KK  SAJ175
 185          KM        SUB-BASIN AJ175: PONDING AT AT&SF TRACKS
 186          BA     .97
 187          LG     .14     .32    3.85     .32    8.10
 188          UI    504.   1090.    503.    228.    101.     43.     26.      0.      0.      0.
 189          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 190          KK    NULL
 191          KM        COMBINE HARTMAN AND PONDING W/NULL TO REDUCE NUMBER OF FREE HYDROGRAPHS
 192          HC       3

 193          KK  SAB180
 194          KM        SUB-BASIN AB180:  BEGIN TWIN PEAKS WASH
 195          BA    1.09
 196          LG     .15     .29    3.81     .25   10.90
 197          UI    365.   1093.    641.    347.    179.     93.     48.     24.      0.      0.
 198          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 199          KK  RAB182
 200          KM        ROUTE SAB180 DOWNSTREAM THROUGH SAB185 TO CAB186
 201          RS       1    FLOW      -1
 202          RC   0.040   0.025   0.040   12500  0.0120
 203          RX     400     435     475     480     520     525     565     600
 204          RY       8       6       3       0       0       3       6       8

 205          KK  SAB185
 206          KM        SUB-BASIN SAB185
 207          BA    1.31
 208          LG     .15     .30    3.51     .26    5.80
 209          UI    251.    896.    930.    528.    314.    189.    113.     67.     38.     23.
 210          UI     23.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 211          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 212          KK  CAB186 LOWER TWIN PEAKS WASH
 213          KM        COMBINE SAB185, & RAB182
 214          HC       2

 215          KK  SAB190
 216          KM        SUB-BASIN SAB190:  YUCCA TANK INFLOW
 217          BA    1.90
 218          LG     .15     .28    4.51     .23    9.70
 219          UI    555.   1806.   1142.    647.    355.    191.    106.     43.     40.      0.
 220          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 221          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 222          KK  RAB192
 223          KM        ROUTE SAB190 THROUGH SAB195 TO CAB193
 224          RS       1    FLOW      -1
 225          RC    .035    .030   0.035    6500   .0077
 226          RX     400     460     485     490     510     515     540     600
 227          RY       8       6       2       0       0       2       6       8

 228          KK  CAB193
 229          KM        COMBINE CAB186, & RAB192
 230          HC       2

 231          KK  RAB194
 232          KM        ROUTE CAB193 THRU SAB195 TO JUNCTURE NEAR TRAILER PARK CAB196
 233          RS       1    FLOW      -1
 234          RC    .035    .030    .035    9000   .0167
 235          RX     400     460     485     490     510     515     540     600
 236          RY       8       6       4       0       0       4       6       8

 237          KK  SAB195
 238          KM        SUB-BASIN SAB195
 239          BA    2.18
 240          LG     .15     .31    3.86     .32    5.20
 241          UI    432.   1547.   1527.    871.    513.    304.    183.    108.     57.     39.
 242          UI     39.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 243          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 244          KK  CAB196
 245          KM        COMBINE SAB195, & RAB194
 246          HC       2

 247          KK  SAB200
 248          KM        SUB-BASIN SAB200:  LAKE GEORGE INFLOW
 249          BA    0.81
 250          LG     .15     .29    3.58     .27    7.70
 251          UI    263.    803.    479.    262.    137.     72.     38.     18.     18.      0.
 252          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 253          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 254          KK  RAB201
 255          KM        ROUTE DOWNSTREAM FROM LAKE GEORGE TO FLYING E TANK CAB206
 256          RS       1    FLOW      -1
 257          RC    .030    .035    .030    5000    .016
 258          RX     425     450     490     495     505     510     550     575
 259          RY       6       5       2       0       0       2       5       6

 260          KK  SAB205
 261          KM        SUB-BASIN SAB205:  HOLLY WASH
 262          BA    1.25
 263          LG     .15     .29    3.54     .26    9.20
 264          UI    357.   1175.    755.    431.    237.    128.     71.     31.     26.      0.
 265          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 266          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 267          KK  CAB206
 268          KM        COMBINE RAB201 & SAB205 AT FLYING E TANK
 269          HC       2

 270          KK  RAB207
 271          KM        ROUTE CAB206 DOWNSTREAM FROM FLYING E TANK TO TRAILER PARK CAB208
 272          RS       1    FLOW      -1
 273          RC    .035    .030    .035    5000    .016
 274          RX     400     460     485     490     510     515     540     600
 275          RY       8       6       3       0       0       3       6       8

 276          KK  CAB208 FLYING E WASH ABOVE US 60
 277          KM        COMBINE CAB196, & RAB207:  FLYING E WASH ABOVE US 60
 278          HC       2

 279          KK  RAB209
 280          KM        ROUTE CAB208 THROUGH SAB210 TO CAB211
 281          RS       1    FLOW      -1
 282          RC    .040    .030    .040   10000   .0155
 283          RX     400     425     475     480     520     525     575     600
 284          RY       9       6       3       0       0       3       6       9

 285          KK  SAB210
 286          KM        SUB-BASIN SAB210
 287          BA    2.19
 288          LG     .14     .32    4.09     .37    4.00
 289          UI    227.    867.   1480.    964.    691.    463.    326.    207.    144.     96.
 290          UI     75.     30.     29.     29.      0.      0.      0.      0.      0.      0.
 291          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 292          KK  CAB211
 293          KM        COMBINE SAB210 & RAB209 AT CAB211:  FLYING E DISCHARGE TO SOLS WASH
 294          HC       2

 295          KK  SAJ215
 296          KM        SUB-BASIN AJ215:  PONDING AT AT&SF RR TRACKS
 297          BA     .47
 298          LG     .14     .32    4.04     .36    6.00
 299          UI    708.    390.     91.     23.      0.      0.      0.      0.      0.      0.
 300          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 301          ZZ
```

SCHEMATIC DIAGRAM OF STREAM NETWORK

```
INPUT
LINE     (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

 0.      (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

25          SA
             .
             .
32           .       SAH65
             .          .
             .          .
40           .          .      SAH80
             .          .         V
             .          .         V
47           .          .      RAH81
             .          .         .
             .          .         .
53           .          .         .      SAH85
             .          .         .         .
             .          .         .         .
60           .          .      CAH86............
             .          .         .
             .          .         .
63           .          .         .      SAH90
             .          .         .         .
             .          .         .         .
70           .          .      CAH91............
             .          .         V
             .          .         V
73           .          .      RAH92
             .          .         .
             .          .         .
79           .          .         .      SAH95
             .          .         .         .
             .          .         .         .
85           .          .      CAH96............
             .          .         .
             .          .         .
88           .          .         .     SAH100
             .          .         .         .
             .          .         .         .
95      NULL.................................
             .
             .
98           .      SAH120
             .          .
             .          .
105          .          .     SAH125
             .          .         .
             .          .         .
111          .          .         .     SAJ140
             .          .         .         .
             .          .         .         .
117     NULL.................................
             .
             .
120          .      SAI150
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127       .          .      SAI155
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134       .     CAI157............
          .          V
          .          V
137       .     RAI159
          .          .
          .          .
143       .          .      SAI160
          .          .          .
          .          .          .
150       .     CAI162............
          .          V
          .          V
153       .     RAI164
          .          .
          .          .
159       .          .      SAI165
          .          .          .
          .          .          .
165       .     CAI167............
          .          V
          .          V
168       .     RAI169
          .          .
          .          .
174       .          .      SAI170
          .          .          .
          .          .          .
181       .     CAI171............
          .          .
          .          .
184       .          .      SAJ175
          .          .          .
          .          .          .
190       NULL........................
          .
          .
193       .     SAB180
          .          V
          .          V
199       .     RAB182
          .          .
          .          .
205       .          .      SAB185
          .          .          .
          .          .          .
212       .     CAB186............
          .          .
          .          .
215       .          .      SAB190
          .          .          V
          .          .          V
222       .          .      RAB192
          .          .          .
          .          .          .
228       .     CAB193............
          .          V
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                .          V
231             .      RAB194
                .          .
                .          .
237             .          .      SAB195
                .          .          .
                .          .          .
244             .      CAB196............
                .          .
                .          .
247             .          .      SAB200
                .          .          V
                .          .          V
254             .          .      RAB201
                .          .          .
                .          .          .
260             .          .          .      SAB205
                .          .          .          .
                .          .          .          .
267             .          .      CAB206............
                .          .          V
                .          .          V
270             .          .      RAB207
                .          .          .
                .          .          .
276             .      CAB208............
                .          V
                .          V
279             .      RAB209
                .          .
                .          .
285             .          .      SAB210
                .          .          .
                .          .          .
292             .      CAB211............
                .          .
                .          .
295             .          .      SAJ215
```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

```
****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*            FEBRUARY 1981             *
*          REVISED 02 AUG 88           *
*                                      *
* RUN DATE  10/20/1992  TIME  08:14:48 *
*                                      *
****************************************
```

```
****************************************
*                                      *
*    U.S. ARMY CORPS OF ENGINEERS      *
*  THE HYDROLOGIC ENGINEERING CENTER   *
*          609 SECOND STREET           *
*       DAVIS, CALIFORNIA 95616        *
*          (916) 551-1748              *
*                                      *
****************************************
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```
                    WICKENBURG ADMS - CONTRACT FCD 89-79
                    BLACK & VEATCH PN 17676, COE & VAN LOO PN 1197-02
                    WASHES AH (SOLS WASH UNNAMED TRIBS), AB (FLYING E),
                    AI (HARTMAN), PORTIONS OF AJ (LOCAL PONDING AT AT&SF TRACKS), AND
                    A (AMIR)
                    SCS TYPE II STORM; 100-YR, 24-HR DEPTH; PHOENIX MOUNTAIN S-GRAPH
                    AREAL REDUCTION FACTORS PER NWS HYDRO-40
                    SOLS WASH AREA

 10 IO        OUTPUT CONTROL VARIABLES
                    IPRNT          5  PRINT CONTROL
                    IPLOT          0  PLOT CONTROL
                    QSCAL         0.  HYDROGRAPH PLOT SCALE

   IT         HYDROGRAPH TIME DATA
                     NMIN         15  MINUTES IN COMPUTATION INTERVAL
                    IDATE     1    0  STARTING DATE
                    ITIME       0000  STARTING TIME
                       NQ        300  NUMBER OF HYDROGRAPH ORDINATES
                   NDDATE     4    0  ENDING DATE
                   NDTIME       0245  ENDING TIME
                    ICENT         19  CENTURY MARK

              COMPUTATION INTERVAL     .25 HOURS
                   TOTAL TIME BASE   74.75 HOURS

        ENGLISH UNITS
             DRAINAGE AREA         SQUARE MILES
             PRECIPITATION DEPTH   INCHES
             LENGTH, ELEVATION     FEET
             FLOW                  CUBIC FEET PER SECOND
             STORAGE VOLUME        ACRE-FEET
             SURFACE AREA          ACRES
             TEMPERATURE           DEGREES FAHRENHEIT

 12 JD        INDEX STORM NO. 1
                    STRM       4.30  PRECIPITATION DEPTH
                    TRDA        .01  TRANSPOSITION DRAINAGE AREA

 13 PI          PRECIPITATION PATTERN
                   .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                   .00       .00       .00       .00       .00       .00       .00       .00       .01       .01
                   .00       .00       .00       .00       .00       .00       .00       .00       .01       .01
                   .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                   .01       .01       .02       .02       .02       .02       .19       .19       .04       .04
                   .02       .02       .01       .01       .01       .01       .01       .01       .01       .01
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.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00				

18 JD INDEX STORM NO. 2

STRM 4.21 PRECIPITATION DEPTH

TRDA 3.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.19	.19	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
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.00	.00	.00	.00	.00	.00				

19 JD INDEX STORM NO. 3

STRM 4.13 PRECIPITATION DEPTH

TRDA 10.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.19	.19	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00				

20 JD INDEX STORM NO. 4

STRM 3.96 PRECIPITATION DEPTH

TRDA 20.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.19	.19	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
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.00	.00	.00	.00	.00	.00				

21 JD INDEX STORM NO. 5

STRM 3.87 PRECIPITATION DEPTH

TRDA 30.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
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.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.19	.19	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
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.00	.00	.00	.00	.00	.00				

22 JD INDEX STORM NO. 6

STRM 3.78 PRECIPITATION DEPTH

TRDA 50.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.19	.19	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
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.00	.00	.00	.00	.00	.00				

23 JD INDEX STORM NO. 7

STRM 3.66 PRECIPITATION DEPTH

TRDA 100.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.19	.19	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
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.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00				

24 JD INDEX STORM NO. 8

STRM 3.57 PRECIPITATION DEPTH

TRDA 150.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.19	.19	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
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.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00				

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	SA	1500.	12.25	276.	70.	23.	2.19		
+	HYDROGRAPH AT	SAH65	6031.	12.75	1524.	385.	129.	10.27		
+	HYDROGRAPH AT	SAH80	1908.	12.25	354.	92.	31.	2.23		
+	ROUTED TO	RAH81	1419.	12.75	351.	92.	31.	2.23		
+									4.56	12.75
+	HYDROGRAPH AT	SAH85	1764.	12.50	358.	93.	31.	2.54		
+	2 COMBINED AT	CAH86	2741.	12.50	699.	182.	61.	4.77		
+	HYDROGRAPH AT	SAH90	1680.	12.25	253.	66.	22.	1.52		
+	2 COMBINED AT	CAH91	3768.	12.50	941.	246.	82.	6.29		
+	ROUTED TO	RAH92	3616.	12.50	940.	246.	82.	6.29		
+									3.82	12.50
+	HYDROGRAPH AT	SAH95	914.	12.25	121.	31.	10.	.89		
+	2 COMBINED AT	CAH96	4046.	12.50	1054.	275.	92.	7.18		
+	HYDROGRAPH AT	SAH100	907.	12.25	137.	35.	12.	.94		
+	4 COMBINED AT	NULL	11078.	12.50	2780.	712.	238.	20.58		
+	HYDROGRAPH AT	SAH120	2129.	12.50	454.	118.	39.	2.89		
+	HYDROGRAPH AT	SAH125	840.	12.25	114.	28.	9.	.81		
+	HYDROGRAPH AT	SAJ140	408.	12.00	46.	11.	4.	.34		
	4 COMBINED AT									

+		NULL	13374.	12.50	3283.	842.	281.	24.62	
	HYDROGRAPH AT								
+		SAI150	1855.	12.25	317.	84.	28.	1.98	
	HYDROGRAPH AT								
+		SAI155	1559.	12.25	253.	67.	22.	1.51	
	2 COMBINED AT								
+		CAI157	3395.	12.25	566.	151.	50.	3.49	
	ROUTED TO								
+		RAI159	2381.	12.50	565.	150.	50.	3.49	
+									3.82 12.50
	HYDROGRAPH AT								
+		SAI160	1725.	12.25	260.	66.	22.	1.92	
	2 COMBINED AT								
+		CAI162	3641.	12.50	815.	213.	71.	5.41	
	ROUTED TO								
+		RAI164	3458.	12.50	815.	213.	71.	5.41	
+									3.77 12.50
	HYDROGRAPH AT								
+		SAI165	647.	12.00	75.	19.	6.	.55	
	2 COMBINED AT								
+		CAI167	3660.	12.50	886.	231.	77.	5.96	
	ROUTED TO								
+		RAI169	3239.	12.75	882.	231.	77.	5.96	
+									3.38 12.75
	HYDROGRAPH AT								
+		SAI170	890.	12.50	179.	48.	16.	1.28	
	2 COMBINED AT								
+		CAI171	3802.	12.75	1051.	276.	92.	7.24	
	HYDROGRAPH AT								
+		SAJ175	1058.	12.25	149.	40.	13.	.97	
	3 COMBINED AT								
+		NULL	17018.	12.50	4276.	1105.	369.	32.83	
	HYDROGRAPH AT								
+		SAB180	1231.	12.25	187.	51.	17.	1.09	
	ROUTED TO								
+		RAB182	951.	12.50	186.	51.	17.	1.09	
+									1.85 12.50
	HYDROGRAPH AT								
+		SAB185	1270.	12.25	214.	56.	19.	1.31	
	2 COMBINED AT								
+		CAB186	2099.	12.25	399.	106.	35.	2.40	

	HYDROGRAPH AT								
+		SAB190	2085.	12.25	325.	87.	29.	1.90	
	ROUTED TO								
		RAB192	1761.	12.25	324.	87.	29.	1.90	
									4.28 12.25
	2 COMBINED AT								
+		CAB193	3824.	12.25	716.	192.	64.	4.30	
	ROUTED TO								
+		RAB194	3622.	12.50	716.	192.	64.	4.30	
+									5.74 12.50
	HYDROGRAPH AT								
+		SAB195	2011.	12.25	324.	85.	28.	2.18	
	2 COMBINED AT								
+		CAB196	5152.	12.50	1026.	273.	91.	6.48	
	HYDROGRAPH AT								
+		SAB200	896.	12.25	134.	36.	12.	.81	
	ROUTED TO								
+		RAB201	799.	12.25	134.	36.	12.	.81	
+									3.19 12.25
	HYDROGRAPH AT								
+		SAB205	1361.	12.25	212.	57.	19.	1.25	
	2 COMBINED AT								
		CAB206	2152.	12.25	345.	92.	31.	2.06	
	ROUTED TO								
+		RAB207	1989.	12.25	345.	92.	31.	2.06	
+									4.14 12.25
	2 COMBINED AT								
+		CAB208	6943.	12.50	1355.	361.	120.	8.54	
	ROUTED TO								
+		RAB209	6404.	12.50	1354.	361.	120.	8.54	
+									5.46 12.50
	HYDROGRAPH AT								
+		SAB210	1528.	12.50	303.	79.	26.	2.19	
	2 COMBINED AT								
+		CAB211	7820.	12.50	1633.	433.	145.	10.73	
	HYDROGRAPH AT								
+		SAJ215	697.	12.00	68.	18.	6.	.47	

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

HEC-1 OUTPUT
WEST TRIBUTARIES AREA
2-YEAR RETURN PERIOD

FN = W1-2

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****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*      BY THE COE IN FEBRUARY 1981     *
*           REVISED 02 AUG 88          *
*                                      *
*  RUN DATE  04/23/1991  TIME  12:01:23 *
*                                      *
****************************************
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```
****************************************
*                                      *
*     DODSON AND ASSOCIATES, INC.      *
*   HYDROLOGIST AND CIVIL ENGINEERS    *
*      7015 W TIDWELL SUITE 107        *
*        HOUSTON, TEXAS  77092         *
*           (713) 895-8322             *
*                                      *
****************************************
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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

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

  1           ID        WICKENBURG ADMS - CONTRACT FCD 89-79
  2           ID        WASHES W (TURTLEBACK), R (CEMETARY), AE,AD, AC (TRIB. TO SOLS WASH)
  3           ID        SCS TYPE 11 STORM - 24 HR: PHOENIX MOUNTAIN S-GRAPH
  4           ID        AREAL REDUCTION FACTORS PER NWS HYDRO-40
  5           ID        SUNSET & SUNNYCOVE DAMS - EXISTING CONDITIONS
  6           ID         RATING CURVES FROM SCS TR20, DATE 2-5-71
  7           ID         STORAGE VOLS PER CONSTRUCTION PLANS & FIELD OBSERVED BOTTOM ELEV.
  8           ID         RATING CURVES MODIFIED TO REFLECT EXST. EMERGENCY SPILLWAYS
  9           ID        W1-2 ; 2-YEAR EVENT
              *DIAGRAM
 10           IT       6                    300
 11           IO       5
 12           IN      30
 13           JD    1.61     .01
 14           PC    .000    .005    .011    .016    .022    .028    .035    .041    .048    .056
 15           PC    .068    .071    .080    .089    .098    .109    .120    .133    .147    .163
 16           PC    .181    .204    .235    .283    .663    .735    .772    .799    .820    .838
 17           PC    .854    .868    .880    .891    .902    .912    .921    .929    .937    .945
 18           PC    .952    .959    .965    .972    .978    .984    .989    .995   1.000
 19           JD    1.58     3.0
 20           JD    1.55     10.
 21           JD    1.48    20.0
 22           JD    1.45    30.0

 23           KK     SW2
 24           KM   SUB-BASIN SW2
 25           BA    1.25
 26           LG     .15     .28    4.64     .23   14.90
 27           UI    569.   2025.   2254.   1276.    768.    474.    284.    170.    105.     53.
 28           UI     53.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 29           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 30           KK     RW4
 31           KM        TURTLEBACK WASH WITHIN SW7
 32           RS       2    FLOW      -1
 33           RC    .045    .030    .045   12780     .02
 34           RX     462     465     485     490     510     515     535     538
 35           RY      18      15      15      10      10      15      15      18

 36           KK     SW6
 37           KM   SUB-BASIN SW6
 38           BA     .98
 39           LG     .15     .28    4.54     .23   16.00
 40           UI    151.    584.    997.   1356.    826.    642.    484.    340.    266.    182.
 41           UI    139.    103.     67.     64.     26.     26.     26.     26.      0.      0.
 42           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 43           KK     SW7
 44           KM   SUB-BASIN SW7
 45           BA    1.30
 46           LG     .15     .28    4.71     .22   15.00
 47           UI    163.    617.   1111.   1661.   1175.    875.    697.    518.    392.    305.
 48           UI    215.    172.    125.     90.     80.     48.     31.     31.     31.     31.
 49           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 50           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
```

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

 51           KK     CW8
 52           HC       3

 53           KK    RW10
 54           KM        TURTLEBACK WASH WITHIN SW14
 55           RS       1    FLOW      -1
 56           RC    .045     .03    .045    5550   .0198
 57           RX     423     427     477     480     520     523     573     577
 58           RY      17      13      13      10      10      13      13      17

 59           KK    SW12
 60           KM   SUB-BASIN SW12
 61           BA     .51
 62           LG     .15     .28    3.70     .26   15.30
 63           UI    337.   1157.    780.    455.    256.    139.     78.     40.     25.      0.
 64           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 65           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 66           KK    SW14
 67           KM   SUB-BASIN SW14
 68           BA     .76
 69           LG     .15     .29    3.71     .31   13.80
 70           UI    304.   1094.   1391.    792.    502.    324.    192.    120.     78.     36.
 71           UI     31.     31.      0.      0.      0.      0.      0.      0.      0.      0.
 72           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 73           KK    CW16
 74           HC       3

 75           KK    RW18
 76           KM        TURTLEBACK WASH WITHIN SW20
 77           RS       1    FLOW      -1
 78           RC    .045     .03    .045    4100    .018
 79           RX     423     427     477     480     520     523     573     577
 80           RY      17      13      13      10      10      13      13      17

 81           KK    SW20
 82           KM   SUB-BASIN SW20
 83           BA     .23
 84           LG     .15     .29    4.12     .39   12.60
 85           UI    137.    488.    364.    216.    124.     69.     38.     23.     11.     11.
 86           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 87           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 88           KK    CW22
 89           KM    WASH "W" CONFLUENCE WITH HASSAYAMPA RIVER
 90           HC       2

 91           KK     SQ2
 92           KM   SUB-BASIN SQ2
 93           BA     .37
 94           LG     .15     .30    3.61     .25    9.10
 95           UI    239.    830.    568.    334.    189.    102.     58.     30.     18.     18.
 96           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
```

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

 97           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 98           KK     SR2
 99           KM   SUB-BASIN SR2
100           BA     .91
101           LG     .15     .29    3.55     .27    8.00
102           UI    138.    534.    914.   1258.    768.    597.    452.    318.    250.    171.
103           UI    131.     95.     65.     61.     25.     24.     24.     24.      0.      0.
104           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

105           KK     SR4
106           KM   SUB-BASIN SR4
107           BA     .47
108           LG     .15     .30    3.67     .29   10.00
109           UI    131.    491.    813.    511.    366.    239.    168.    105.     73.     47.
110           UI     34.     16.     16.     16.      0.      0.      0.      0.      0.      0.
111           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

112           KK     CR6
113           HC       2

114           KK     RR8
115           KM        CEMETARY WASH WITHIN SR10
116           RS       3    FLOW      -1
117           RC    .045     .03    .045   10800   .0176
118           RX     443     447     487     490     510     513     553     557
119           RY      17      13      13      10      10      13      13      17

120           KK    SR10
121           KM   SUB-BASIN SR10
122           BA    1.57
123           LG     .15     .30    3.94     .35    8.40
124           UI    173.    527.   1055.   1439.   1757.   1084.    886.    722.    552.    425.
125           UI    354.    253.    203.    161.    133.     86.     85.     54.     33.     33.
126           UI     33.     33.     33.      0.      0.      0.      0.      0.      0.      0.
127           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

128           KK    CR12
129           HC       2

130           KK    RR14
131           KM        CEMETARY WASH WITHIN SR32
132           RS       1    FLOW      -1
133           RC    .045     .03    .045    2200   .0182
134           RX     443     447     487     490     510     513     553     557
135           RY      17      13      13      10      10      13      13      17

136           KK    SR16
137           KM   SUB-BASIN SR16
138           BA     .75
139           LG     .15     .30    3.61     .28   11.20
140           UI    146.    553.    948.   1000.    618.    467.    319.    241.    160.    117.
141           UI     84.     56.     43.     22.     22.     22.     22.      0.      0.      0.
142           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
```

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

 143          KK   SR18
 144          KM   SUB-BASIN SR18
 145          BA    .71
 146          LG    .15     .30    3.58     .28   11.20
 147          UI   103.    404.    694.    977.    602.    469.    358.    253.    200.    136.
 148          UI   108.     74.     54.     47.     25.     18.     18.     18.     18.      0.
 149          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 150          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 151          KK   CR20
 152          HC      2

 153          KK   RR22
 154          KM       CEMETARY WASH WITHIN SR26
 155          RS      1    FLOW     -1
 156          RC   .045     .03    .045    4800   .0188
 157          RX    439     444     494     495     505     506     556     561
 158          RY     16      11       1      10      10      11      11      16

 159          KK   SR24
 160          KM   SUB-BASIN SR24
 161          BA    .44
 162          LG    .15     .30    3.59     .28   12.70
 163          UI   110.    419.    730.    489.    350.    239.    168.    107.     75.     51.
 164          UI    37.     19.     14.     14.     14.      0.      0.      0.      0.      0.
 165          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 166          KK   RR25
 167          KM       CEMETARY WASH WITHIN SR26
 168          RS      1    FLOW     -1
 169          RC   .045     .03    .045    4800   .0167
 170          RX    450     454     494     495     505     506     546     550
 171          RY     15      11      11      10      10      11      11      15

 172          KK   SR26
 173          KM   SUB-BASIN SR26
 174          BA    .95
 175          LG    .15     .30    3.59     .28   12.10
 176          UI   229.    870.   1533.   1078.    761.    530.    368.    242.    171.    116.
 177          UI    78.     51.     31.     31.     31.      0.      0.      0.      0.      0.
 178          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 179          KK   CR28
 180          HC      3

 181          KK   RR30
 182          KM       CEMETARY WASH WITHIN SR32
 183          RS      2    FLOW     -1
 184          RC   .045     .03    .045    9200   .0163
 185          RX    439     444     494     495     505     506     556     561
 186          RY     16      11      11      10      10      11      11      16
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 187          KK   SR32
 188          KM   SUB-BASIN SR32
 189          BA    .94
 190          LG    .15     .30    3.86     .33   11.30
 191          UI   167.    637.   1085.   1290.    779.    600.    424.    315.    218.    160.
 192          UI   113.     80.     67.     32.     26.     26.     26.      0.      0.      0.
 193          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 194          KK   CR34
 195          HC      3

 196          KK   RR36
 197          KM       CEMETARY WASH WITHIN SR38
 198          RS      1    FLOW      -1
 199          RC   .045     .03    .045    3000   .0167
 200          RX    435     438     483     485     515     517     562     566
 201          RY     16      12      12      10      10      12      12      16

 202          KK   SR38
 203          KM   SUB-BASIN SR38
 204          BA    .79
 205          LG    .15     .28    3.85     .25   14.60
 206          UI   104.    415.    723.   1062.    682.    528.    412.    295.    233.    166.
 207          UI   122.     93.     71.     50.     43.     20.     20.     20.     20.      0.
 208          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 209          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 210          KK   CR40
 211          HC      2

 212          KK   RR42
 213          KM       CEMETARY WASH WITHIN SR44
 214          RS      1    FLOW      -1
 215          RC   .045     .03    .045    5200   .0154
 216          RX    443     447     477     480     520     523     553     557
 217          RY     17      13      13      10      10      13      13      17

 218          KK   SR44
 219          KM   SUB-BASIN SR44
 220          BA   1.05
 221          LG    .15     .29    3.59     .28   14.20
 222          UI   313.   1159.   1854.   1131.    803.    515.    354.    227.    152.     95.
 223          UI    61.     37.     37.     37.      0.      0.      0.      0.      0.      0.
 224          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 225          KK   CR46
 226          HC      2

 227          KK   RR48
 228          KM       CEMETARY WASH WITHIN SR50
 229          RS      2    FLOW      -1
 230          RC   .045     .03    .045    7800   .0167
 231          RX    434     438     478     482     518     522     562     566
 232          RY     18      14      14      10      10      14      14      18
```

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

 233          KK    SR50
 234          KM   SUB-BASIN SR50
 235          BA     .56
 236          LG     .15     .31    3.76     .30    5.10
 237          UI    159.    596.    976.    606.    434.    281.    198.    122.     85.     54.
 238          UI     38.     19.     19.     19.      0.      0.      0.      0.      0.      0.
 239          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 240          KK    CR52
 241          KM    WASH "R" CONFLUENCE WITH HASSAYAMPA RIVER
 242          HC       2

 243          KK   NUL
 244          KM   COMBINING WASHES W, Q, & R TO REDUCE THE NO. OF FREE HYDROGRAPHS
 245          HC   3.

 246          KK    SAG2
 247          KM   SUB-BASIN SAG2
 248          BA     .18
 249          LG     .15     .32    3.72     .29    1.50
 250          UI    119.    408.    275.    161.     91.     49.     28.     14.      9.      0.
 251          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 252          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 253          KK    SAD2
 254          KM   SUB-BASIN SAD2
 255          BA     .98
 256          LG     .14     .31    3.81     .31    7.20
 257          UI     95.    230.    498.    688.    963.    809.    564.    477.    399.    322.
 258          UI    244.    213.    169.    125.    107.     85.     73.     50.     46.     43.
 259          UI     18.     18.     18.     18.     18.     18.      0.      0.      0.      0.
 260          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 261          KK    DAD4
 262          KM        SUNSET DAM - EXISTING CONDITIONS
 263          KM        RATING CURVE FROM SCS TR20, DATE 2-5-71
 264          KM         DISCHARGES PER SCS TR20
 265          KM         STORAGE VOLS PER CONSTRUCTION PLANS & FIELD OBSERVED BOTTOM ELEV.
 266          KM        TOP OF SEDIMENT STORAGE 2124.0 PER SCS
 267          RS       1    ELEV  2112.5
 268          SV       0    8.44  24.615  40.635  63.375  72.225    90.8
 269          SQ       0    22.0   23.25   24.00   24.60   196.0   605.0
 270          SE  2112.5  2120.0  2125.0  2128.0  2131.0  2132.0  2134.0

 271          KK    RAD6
 272          KM    WASH AD - SURFACE & PIPELINE FLOW
 273          RS       1    FLOW      -1
 274          RC    .045     .03    .045    2400   .0167
 275          RX     434     438     478     482     518     522     562     566
 276          RY      18      14      14      10      10      14      14      18
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 277          KK   SAD8
 278          KM   SUB-BASIN SAD8
 279          BA    .53
 280          LG    .14     .33    4.20     .39    6.10
 281          UI   103.    389.    666.    708.    437.    330.    226.    171.    113.     83.
 282          UI    60.     39.     31.     15.     15.     15.     15.      0.      0.      0.
 283          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 284          KK   SAE10
 285          KM   SUB-BASIN SAE10
 286          BA    .95
 287          LG    .15     .30    3.58     .27    6.40
 288          UI   102.    294.    601.    817.   1071.    663.    540.    445.    352.    262.
 289          UI   224.    166.    126.    108.     78.     63.     50.     48.     19.     19.
 290          UI    19.     19.     19.     19.      0.      0.      0.      0.      0.      0.
 291          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 292          KK   DAE12
 293          KM        SUNNYCOVE DAM - EXISTING CONDITIONS
 294          KM        RATING CRVE FROM SCS TR20, DATE 2-5-71
 295          KM          STORAGE VOLS PER CONSTRUCTION PLANS & FIELD OBSERVED BOTTOM ELEV.
 296          KM          TOP OF SEDIMENT STORAGE 2156.0
 297          KM          DISCHARGES PER SCS RATING CURVE
 298          RS      1    ELEV    2134
 299          SV      0   11.19   88.84 215.665  223.19   272.7   310.0
 300          SQ      0    23.5    24.5    25.9    26.0    26.4    26.7
 301          SE 2134.0  2150.0  2160.0  2169.5  2170.0  2173.0  2175.0

 302          KK   RAE14
 303          KM     WASH AE - SURFACE & PIPELINE FLOW
 304          RS      3    FLOW      -1
 305          RC   .045     .03    .045    5800   .0155
 306          RX    441     445     475     487     513     525     555     559
 307          RY     18      14      14      10      10      14      14      18

 308          KK   CAE16
 309          KM    WASH "AE" CONFLUENCE WITH HASSAYAMPA RIVER
 310          HC      3
 311          ZZ
```

SCHEMATIC DIAGRAM OF STREAM NETWORK

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

 23        SW2
            V
            V
 30        RW4
            .
            .
 36         .        SW6
            .          .
            .          .
 43         .          .        SW7
            .          .          .
            .          .          .
 51       CW8.......................
            V
            V
 53       RW10
            .
            .
 59         .       SW12
            .          .
            .          .
 66         .          .       SW14
            .          .          .
            .          .          .
 73       CW16......................
            V
            V
 75       RW18
            .
            .
 81         .       SW20
            .          .
            .          .
 88       CW22............
            .
            .
 91         .        SQ2
            .          .
            .          .
 98         .          .        SR2
            .          .          .
            .          .          .
105         .          .          .        SR4
            .          .          .          .
            .          .          .          .
112         .          .       CR6............
            .          .         V
            .          .         V
            .          .       RR8
            .          .         .
            .          .         .
120         .          .         .       SR10
            .          .         .          .
```

```
128          CR12............
                V
                V
0            RR14
                .
                .
136             .      SR16
                .         .
                .         .
143             .         .        SR18
                .         .          .
                .         .          .
151             .      CR20............
                .         V
                .         V
153             .      RR22
                .         .
                .         .
159             .         .        SR24
                .         .          V
                .         .          V
166             .         .        RR25
                .         .          .
                .         .          .
172             .         .          .        SR26
                .         .          .          .
                .         .          .          .
179             .      CR28......................
                .         V
                .         V
181             .      RR30
                .         .
                .         .
187             .         .        SR32
                .         .          .
                .         .          .
194          CR34......................
                V
                V
196          RR36
                .
                .
202             .      SR38
                .         .
                .         .
210          CR40............
                V
                V
212          RR42
                .
                .
218             .      SR44
                .         .
                .         .
             CR46............
                V
                V
227          RR48
                .
```

```
                .         .         .
233             .         .         .        SR50
                .         .         .          .
                .         .         .          .
                .         .       CR52.........
                .         .         .
                .         .         .
243     NUL     ......................
                .
                .
246             .       SAG2
                .         .
                .         .
253             .         .       SAD2
                .         .         V
                .         .         V
261             .         .       DAD4
                .         .         V
                .         .         V
271             .         .       RAD6
                .         .         .
                .         .         .
277             .         .         .        SAD8
                .         .         .          .
                .         .         .          .
284             .         .         .          .      SAE10
                .         .         .          .        V
                .         .         .          .        V
292             .         .         .          .      DAE12
                .         .         .          .        V
                .         .         .          .        V
302             .         .         .          .      RAE14
                .         .         .          .        .
                .         .         .          .        .
308             .         .       CAE16.......................
```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

```
****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*      BY THE COE IN FEBRUARY 1981     *
*           REVISED 02 AUG 88          *
*                                      *
*  RUN DATE  04/23/1991  TIME  12:01:23 *
*                                      *
****************************************
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****************************************
*                                      *
*     DODSON AND ASSOCIATES, INC.      *
*   HYDROLOGIST AND CIVIL ENGINEERS    *
*      7015 W TIDWELL SUITE 107        *
*        HOUSTON, TEXAS  77092         *
*           (713) 895-8322             *
*                                      *
****************************************
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```
                    WICKENBURG ADMS - CONTRACT FCD 89-79
                    WASHES W (TURTLEBACK), R (CEMETARY), AE,AD, AC (TRIB. TO SOLS WASH)
                    SCS TYPE II STORM - 24 HR: PHOENIX MOUNTAIN S-GRAPH
                    AREAL REDUCTION FACTORS PER NWS HYDRO-40
                    SUNSET & SUNNYCOVE DAMS - EXISTING CONDITIONS
                     RATING CURVES FROM SCS TR20, DATE 2-5-71
                     STORAGE VOLS PER CONSTRUCTION PLANS & FIELD OBSERVED BOTTOM ELEV.
                     RATING CURVES MODIFIED TO REFLECT EXST. EMERGENCY SPILLWAYS
                    W1-2 ; 2-YEAR EVENT

 11 IO        OUTPUT CONTROL VARIABLES
                    IPRNT          5  PRINT CONTROL
                    IPLOT          0  PLOT CONTROL
                    QSCAL         0.  HYDROGRAPH PLOT SCALE

    IT        HYDROGRAPH TIME DATA
                     NMIN          6  MINUTES IN COMPUTATION INTERVAL
                    IDATE      1   0  STARTING DATE
                    ITIME       0000  STARTING TIME
                       NQ        300  NUMBER OF HYDROGRAPH ORDINATES
                   NDDATE      2   0  ENDING DATE
                   NDTIME       0554  ENDING TIME
                    ICENT         19  CENTURY MARK

              COMPUTATION INTERVAL     .10 HOURS
                   TOTAL TIME BASE   29.90 HOURS

         ENGLISH UNITS
              DRAINAGE AREA          SQUARE MILES
              PRECIPITATION DEPTH    INCHES
              LENGTH, ELEVATION      FEET
              FLOW                   CUBIC FEET PER SECOND
              STORAGE VOLUME         ACRE-FEET
              SURFACE AREA           ACRES
              TEMPERATURE            DEGREES FAHRENHEIT

 13 JD        INDEX STORM NO. 1
                    STRM        1.61  PRECIPITATION DEPTH
                    TRDA         .01  TRANSPOSITION DRAINAGE AREA

 14 PI          PRECIPITATION PATTERN
                   .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                   .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                   .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                   .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                   .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
```

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.08	.08	.08	.08	.08
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19 JD INDEX STORM NO. 2

STRM 1.58 PRECIPITATION DEPTH

TRDA 3.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

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20 JD INDEX STORM NO. 3

STRM 1.55 PRECIPITATION DEPTH

TRDA 10.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

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21 JD INDEX STORM NO. 4

STRM 1.48 PRECIPITATION DEPTH

TRDA 20.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

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22 JD INDEX STORM NO. 5

STRM 1.45 PRECIPITATION DEPTH

TRDA 30.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

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WARNING EXCESS AT PONDING LESS THAN ZERO FOR PERIOD. EXCESS SET TO ZERO

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	SW2	381.	12.10	44.	13.	11.	1.25 304		
ROUTED TO	RW4	271.	12.30	44.	13.	11.	1.25	11.20	12.40
HYDROGRAPH AT	SW6	243.	12.20	36.	11.	9.	.98 295		
HYDROGRAPH AT	SW7	307.	12.20	47.	14.	11.	1.30 236		
3 COMBINED AT	CW8	773.	12.20	124.	38.	30.	3.53 219		
ROUTED TO	RW10	715.	12.30	124.	38.	30.	3.53	11.47	12.40
HYDROGRAPH AT	SW12	166.	12.00	19.	6.	5.	.51 325		
HYDROGRAPH AT	SW14	187.	12.10	22.	7.	5.	.76 246		
3 COMBINED AT	CW16	863.	12.30	162.	49.	40.	4.80 180		
ROUTED TO	RW18	846.	12.30	161.	49.	40.	4.80	11.67	12.40
HYDROGRAPH AT	SW20	37.	12.10	4.	1.	1.	.23 161		
2 COMBINED AT	CW22	859.	12.30	165.	51.	41.	5.03 171		
HYDROGRAPH AT	SQ2	112.	12.10	11.	3.	3.	.37 302		
HYDROGRAPH AT	SR2	193.	12.20	26.	7.	6.	.91 212		
HYDROGRAPH AT	SR4	106.	12.10	13.	4.	3.	.47 226		
2 COMBINED AT	CR6	290.	12.10	38.	11.	9.	1.38 210		
ROUTED TO	RR8	243.	12.40	38.	11.	9.	1.38	11.14	12.50
HYDROGRAPH AT	SR10	166.	12.30	27.	8.	7.	1.57 106		
2 COMBINED AT	CR12	388.	12.40	65.	19.	16.	2.95 191		
ROUTED TO	RR14	384.	12.40	65.	19.	16.	2.95	11.44	12.50
HYDROGRAPH AT	SR16	163.	12.10	22.	7.	5.	.75 217		
HYDROGRAPH AT	SR18	148.	12.20	21.	6.	5.	.71		
2 COMBINED AT	CR20	309.	12.20	43.	13.	10.	1.46 211		
ROUTED TO	RR22	267.	12.30	43.	13.	10.	1.46	4.41	12.30
HYDROGRAPH AT	SR24	108.	12.10	14.	4.	3.	.44 245		
ROUTED TO	RR25	76.	12.30	14.	4.	3.	.44	10.92	12.30

HYDROGRAPH AT	SR26	227.	12.10	29.	9.	7.	.95 239		
3 COMBINED AT	CR28	531.	12.20	84.	25.	20.	2.85 186		
ROUTED TO	RR30	338.	12.70	84.	25.	20.	2.85	11.44	12.80
HYDROGRAPH AT	SR32	151.	12.20	21.	7.	5.	.94		
3 COMBINED AT	CR34	694.	12.50	163.	49.	40.	6.74 103		
ROUTED TO	RR36	666.	12.60	163.	49.	40.	6.74	11.74	12.60
HYDROGRAPH AT	SR38	192.	12.20	29.	9.	7.	.79		
2 COMBINED AT	CR40	743.	12.50	189.	57.	46.	7.53 99		
ROUTED TO	RR42	726.	12.60	189.	57.	46.	7.53	11.59	12.70
HYDROGRAPH AT	SR44	281.	12.10	35.	11.	8.	1.05 268		
2 COMBINED AT	CR46	783.	12.60	220.	67.	54.	8.58 91		
ROUTED TO	RR48	769.	12.70	219.	67.	54.	8.58	11.72	12.80
HYDROGRAPH AT	SR50	102.	12.10	11.	3.	2.	.56		
2 COMBINED AT	CR52	780.	12.70	228.	69.	56.	9.14		
3 COMBINED AT	NUL	1362.	12.40	370.	114.	92.	14.54 94		
HYDROGRAPH AT	SAG2	37.	12.10	3.	1.	1.	.18		
HYDROGRAPH AT	SAD2	118.	12.30	20.	6.	5.	.98 126		
ROUTED TO	DAD4	19.	13.40	14.	6.	5.	.98	2116.90	13.40
ROUTED TO	RAD6	19.	13.60	14.	6.	5.	.98	10.10	13.60
HYDROGRAPH AT	SAD8	34.	12.20	5.	2.	1.	.53		
HYDROGRAPH AT	SAE10	160.	12.30	24.	7.	6.	.95 168		
ROUTED TO	DAE12	20.	13.30	15.	6.	5.	.95	2143.78	13.30
ROUTED TO	RAE14	20.	13.90	15.	6.	5.	.95	10.15	13.90
3 COMBINED AT	CAE16	40.	13.60	32.	13.	11.	2.46		

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

HEC-1 OUTPUT
WEST TRIBUTARIES AREA
10-YEAR RETURN PERIOD

FN = W1-10

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****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*     BY THE COE IN FEBRUARY 1981      *
*          REVISED 02 AUG 88           *
*                                      *
* RUN DATE  04/23/1991  TIME  12:01:57 *
*                                      *
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*                                      *
*    DODSON AND ASSOCIATES, INC.       *
*  HYDROLOGIST AND CIVIL ENGINEERS     *
*     7015 W TIDWELL SUITE 107         *
*       HOUSTON, TEXAS  77092          *
*          (713) 895-8322              *
*                                      *
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X     X  XXXXXXX   XXXXX          X
X     X  X        X     X        XX
X     X  X        X              X
XXXXXXX  XXXX     X       XXXXX  X
X     X  X        X              X
X     X  X        X     X        X
X     X  XXXXXXX   XXXXX         XXX
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THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

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

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

  1           ID        WICKENBURG ADMS - CONTRACT FCD 89-79
  2           ID        WASHES W (TURTLEBACK), R (CEMETARY), AE,AD, AC (TRIB. TO SOLS WASH)
  3           ID        SCS TYPE II STORM - 24 HR: PHOENIX MOUNTAIN S-GRAPH
  4           ID        AREAL REDUCTION FACTORS PER NWS HYDRO-40
  5           ID        SUNSET & SUNNYCOVE DAMS
  6           ID         RATING CURVES FROM SCS TR20, DATE 2-5-71
  7           ID         STORAGE VOLS PER CONSTRUCTION PLANS & FIELD OBSERVED BOTTOM ELEV.
  8           ID         RATING CURVES MODIFIED TO REFLECT EXST. EMERGENCY SPILLWAYS
  9           ID        W1-10;10-YEAR EVENT
              *DIAGRAM
 10           IT      6                    300
 11           IO      5
 12           IN     30
 13           JD   2.68     .01
 14           PC   .000    .005    .011    .016    .022    .028    .035    .041    .048    .056
 15           PC   .068    .071    .080    .089    .098    .109    .120    .133    .147    .163
 16           PC   .181    .204    .235    .283    .663    .735    .772    .799    .820    .838
 17           PC   .854    .868    .880    .891    .902    .912    .921    .929    .937    .945
 18           PC   .952    .959    .965    .972    .978    .984    .989    .995   1.000
 19           JD   2.63     3.0
 20           JD   2.57     10.
 21           JD   2.47    20.0
 22           JD   2.41    30.0

 23           KK    SW2
 24           KM   SUB-BASIN SW2
 25           BA   1.25
 26           LG    .15     .28    4.64     .23   14.90
 27           UI   569.   2025.   2254.   1276.    768.    474.    284.    170.    105.     53.
 28           UI    53.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 29           UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 30           KK    RW4
 31           KM        TURTLEBACK WASH WITHIN SW7
 32           RS      2    FLOW      -1
 33           RC   .045    .030    .045   12780     .02
 34           RX   462     465     485     490     510     515     535     538
 35           RY    18      15      15      10      10      15      15      18

 36           KK    SW6
 37           KM   SUB-BASIN SW6
 38           BA    .98
 39           LG    .15     .28    4.54     .23   16.00
 40           UI   151.    584.    997.   1356.    826.    642.    484.    340.    266.    182.
 41           UI   139.    103.     67.     64.     26.     26.     26.     26.      0.      0.
 42           UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 43           KK    SW7
 44           KM   SUB-BASIN SW7
 45           BA   1.30
 46           LG    .15     .28    4.71     .22   15.00
 47           UI   163.    617.   1111.   1661.   1175.    875.    697.    518.    392.    305.
 48           UI   215.    172.    125.     90.     80.     48.     31.     31.     31.     31.
 49           UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 50           UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 51           KK     CW8
 52           HC       3

 53           KK    RW10
 54           KM        TURTLEBACK WASH WITHIN SW14
 55           RS       1    FLOW      -1
 56           RC    .045     .03    .045    5550   .0198
 57           RX     423     427     477     480     520     523     573     577
 58           RY      17      13      13      10      10      13      13      17

 59           KK    SW12
 60           KM   SUB-BASIN SW12
 61           BA     .51
 62           LG     .15     .28    3.70     .26   15.30
 63           UI    337.   1157.    780.    455.    256.    139.     78.     40.     25.      0.
 64           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 65           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 66           KK    SW14
 67           KM   SUB-BASIN SW14
 68           BA     .76
 69           LG     .15     .29    3.71     .31   13.80
 70           UI    304.   1094.   1391.    792.    502.    324.    192.    120.     78.     36.
 71           UI     31.     31.      0.      0.      0.      0.      0.      0.      0.      0.
 72           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 73           KK    CW16
 74           HC       3

 75           KK    RW18
 76           KM        TURTLEBACK WASH WITHIN SW20
 77           RS       1    FLOW      -1
 78           RC    .045     .03    .045    4100    .018
 79           RX     423     427     477     480     520     523     573     577
 80           RY      17      13      13      10      10      13      13      17

 81           KK    SW20
 82           KM   SUB-BASIN SW20
 83           BA     .23
 84           LG     .15     .29    4.12     .39   12.60
 85           UI    137.    488.    364.    216.    124.     69.     38.     23.     11.     11.
 86           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 87           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 88           KK    CW22
 89           KM    WASH "W" CONFLUENCE WITH HASSAYAMPA RIVER
 90           HC       2

 91           KK     SQ2
 92           KM   SUB-BASIN SQ2
 93           BA     .37
 94           LG     .15     .30    3.61     .25    9.10
 95           UI    239.    830.    568.    334.    189.    102.     58.     30.     18.     18.
 96           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  97          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

  98          KK     SR2
  99          KM   SUB-BASIN SR2
 100          BA     .91
 101          LG     .15     .29    3.55     .27    8.00
 102          UI    138.    534.    914.   1258.    768.    597.    452.    318.    250.    171.
 103          UI    131.     95.     65.     61.     25.     24.     24.     24.      0.      0.
 104          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 105          KK     SR4
 106          KM   SUB-BASIN SR4
 107          BA     .47
 108          LG     .15     .30    3.67     .29   10.00
 109          UI    131.    491.    813.    511.    366.    239.    168.    105.     73.     47.
 110          UI     34.     16.     16.     16.      0.      0.      0.      0.      0.      0.
 111          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 112          KK     CR6
 113          HC       2

 114          KK     RR8
 115          KM        CEMETARY WASH WITHIN SR10
 116          RS       3    FLOW      -1
 117          RC    .045     .03    .045   10800   .0176
 118          RX     443     447     487     490     510     513     553     557
 119          RY      17      13      13      10      10      13      13      17

 120          KK    SR10
 121          KM   SUB-BASIN SR10
 122          BA    1.57
 123          LG     .15     .30    3.94     .35    8.40
 124          UI    173.    527.   1055.   1439.   1757.   1084.    886.    722.    552.    425.
 125          UI    354.    253.    203.    161.    133.     86.     85.     54.     33.     33.
 126          UI     33.     33.     33.      0.      0.      0.      0.      0.      0.      0.
 127          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 128          KK    CR12
 129          HC       2

 130          KK    RR14
 131          KM        CEMETARY WASH WITHIN SR32
 132          RS       1    FLOW      -1
 133          RC    .045     .03    .045    2200   .0182
 134          RX     443     447     487     490     510     513     553     557
 135          RY      17      13      13      10      10      13      13      17

 136          KK    SR16
 137          KM   SUB-BASIN SR16
 138          BA     .75
 139          LG     .15     .30    3.61     .28   11.20
 140          UI    146.    553.    948.   1000.    618.    467.    319.    241.    160.    117.
 141          UI     84.     56.     43.     22.     22.     22.     22.      0.      0.      0.
 142          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
```

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

 143          KK   SR18
 144          KM   SUB-BASIN SR18
 145          BA    .71
 146          LG    .15     .30    3.58     .28   11.20
 147          UI   103.    404.    694.    977.    602.    469.    358.    253.    200.    136.
 148          UI   108.     74.     54.     47.     25.     18.     18.     18.     18.      0.
 149          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 150          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 151          KK   CR20
 152          HC      2

 153          KK   RR22
 154          KM       CEMETARY WASH WITHIN SR26
 155          RS      1    FLOW      -1
 156          RC   .045     .03    .045    4800   .0188
 157          RX    439     444     494     495     505     506     556     561
 158          RY     16      11       1      10      10      11      11      16

 159          KK   SR24
 160          KM   SUB-BASIN SR24
 161          BA    .44
 162          LG    .15     .30    3.59     .28   12.70
 163          UI   110.    419.    730.    489.    350.    239.    168.    107.     75.     51.
 164          UI    37.     19.     14.     14.     14.      0.      0.      0.      0.      0.
 165          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 166          KK   RR25
 167          KM       CEMETARY WASH WITHIN SR26
 168          RS      1    FLOW      -1
 169          RC   .045     .03    .045    4800   .0167
 170          RX    450     454     494     495     505     506     546     550
 171          RY     15      11      11      10      10      11      11      15

 172          KK   SR26
 173          KM   SUB-BASIN SR26
 174          BA    .95
 175          LG    .15     .30    3.59     .28   12.10
 176          UI   229.    870.   1533.   1078.    761.    530.    368.    242.    171.    116.
 177          UI    78.     51.     31.     31.     31.      0.      0.      0.      0.      0.
 178          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 179          KK   CR28
 180          HC      3

 181          KK   RR30
 182          KM       CEMETARY WASH WITHIN SR32
 183          RS      2    FLOW      -1
 184          RC   .045     .03    .045    9200   .0163
 185          RX    439     444     494     495     505     506     556     561
 186          RY     16      11      11      10      10      11      11      16
```

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

 187          KK    SR32
 188          KM   SUB-BASIN SR32
 189          BA     .94
 190          LG     .15     .30    3.86     .33   11.30
 191          UI    167.    637.   1085.   1290.    779.    600.    424.    315.    218.    160.
 192          UI    113.     80.     67.     32.     26.     26.     26.      0.      0.      0.
 193          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 194          KK    CR34
 195          HC       3

 196          KK    RR36
 197          KM        CEMETARY WASH WITHIN SR38
 198          RS       1    FLOW      -1
 199          RC    .045     .03    .045    3000   .0167
 200          RX     435     438     483     485     515     517     562     566
 201          RY      16      12      12      10      10      12      12      16

 202          KK    SR38
 203          KM   SUB-BASIN SR38
 204          BA     .79
 205          LG     .15     .28    3.85     .25   14.60
 206          UI    104.    415.    723.   1062.    682.    528.    412.    295.    233.    166.
 207          UI    122.     93.     71.     50.     43.     20.     20.     20.     20.      0.
 208          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 209          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 210          KK    CR40
 211          HC       2

 212          KK    RR42
 213          KM        CEMETARY WASH WITHIN SR44
 214          RS       1    FLOW      -1
 215          RC    .045     .03    .045    5200   .0154
 216          RX     443     447     477     480     520     523     553     557
 217          RY      17      13      13      10      10      13      13      17

 218          KK    SR44
 219          KM   SUB-BASIN SR44
 220          BA    1.05
 221          LG     .15     .29    3.59     .28   14.20
 222          UI    313.   1159.   1854.   1131.    803.    515.    354.    227.    152.     95.
 223          UI     61.     37.     37.     37.      0.      0.      0.      0.      0.      0.
 224          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 225          KK    CR46
 226          HC       2

 227          KK    RR48
 228          KM        CEMETARY WASH WITHIN SR50
 229          RS       2    FLOW      -1
 230          RC    .045     .03    .045    7800   .0167
 231          RX     434     438     478     482     518     522     562     566
 232          RY      18      14      14      10      10      14      14      18
```

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

 233          KK    SR50
 234          KM   SUB-BASIN SR50
 235          BA     .56
 236          LG     .15     .31    3.76     .30    5.10
 237          UI    159.    596.    976.    606.    434.    281.    198.    122.     85.     54.
 238          UI     38.     19.     19.     19.      0.      0.      0.      0.      0.      0.
 239          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 240          KK    CR52
 241          KM    WASH "R" CONFLUENCE WITH HASSAYAMPA RIVER
 242          HC       2

 243          KK   NUL
 244          KM   COMBINING WASHES W, Q, & R TO REDUCE THE NO. OF FREE HYDROGRAPHS
 245          HC   3.

 246          KK    SAG2
 247          KM   SUB-BASIN SAG2
 248          BA     .18
 249          LG     .15     .32    3.72     .29    1.50
 250          UI    119.    408.    275.    161.     91.     49.     28.     14.      9.      0.
 251          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 252          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 253          KK    SAD2
 254          KM   SUB-BASIN SAD2
 255          BA     .98
 256          LG     .14     .31    3.81     .31    7.20
 257          UI     95.    230.    498.    688.    963.    809.    564.    477.    399.    322.
 258          UI    244.    213.    169.    125.    107.     85.     73.     50.     46.     43.
 259          UI     18.     18.     18.     18.     18.     18.      0.      0.      0.      0.
 260          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 261          KK    DAD4
 262          KM        SUNSET DAM - EXISTING CONDITIONS
 263          KM        RATING CURVE FROM SCS TR20, DATE 2-5-71
 264          KM         DISCHARGES PER SCS TR20
 265          KM         STORAGE VOLS PER CONSTRUCTION PLANS & FIELD OBSERVED BOTTOM ELEV.
 266          KM        TOP OF SEDIMENT STORAGE 2124.0 PER SCS
 267          RS       1    ELEV  2112.5
 268          SV       0    8.44  24.615  40.635  63.375  72.225    90.8
 269          SQ       0    22.0   23.25   24.00   24.60   196.0   605.0
 270          SE  2112.5  2120.0  2125.0  2128.0  2131.0  2132.0  2134.0

 271          KK    RAD6
 272          KM    WASH AD - SURFACE & PIPELINE FLOW
 273          RS       1    FLOW      -1
 274          RC    .045     .03    .045    2400   .0167
 275          RX     434     438     478     482     518     522     562     566
 276          RY      18      14      14      10      10      14      14      18
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 277          KK   SAD8
 278          KM   SUB-BASIN SAD8
 279          BA     .53
 280          LG     .14     .33    4.20     .39    6.10
 281          UI    103.    389.    666.    708.    437.    330.    226.    171.    113.     83.
 282          UI     60.     39.     31.     15.     15.     15.     15.      0.      0.      0.
 283          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 284          KK   SAE10
 285          KM   SUB-BASIN SAE10
 286          BA     .95
 287          LG     .15     .30    3.58     .27    6.40
 288          UI    102.    294.    601.    817.   1071.    663.    540.    445.    352.    262.
 289          UI    224.    166.    126.    108.     78.     63.     50.     48.     19.     19.
 290          UI     19.     19.     19.     19.      0.      0.      0.      0.      0.      0.
 291          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 292          KK   DAE12
 293          KM        SUNNYCOVE DAM - EXISTING CONDITIONS
 294          KM        RATING CRVE FROM SCS TR20, DATE 2-5-71
 295          KM          STORAGE VOLS PER CONSTRUCTION PLANS & FIELD OBSERVED BOTTOM ELEV.
 296          KM          TOP OF SEDIMENT STORAGE 2156.0
 297          KM          DISCHARGES PER SCS RATING CURVE
 298          RS       1    ELEV    2134
 299          SV       0   11.19   88.84 215.665  223.19   272.7   310.0
 300          SQ       0    23.5    24.5    25.9    26.0    26.4    26.7
 301          SE  2134.0  2150.0  2160.0  2169.5  2170.0  2173.0  2175.0

 302          KK   RAE14
 303          KM     WASH AE - SURFACE & PIPELINE FLOW
 304          RS       3    FLOW      -1
 305          RC    .045     .03    .045    5800   .0155
 306          RX     441     445     475     487     513     525     555     559
 307          RY      18      14      14      10      10      14      14      18

 308          KK   CAE16
 309          KM    WASH "AE" CONFLUENCE WITH HASSAYAMPA RIVER
 310          HC       3
 311          ZZ
```

SCHEMATIC DIAGRAM OF STREAM NETWORK

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

 23         SW2
             V
             V
 30         RW4
             .
             .
 36          .        SW6
             .          .
             .          .
 43          .          .        SW7
             .          .         .
             .          .         .
 51         CW8.......................
             V
             V
 53        RW10
             .
             .
 59          .       SW12
             .          .
             .          .
 66          .          .       SW14
             .          .         .
             .          .         .
 73        CW16.......................
             V
             V
 75        RW18
             .
             .
 81          .       SW20
             .          .
             .          .
 88        CW22............
             .
             .
 91          .        SQ2
             .          .
             .          .
 98          .          .        SR2
             .          .         .
             .          .         .
105          .          .         .        SR4
             .          .         .         .
             .          .         .         .
112          .          .        CR6............
             .          .         V
             .          .         V
             .          .        RR8
             .          .         .
             .          .         .
120          .          .         .       SR10
             .          .         .         .
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128          CR12............
                V
                V
             RR14
                .
                .
136             .        SR16
                .          .
                .          .
143             .          .        SR18
                .          .          .
                .          .          .
151             .        CR20............
                .          V
                .          V
153             .        RR22
                .          .
                .          .
159             .          .        SR24
                .          .          V
                .          .          V
166             .          .        RR25
                .          .          .
                .          .          .
172             .          .          .        SR26
                .          .          .          .
                .          .          .          .
179             .        CR28......................
                .          V
                .          V
181             .        RR30
                .          .
                .          .
187             .          .        SR32
                .          .          .
                .          .          .
194          CR34......................
                V
                V
196          RR36
                .
                .
202             .        SR38
                .          .
                .          .
210          CR40............
                V
                V
212          RR42
                .
                .
218             .        SR44
                .          .
                .          .
             CR46............
                V
                V
227          RR48
                .
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                .         .         .
233             .         .         .        SR50
                .         .         .          .
                .         .         .          .
                .         .       CR52............
                .         .         .
                .         .         .
243       NUL  .......................
                .
                .
246             .       SAG2
                .         .
                .         .
253             .         .       SAD2
                .         .         V
                .         .         V
261             .         .       DAD4
                .         .         V
                .         .         V
271             .         .       RAD6
                .         .         .
                .         .         .
277             .         .         .        SAD8
                .         .         .          .
                .         .         .          .
284             .         .         .          .      SAE10
                .         .         .          .         V
                .         .         .          .         V
292             .         .         .          .      DAE12
                .         .         .          .         V
                .         .         .          .         V
302             .         .         .          .      RAE14
                .         .         .          .         .
                .         .         .          .         .
308             .         .      CAE16........................
```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

```
****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*     BY THE COE IN FEBRUARY 1981      *
*          REVISED 02 AUG 88           *
*                                      *
* RUN DATE  04/23/1991  TIME  12:01:57 *
*                                      *
****************************************
```

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****************************************
*                                      *
*     DODSON AND ASSOCIATES, INC.      *
*   HYDROLOGIST AND CIVIL ENGINEERS    *
*      7015 W TIDWELL SUITE 107        *
*        HOUSTON, TEXAS  77092         *
*           (713) 895-8322             *
*                                      *
****************************************
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```
                    WICKENBURG ADMS - CONTRACT FCD 89-79
                    WASHES W (TURTLEBACK), R (CEMETARY), AE,AD, AC (TRIB. TO SOLS WASH)
                    SCS TYPE 11 STORM - 24 HR: PHOENIX MOUNTAIN S-GRAPH
                    AREAL REDUCTION FACTORS PER NWS HYDRO-40
                    SUNSET & SUNNYCOVE DAMS
                     RATING CURVES FROM SCS TR20, DATE 2-5-71
                     STORAGE VOLS PER CONSTRUCTION PLANS & FIELD OBSERVED BOTTOM ELEV.
                     RATING CURVES MODIFIED TO REFLECT EXST. EMERGENCY SPILLWAYS
                    W1-10;10-YEAR EVENT

 11 IO        OUTPUT CONTROL VARIABLES
                    IPRNT          5  PRINT CONTROL
                    IPLOT          0  PLOT CONTROL
                    QSCAL         0.  HYDROGRAPH PLOT SCALE

 IT           HYDROGRAPH TIME DATA
                     NMIN          6  MINUTES IN COMPUTATION INTERVAL
                    IDATE      1   0  STARTING DATE
                    ITIME       0000  STARTING TIME
                       NQ        300  NUMBER OF HYDROGRAPH ORDINATES
                   NDDATE      2   0  ENDING DATE
                   NDTIME       0554  ENDING TIME
                    ICENT         19  CENTURY MARK

              COMPUTATION INTERVAL     .10 HOURS
                   TOTAL TIME BASE   29.90 HOURS

        ENGLISH UNITS
             DRAINAGE AREA          SQUARE MILES
             PRECIPITATION DEPTH    INCHES
             LENGTH, ELEVATION      FEET
             FLOW                   CUBIC FEET PER SECOND
             STORAGE VOLUME         ACRE-FEET
             SURFACE AREA           ACRES
             TEMPERATURE            DEGREES FAHRENHEIT

 13 JD        INDEX STORM NO. 1
                    STRM       2.68  PRECIPITATION DEPTH
                    TRDA        .01  TRANSPOSITION DRAINAGE AREA

 14 PI          PRECIPITATION PATTERN
                  .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                  .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                  .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                  .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                  .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
```

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.08	.08	.08	.08	.08
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
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.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
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.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

19 JD INDEX STORM NO. 2

STRM 2.63 PRECIPITATION DEPTH

TRDA 3.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.08	.08	.08	.08	.08
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

20 JD INDEX STORM NO. 3

STRM 2.57 PRECIPITATION DEPTH

TRDA 10.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.08	.08	.08	.08	.08
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

21 JD INDEX STORM NO. 4

STRM 2.47 PRECIPITATION DEPTH

TRDA 20.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.08	.08	.08	.08	.08
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

22 JD INDEX STORM NO. 5

STRM 2.41 PRECIPITATION DEPTH

TRDA 30.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.08	.08	.08	.08	.08
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
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.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

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	SW2	1020.	12.00	116.	33.	26.	1.25		
ROUTED TO	RW4	892.	12.20	115.	33.	26.	1.25	12.75	12.20
HYDROGRAPH AT	SW6	662.	12.10	92.	26.	21.	.98		
HYDROGRAPH AT	SW7	837.	12.20	122.	34.	28.	1.30		
3 COMBINED AT	CW8	2359.	12.20	326.	93.	74.	3.53		
ROUTED TO	RW10	2131.	12.30	326.	93.	74.	3.53	13.11	12.30
HYDROGRAPH AT	SW12	447.	12.00	48.	14.	11.	.51		
HYDROGRAPH AT	SW14	574.	12.10	66.	19.	15.	.76		
3 COMBINED AT	CW16	2757.	12.10	434.	123.	99.	4.80		
ROUTED TO	RW18	2602.	12.30	434.	123.	99.	4.80	13.49	12.30
HYDROGRAPH AT	SW20	160.	12.00	17.	5.	4.	.23		
2 COMBINED AT	CW22	2659.	12.30	450.	128.	103.	5.03		
HYDROGRAPH AT	SQ2	317.	12.00	32.	9.	7.	.37		
HYDROGRAPH AT	SR2	582.	12.10	76.	20.	16.	.91		
HYDROGRAPH AT	SR4	338.	12.10	39.	11.	9.	.47		
2 COMBINED AT	CR6	917.	12.10	115.	31.	25.	1.38		
ROUTED TO	RR8	810.	12.30	114.	31.	25.	1.38	12.79	12.30
HYDROGRAPH AT	SR10	767.	12.20	114.	31.	25.	1.57		
2 COMBINED AT	CR12	1542.	12.30	228.	62.	50.	2.95		
ROUTED TO	RR14	1520.	12.30	228.	62.	50.	2.95	13.56	12.30
HYDROGRAPH AT	SR16	510.	12.10	64.	18.	14.	.75		
HYDROGRAPH AT	SR18	448.	12.10	61.	17.	14.	.71		
2 COMBINED AT	CR20	954.	12.10	125.	35.	28.	1.46		
ROUTED TO	RR22	878.	12.20	125.	35.	28.	1.46	6.71	12.20
HYDROGRAPH AT	SR24	321.	12.10	39.	11.	9.	.44		
ROUTED TO	RR25	230.	12.30	39.	11.	9.	.44	11.40	12.30

HYDROGRAPH AT	SR26	683.	12.10	83.	23.	19.	.95		
3 COMBINED AT	CR28	1710.	12.20	245.	68.	55.	2.85		
ROUTED TO	RR30	1365.	12.40	245.	68.	55.	2.85	12.50	12.50
HYDROGRAPH AT	SR32	572.	12.10	75.	21.	17.	.94		
3 COMBINED AT	CR34	3084.	12.40	533.	147.	118.	6.74		
ROUTED TO	RR36	3049.	12.40	533.	147.	118.	6.74	13.65	12.40
HYDROGRAPH AT	SR38	516.	12.20	74.	21.	17.	.79		
2 COMBINED AT	CR40	3362.	12.40	602.	167.	134.	7.53		
ROUTED TO	RR42	3199.	12.50	602.	167.	134.	7.53	13.97	12.50
HYDROGRAPH AT	SR44	796.	12.10	95.	27.	22.	1.05		
2 COMBINED AT	CR46	3399.	12.50	690.	192.	154.	8.58		
ROUTED TO	RR48	3199.	12.70	690.	192.	154.	8.58	14.36	12.70
HYDROGRAPH AT	SR50	382.	12.10	42.	11.	9.	.56		
2 COMBINED AT	CR52	3250.	12.60	728.	202.	163.	9.14		
3 COMBINED AT	NUL	5172.	12.40	1156.	324.	261.	14.54		
HYDROGRAPH AT	SAG2	138.	12.00	13.	3.	3.	.18		
HYDROGRAPH AT	SAD2	461.	12.30	74.	20.	16.	.98		
ROUTED TO	DAD4	24.	13.80	23.	17.	14.	.98	2125.40	13.80
ROUTED TO	RAD6	24.	14.10	23.	17.	14.	.98	10.18	14.00
HYDROGRAPH AT	SAD8	271.	12.10	33.	9.	7.	.53		
HYDROGRAPH AT	SAE10	520.	12.20	77.	20.	16.	.95		
ROUTED TO	DAE12	24.	13.70	24.	17.	14.	.95	2152.24	13.60
ROUTED TO	RAE14	24.	14.30	24.	17.	14.	.95	10.26	14.40
3 COMBINED AT	CAE16	284.	12.10	74.	43.	34.	2.46		

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

HEC-1 OUTPUT
WEST TRIBUTARIES AREA
25-YEAR RETURN PERIOD

FN = W1-25

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****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*     BY THE COE IN FEBRUARY 1981      *
*          REVISED 02 AUG 88           *
*                                      *
*  RUN DATE  04/23/1991  TIME  12:02:28 *
*                                      *
****************************************
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****************************************
*                                      *
*     DODSON AND ASSOCIATES, INC.      *
*   HYDROLOGIST AND CIVIL ENGINEERS    *
*      7015 W TIDWELL SUITE 107        *
*        HOUSTON, TEXAS  77092         *
*          (713) 895-8322              *
*                                      *
****************************************
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X     X  XXXXXXX   XXXXX          X
X     X  X        X     X        XX
X     X  X        X              X
XXXXXXX  XXXX     X       XXXXX  X
X     X  X        X              X
X     X  X        X     X        X
X     X  XXXXXXX   XXXXX         XXX
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THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

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

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

  1           ID        WICKENBURG ADMS - CONTRACT FCD 89-79
  2           ID        WASHES W (TURTLEBACK), R (CEMETARY), AE,AD, AC (TRIB. TO SOLS WASH)
  3           ID        SCS TYPE II STORM - 24 HR: PHOENIX MOUNTAIN S-GRAPH
  4           ID        AREAL REDUCTION FACTORS PER NWS HYDRO-40
  5           ID        SUNSET & SUNNYCOVE DAMS
  6           ID         RATING CURVES FROM SCS TR20, DATE 2-5-71
  7           ID         STORAGE VOLS PER CONSTRUCTION PLANS & FIELD OBSERVED BOTTOM ELEV.
  8           ID         RATING CURVES MODIFIED TO REFLECT EXST. EMERGENCY SPILLWAYS
  9           ID        W1-25;25-YEAR EVENT
              *DIAGRAM
 10           IT      6                    300
 11           IO      5
 12           IN     30
 13           JD   3.30     .01
 14           PC    .000    .005    .011    .016    .022    .028    .035    .041    .048    .056
 15           PC    .068    .071    .080    .089    .098    .109    .120    .133    .147    .163
 16           PC    .181    .204    .235    .283    .663    .735    .772    .799    .820    .838
 17           PC    .854    .868    .880    .891    .902    .912    .921    .929    .937    .945
 18           PC    .952    .959    .965    .972    .978    .984    .989    .995   1.000
 19           JD   3.23     3.0
 20           JD   3.17     10.
 21           JD   3.04    20.0
 22           JD   2.97    30.0

 23           KK     SW2
 24           KM   SUB-BASIN SW2
 25           BA    1.25
 26           LG     .15     .28    4.64     .23   14.90
 27           UI    569.   2025.   2254.   1276.    768.    474.    284.    170.    105.     53.
 28           UI     53.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 29           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 30           KK     RW4
 31           KM        TURTLEBACK WASH WITHIN SW7
 32           RS       2    FLOW      -1
 33           RC    .045    .030    .045   12780     .02
 34           RX     462     465     485     490     510     515     535     538
 35           RY      18      15      15      10      10      15      15      18

 36           KK     SW6
 37           KM   SUB-BASIN SW6
 38           BA     .98
 39           LG     .15     .28    4.54     .23   16.00
 40           UI    151.    584.    997.   1356.    826.    642.    484.    340.    266.    182.
 41           UI    139.    103.     67.     64.     26.     26.     26.     26.      0.      0.
 42           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 43           KK     SW7
 44           KM   SUB-BASIN SW7
 45           BA    1.30
 46           LG     .15     .28    4.71     .22   15.00
 47           UI    163.    617.   1111.   1661.   1175.    875.    697.    518.    392.    305.
 48           UI    215.    172.    125.     90.     80.     48.     31.     31.     31.     31.
 49           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 50           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 51           KK     CW8
 52           HC       3

 53           KK    RW10
 54           KM        TURTLEBACK WASH WITHIN SW14
 55           RS       1    FLOW      -1
 56           RC    .045     .03    .045    5550   .0198
 57           RX     423     427     477     480     520     523     573     577
 58           RY      17      13      13      10      10      13      13      17

 59           KK    SW12
 60           KM   SUB-BASIN SW12
 61           BA     .51
 62           LG     .15     .28    3.70     .26   15.30
 63           UI    337.   1157.    780.    455.    256.    139.     78.     40.     25.      0.
 64           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 65           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 66           KK    SW14
 67           KM   SUB-BASIN SW14
 68           BA     .76
 69           LG     .15     .29    3.71     .31   13.80
 70           UI    304.   1094.   1391.    792.    502.    324.    192.    120.     78.     36.
 71           UI     31.     31.      0.      0.      0.      0.      0.      0.      0.      0.
 72           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 73           KK    CW16
 74           HC       3

 75           KK    RW18
 76           KM        TURTLEBACK WASH WITHIN SW20
 77           RS       1    FLOW      -1
 78           RC    .045     .03    .045    4100    .018
 79           RX     423     427     477     480     520     523     573     577
 80           RY      17      13      13      10      10      13      13      17

 81           KK    SW20
 82           KM   SUB-BASIN SW20
 83           BA     .23
 84           LG     .15     .29    4.12     .39   12.60
 85           UI    137.    488.    364.    216.    124.     69.     38.     23.     11.     11.
 86           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 87           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 88           KK    CW22
 89           KM    WASH "W" CONFLUENCE WITH HASSAYAMPA RIVER
 90           HC       2

 91           KK     SQ2
 92           KM   SUB-BASIN SQ2
 93           BA     .37
 94           LG     .15     .30    3.61     .25    9.10
 95           UI    239.    830.    568.    334.    189.    102.     58.     30.     18.     18.
 96           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 97           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 98           KK     SR2
 99           KM   SUB-BASIN SR2
100           BA     .91
101           LG     .15     .29    3.55     .27    8.00
102           UI    138.    534.    914.   1258.    768.    597.    452.    318.    250.    171.
103           UI    131.     95.     65.     61.     25.     24.     24.     24.      0.      0.
104           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

105           KK     SR4
106           KM   SUB-BASIN SR4
107           BA     .47
108           LG     .15     .30    3.67     .29   10.00
109           UI    131.    491.    813.    511.    366.    239.    168.    105.     73.     47.
110           UI     34.     16.     16.     16.      0.      0.      0.      0.      0.      0.
111           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

112           KK     CR6
113           HC       2

114           KK     RR8
115           KM        CEMETARY WASH WITHIN SR10
116           RS       3    FLOW      -1
117           RC    .045     .03    .045   10800   .0176
118           RX     443     447     487     490     510     513     553     557
119           RY      17      13      13      10      10      13      13      17

120           KK    SR10
121           KM   SUB-BASIN SR10
122           BA    1.57
123           LG     .15     .30    3.94     .35    8.40
124           UI    173.    527.   1055.   1439.   1757.   1084.    886.    722.    552.    425.
125           UI    354.    253.    203.    161.    133.     86.     85.     54.     33.     33.
126           UI     33.     33.     33.      0.      0.      0.      0.      0.      0.      0.
127           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

128           KK    CR12
129           HC       2

130           KK    RR14
131           KM        CEMETARY WASH WITHIN SR32
132           RS       1    FLOW      -1
133           RC    .045     .03    .045    2200   .0182
134           RX     443     447     487     490     510     513     553     557
135           RY      17      13      13      10      10      13      13      17

136           KK    SR16
137           KM   SUB-BASIN SR16
138           BA     .75
139           LG     .15     .30    3.61     .28   11.20
140           UI    146.    553.    948.   1000.    618.    467.    319.    241.    160.    117.
141           UI     84.     56.     43.     22.     22.     22.     22.      0.      0.      0.
142           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 143          KK   SR18
 144          KM   SUB-BASIN SR18
 145          BA    .71
 146          LG    .15     .30    3.58     .28   11.20
 147          UI   103.    404.    694.    977.    602.    469.    358.    253.    200.    136.
 148          UI   108.     74.     54.     47.     25.     18.     18.     18.     18.      0.
 149          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 150          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 151          KK   CR20
 152          HC      2

 153          KK   RR22
 154          KM       CEMETARY WASH WITHIN SR26
 155          RS      1    FLOW      -1
 156          RC   .045     .03    .045    4800   .0188
 157          RX    439     444     494     495     505     506     556     561
 158          RY     16      11       1      10      10      11      11      16

 159          KK   SR24
 160          KM   SUB-BASIN SR24
 161          BA    .44
 162          LG    .15     .30    3.59     .28   12.70
 163          UI   110.    419.    730.    489.    350.    239.    168.    107.     75.     51.
 164          UI    37.     19.     14.     14.     14.      0.      0.      0.      0.      0.
 165          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 166          KK   RR25
 167          KM       CEMETARY WASH WITHIN SR26
 168          RS      1    FLOW      -1
 169          RC   .045     .03    .045    4800   .0167
 170          RX    450     454     494     495     505     506     546     550
 171          RY     15      11      11      10      10      11      11      15

 172          KK   SR26
 173          KM   SUB-BASIN SR26
 174          BA    .95
 175          LG    .15     .30    3.59     .28   12.10
 176          UI   229.    870.   1533.   1078.    761.    530.    368.    242.    171.    116.
 177          UI    78.     51.     31.     31.     31.      0.      0.      0.      0.      0.
 178          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 179          KK   CR28
 180          HC      3

 181          KK   RR30
 182          KM       CEMETARY WASH WITHIN SR32
 183          RS      2    FLOW      -1
 184          RC   .045     .03    .045    9200   .0163
 185          RX    439     444     494     495     505     506     556     561
 186          RY     16      11      11      10      10      11      11      16
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 187          KK   SR32
 188          KM   SUB-BASIN SR32
 189          BA    .94
 190          LG    .15     .30    3.86     .33   11.30
 191          UI   167.    637.   1085.   1290.    779.    600.    424.    315.    218.    160.
 192          UI   113.     80.     67.     32.     26.     26.     26.      0.      0.      0.
 193          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 194          KK   CR34
 195          HC      3

 196          KK   RR36
 197          KM       CEMETARY WASH WITHIN SR38
 198          RS      1    FLOW      -1
 199          RC   .045     .03    .045    3000   .0167
 200          RX    435     438     483     485     515     517     562     566
 201          RY     16      12      12      10      10      12      12      16

 202          KK   SR38
 203          KM   SUB-BASIN SR38
 204          BA    .79
 205          LG    .15     .28    3.85     .25   14.60
 206          UI   104.    415.    723.   1062.    682.    528.    412.    295.    233.    166.
 207          UI   122.     93.     71.     50.     43.     20.     20.     20.     20.      0.
 208          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 209          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 210          KK   CR40
 211          HC      2

 212          KK   RR42
 213          KM       CEMETARY WASH WITHIN SR44
 214          RS      1    FLOW      -1
 215          RC   .045     .03    .045    5200   .0154
 216          RX    443     447     477     480     520     523     553     557
 217          RY     17      13      13      10      10      13      13      17

 218          KK   SR44
 219          KM   SUB-BASIN SR44
 220          BA   1.05
 221          LG    .15     .29    3.59     .28   14.20
 222          UI   313.   1159.   1854.   1131.    803.    515.    354.    227.    152.     95.
 223          UI    61.     37.     37.     37.      0.      0.      0.      0.      0.      0.
 224          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 225          KK   CR46
 226          HC      2

 227          KK   RR48
 228          KM       CEMETARY WASH WITHIN SR50
 229          RS      2    FLOW      -1
 230          RC   .045     .03    .045    7800   .0167
 231          RX    434     438     478     482     518     522     562     566
 232          RY     18      14      14      10      10      14      14      18
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 233          KK    SR50
 234          KM   SUB-BASIN SR50
 235          BA     .56
 236          LG     .15     .31    3.76     .30    5.10
 237          UI    159.    596.    976.    606.    434.    281.    198.    122.     85.     54.
 238          UI     38.     19.     19.     19.      0.      0.      0.      0.      0.      0.
 239          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 240          KK    CR52
 241          KM    WASH "R" CONFLUENCE WITH HASSAYAMPA RIVER
 242          HC       2

 243          KK   NUL
 244          KM   COMBINING WASHES W, Q, & R TO REDUCE THE NO. OF FREE HYDROGRAPHS
 245          HC   3.

 246          KK    SAG2
 247          KM   SUB-BASIN SAG2
 248          BA     .18
 249          LG     .15     .32    3.72     .29    1.50
 250          UI    119.    408.    275.    161.     91.     49.     28.     14.      9.      0.
 251          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 252          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 253          KK    SAD2
 254          KM   SUB-BASIN SAD2
 255          BA     .98
 256          LG     .14     .31    3.81     .31    7.20
 257          UI     95.    230.    498.    688.    963.    809.    564.    477.    399.    322.
 258          UI    244.    213.    169.    125.    107.     85.     73.     50.     46.     43.
 259          UI     18.     18.     18.     18.     18.     18.      0.      0.      0.      0.
 260          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 261          KK    DAD4
 262          KM        SUNSET DAM - EXISTING CONDITIONS
 263          KM        RATING CURVE FROM SCS TR20, DATE 2-5-71
 264          KM         DISCHARGES PER SCS TR20
 265          KM         STORAGE VOLS PER CONSTRUCTION PLANS & FIELD OBSERVED BOTTOM ELEV.
 266          KM        TOP OF SEDIMENT STORAGE 2124.0 PER SCS
 267          RS       1    ELEV  2112.5
 268          SV       0    8.44  24.615  40.635  63.375  72.225    90.8
 269          SQ       0    22.0   23.25   24.00   24.60   196.0   605.0
 270          SE  2112.5  2120.0  2125.0  2128.0  2131.0  2132.0  2134.0

 271          KK    RAD6
 272          KM    WASH AD - SURFACE & PIPELINE FLOW
 273          RS       1    FLOW      -1
 274          RC    .045     .03    .045    2400   .0167
 275          RX     434     438     478     482     518     522     562     566
 276          RY      18      14      14      10      10      14      14      18
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

277         KK   SAD8
278         KM   SUB-BASIN SAD8
279         BA    .53
280         LG    .14     .33    4.20     .39    6.10
281         UI   103.    389.    666.    708.    437.    330.    226.    171.    113.     83.
282         UI    60.     39.     31.     15.     15.     15.     15.      0.      0.      0.
283         UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

284         KK   SAE10
285         KM   SUB-BASIN SAE10
286         BA    .95
287         LG    .15     .30    3.58     .27    6.40
288         UI   102.    294.    601.    817.   1071.    663.    540.    445.    352.    262.
289         UI   224.    166.    126.    108.     78.     63.     50.     48.     19.     19.
290         UI    19.     19.     19.     19.      0.      0.      0.      0.      0.      0.
291         UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

292         KK   DAE12
293         KM        SUNNYCOVE DAM - EXISTING CONDITIONS
294         KM        RATING CRVE FROM SCS TR20, DATE 2-5-71
295         KM          STORAGE VOLS PER CONSTRUCTION PLANS & FIELD OBSERVED BOTTOM ELEV.
296         KM          TOP OF SEDIMENT STORAGE 2156.0
297         KM          DISCHARGES PER SCS RATING CURVE
298         RS       1    ELEV    2134
299         SV       0   11.19   88.84 215.665  223.19   272.7   310.0
300         SQ       0    23.5    24.5    25.9    26.0    26.4    26.7
301         SE  2134.0  2150.0  2160.0  2169.5  2170.0  2173.0  2175.0

302         KK   RAE14
303         KM     WASH AE - SURFACE & PIPELINE FLOW
304         RS       3    FLOW      -1
305         RC    .045     .03    .045    5800   .0155
306         RX     441     445     475     487     513     525     555     559
307         RY      18      14      14      10      10      14      14      18

308         KK   CAE16
309         KM    WASH "AE" CONFLUENCE WITH HASSAYAMPA RIVER
310         HC       3
311         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

 23         SW2
             V
             V
 30         RW4
             .
             .
 36          .         SW6
             .           .
             .           .
 43          .           .         SW7
             .           .           .
             .           .           .
 51         CW8.......................
             V
             V
 53        RW10
             .
             .
 59          .        SW12
             .           .
             .           .
 66          .           .        SW14
             .           .           .
             .           .           .
 73        CW16.......................
             V
             V
 75        RW18
             .
             .
 81          .        SW20
             .           .
             .           .
 88        CW22............
             .
             .
 91          .         SQ2
             .           .
             .           .
 98          .           .         SR2
             .           .           .
             .           .           .
105          .           .           .        SR4
             .           .           .          .
             .           .           .          .
112          .           .         CR6............
             .           .           V
             .           .           V
             .           .         RR8
             .           .           .
             .           .           .
120          .           .           .        SR10
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                .         .
128             .         .     CR12............
                .         .       V
                .         .       V
130             .         .     RR14
                .         .       .
                .         .       .
136             .         .       .       SR16
                .         .       .         .
                .         .       .         .
143             .         .       .         .       SR18
                .         .       .         .         .
                .         .       .         .         .
151             .         .       .       CR20............
                .         .       .         V
                .         .       .         V
153             .         .       .       RR22
                .         .       .         .
                .         .       .         .
159             .         .       .         .       SR24
                .         .       .         .         V
                .         .       .         .         V
166             .         .       .         .       RR25
                .         .       .         .         .
                .         .       .         .         .
172             .         .       .         .         .       SR26
                .         .       .         .         .         .
                .         .       .         .         .         .
179             .         .       .       CR28......................
                .         .       .         V
                .         .       .         V
181             .         .       .       RR30
                .         .       .         .
                .         .       .         .
187             .         .       .         .       SR32
                .         .       .         .         .
                .         .       .         .         .
194             .         .     CR34......................
                .         .       V
                .         .       V
196             .         .     RR36
                .         .       .
                .         .       .
202             .         .       .       SR38
                .         .       .         .
                .         .       .         .
210             .         .     CR40............
                .         .       V
                .         .       V
212             .         .     RR42
                .         .       .
                .         .       .
218             .         .       .       SR44
                .         .       .         .
                .         .       .         .
                .         .     CR46............
                .         .       V
                .         .       V
227             .         .     RR48
                .         .       .
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                .          .          .
233             .          .          .        SR50
                .          .          .          .
                .          .          .          .
                .          .       CR52............
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243       NUL   ......................
                .
                .
246             .       SAG2
                .          .
                .          .
253             .          .       SAD2
                .          .          V
                .          .          V
261             .          .       DAD4
                .          .          V
                .          .          V
271             .          .       RAD6
                .          .          .
                .          .          .
277             .          .          .        SAD8
                .          .          .          .
                .          .          .          .
284             .          .          .          .      SAE10
                .          .          .          .          V
                .          .          .          .          V
292             .          .          .          .      DAE12
                .          .          .          .          V
                .          .          .          .          V
302             .          .          .          .      RAE14
                .          .          .          .          .
                .          .          .          .          .
308             .          .       CAE16......................
```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

```
****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*      BY THE COE IN FEBRUARY 1981     *
*          REVISED 02 AUG 88           *
*                                      *
* RUN DATE  04/23/1991  TIME  12:02:28 *
*                                      *
****************************************
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****************************************
*                                      *
*     DODSON AND ASSOCIATES, INC.      *
*   HYDROLOGIST AND CIVIL ENGINEERS    *
*      7015 W TIDWELL SUITE 107        *
*        HOUSTON, TEXAS  77092         *
*           (713) 895-8322             *
*                                      *
****************************************
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                    WICKENBURG ADMS - CONTRACT FCD 89-79
                    WASHES W (TURTLEBACK), R (CEMETARY), AE,AD, AC (TRIB. TO SOLS WASH)
                    SCS TYPE II STORM - 24 HR: PHOENIX MOUNTAIN S-GRAPH
                    AREAL REDUCTION FACTORS PER NWS HYDRO-40
                    SUNSET & SUNNYCOVE DAMS
                     RATING CURVES FROM SCS TR20, DATE 2-5-71
                     STORAGE VOLS PER CONSTRUCTION PLANS & FIELD OBSERVED BOTTOM ELEV.
                     RATING CURVES MODIFIED TO REFLECT EXST. EMERGENCY SPILLWAYS
                    W1-25;25-YEAR EVENT

 11 IO        OUTPUT CONTROL VARIABLES
                    IPRNT          5  PRINT CONTROL
                    IPLOT          0  PLOT CONTROL
                    QSCAL         0.  HYDROGRAPH PLOT SCALE

    IT        HYDROGRAPH TIME DATA
                     NMIN          6  MINUTES IN COMPUTATION INTERVAL
                    IDATE      1   0  STARTING DATE
                    ITIME       0000  STARTING TIME
                       NQ        300  NUMBER OF HYDROGRAPH ORDINATES
                   NDDATE      2   0  ENDING DATE
                   NDTIME       0554  ENDING TIME
                    ICENT         19  CENTURY MARK

              COMPUTATION INTERVAL     .10 HOURS
                   TOTAL TIME BASE   29.90 HOURS

        ENGLISH UNITS
             DRAINAGE AREA          SQUARE MILES
             PRECIPITATION DEPTH    INCHES
             LENGTH, ELEVATION      FEET
             FLOW                   CUBIC FEET PER SECOND
             STORAGE VOLUME         ACRE-FEET
             SURFACE AREA           ACRES
             TEMPERATURE            DEGREES FAHRENHEIT

 13 JD        INDEX STORM NO. 1
                    STRM       3.30  PRECIPITATION DEPTH
                    TRDA        .01  TRANSPOSITION DRAINAGE AREA

 14 PI          PRECIPITATION PATTERN
                   .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
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19 JD INDEX STORM NO. 2

STRM 3.23 PRECIPITATION DEPTH

TRDA 3.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

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20 JD INDEX STORM NO. 3

STRM 3.17 PRECIPITATION DEPTH

TRDA 10.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

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21 JD INDEX STORM NO. 4

STRM 3.04 PRECIPITATION DEPTH

TRDA 20.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
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.01	.01	.01	.01	.01	.08	.08	.08	.08	.08
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
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.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

22 JD INDEX STORM NO. 5

STRM 2.97 PRECIPITATION DEPTH

TRDA 30.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
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.00	.00	.00	.00	.00	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.08	.08	.08	.08	.08
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.00	.00	.00	.00	.00
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.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

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	SW2	1375.	12.00	154.	43.	35.	1.25		
ROUTED TO	RW4	1236.	12.20	154.	43.	35.	1.25	13.40	12.20
HYDROGRAPH AT	SW6	891.	12.10	123.	35.	28.	.98		
HYDROGRAPH AT	SW7	1122.	12.20	162.	45.	36.	1.30		
3 COMBINED AT	CW8	3206.	12.20	435.	122.	98.	3.53		
ROUTED TO	RW10	2921.	12.30	435.	122.	98.	3.53	13.59	12.30
HYDROGRAPH AT	SW12	600.	12.00	63.	18.	14.	.51		
HYDROGRAPH AT	SW14	786.	12.10	89.	25.	20.	.76		
3 COMBINED AT	CW16	3695.	12.20	581.	163.	131.	4.80		
ROUTED TO	RW18	3567.	12.30	581.	163.	131.	4.80	13.99	12.30
HYDROGRAPH AT	SW20	231.	12.00	25.	7.	6.	.23		
2 COMBINED AT	CW22	3649.	12.30	604.	170.	137.	5.03		
HYDROGRAPH AT	SQ2	428.	12.00	43.	12.	9.	.37		
HYDROGRAPH AT	SR2	793.	12.10	103.	27.	22.	.91		
HYDROGRAPH AT	SR4	464.	12.10	53.	15.	12.	.47		
2 COMBINED AT	CR6	1252.	12.10	155.	42.	34.	1.38		
ROUTED TO	RR8	1011.	12.40	155.	42.	34.	1.38	13.13	12.40
HYDROGRAPH AT	SR10	1098.	12.20	162.	44.	35.	1.57		
2 COMBINED AT	CR12	2001.	12.30	316.	85.	69.	2.95		
ROUTED TO	RR14	1986.	12.30	316.	85.	69.	2.95	14.00	12.30
HYDROGRAPH AT	SR16	696.	12.10	87.	24.	19.	.75		
HYDROGRAPH AT	SR18	612.	12.10	83.	23.	18.	.71		
2 COMBINED AT	CR20	1303.	12.10	169.	46.	37.	1.46		
ROUTED TO	RR22	1216.	12.20	169.	46.	37.	1.46	7.53	12.20
HYDROGRAPH AT	SR24	436.	12.10	52.	14.	12.	.44		
ROUTED TO	RR25	326.	12.30	52.	14.	12.	.44	11.57	12.30

HYDROGRAPH AT	SR26	929.	12.10	111.	31.	25.	.95		
3 COMBINED AT	CR28	2364.	12.20	331.	91.	73.	2.85		
ROUTED TO	RR30	1992.	12.40	331.	91.	73.	2.85	12.96	12.40
HYDROGRAPH AT	SR32	804.	12.10	103.	29.	23.	.94		
3 COMBINED AT	CR34	4373.	12.30	736.	201.	162.	6.74		
ROUTED TO	RR36	4339.	12.40	736.	201.	162.	6.74	14.32	12.40
HYDROGRAPH AT	SR38	691.	12.20	98.	27.	22.	.79		
2 COMBINED AT	CR40	4766.	12.40	829.	227.	183.	7.53		
ROUTED TO	RR42	4593.	12.50	829.	227.	183.	7.53	14.78	12.50
HYDROGRAPH AT	SR44	1076.	12.10	127.	36.	29.	1.05		
2 COMBINED AT	CR46	4947.	12.40	950.	261.	210.	8.58		
ROUTED TO	RR48	4760.	12.60	950.	261.	210.	8.58	15.22	12.60
HYDROGRAPH AT	SR50	534.	12.10	58.	15.	12.	.56		
2 COMBINED AT	CR52	4848.	12.60	1004.	275.	222.	9.14		
3 COMBINED AT	NUL	7441.	12.50	1588.	440.	354.	14.54		
HYDROGRAPH AT	SAG2	194.	12.00	18.	5.	4.	.18		
HYDROGRAPH AT	SAD2	646.	12.20	104.	28.	22.	.98		
ROUTED TO	DAD4	24.	13.90	24.	18.	15.	.98	2127.88	13.90
ROUTED TO	RAD6	24.	14.20	24.	18.	15.	.98	10.19	14.20
HYDROGRAPH AT	SAD8	409.	12.10	49.	13.	11.	.53		
HYDROGRAPH AT	SAE10	713.	12.20	105.	28.	22.	.95		
ROUTED TO	DAE12	24.	13.70	24.	18.	15.	.95	2153.87	13.80
ROUTED TO	RAE14	24.	14.50	24.	18.	14.	.95	10.26	14.40
3 COMBINED AT	CAE16	425.	12.10	91.	49.	39.	2.46		

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

HEC-1 OUTPUT
WEST TRIBUTARIES AREA
50-YEAR RETURN PERIOD

FN = W1-50

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*****************************************
*                                       *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *
*     BY THE COE IN FEBRUARY 1981       *
*          REVISED 02 AUG 88            *
*                                       *
* RUN DATE  04/23/1991  TIME  12:02:59  *
*                                       *
*****************************************
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*****************************************
*                                       *
*     DODSON AND ASSOCIATES, INC.       *
*   HYDROLOGIST AND CIVIL ENGINEERS     *
*      7015 W TIDWELL SUITE 107         *
*        HOUSTON, TEXAS  77092          *
*           (713) 895-8322              *
*                                       *
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X     X  XXXXXXX   XXXXX          X
X     X  X        X     X        XX
X     X  X        X              X
XXXXXXX  XXXX     X       XXXXX  X
X     X  X        X              X
X     X  X        X     X        X
X     X  XXXXXXX   XXXXX         XXX
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THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

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

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

  1           ID        WICKENBURG ADMS - CONTRACT FCD 89-79
  2           ID        WASHES W (TURTLEBACK), R (CEMETARY), AE,AD, AC (TRIB. TO SOLS WASH)
  3           ID        SCS TYPE II STORM - 24 HR: PHOENIX MOUNTAIN S-GRAPH
  4           ID        AREAL REDUCTION FACTORS PER NWS HYDRO-40
  5           ID        SUNSET & SUNNYCOVE DAMS
  6           ID         RATING CURVES FROM SCS TR20, DATE 2-5-71
  7           ID         STORAGE VOLS PER CONSTRUCTION PLANS & FIELD OBSERVED BOTTOM ELEV.
  8           ID         RATING CURVES MODIFIED TO REFLECT EXST. EMERGENCY SPILLWAYS
  9           ID        W1-50;50-YEAR EVENT
             *DIAGRAM
 10           IT      6                    300
 11           IO      5
 12           IN     30
 13           JD   3.74     .01
 14           PC    .000    .005    .011    .016    .022    .028    .035    .041    .048    .056
 15           PC    .068    .071    .080    .089    .098    .109    .120    .133    .147    .163
 16           PC    .181    .204    .235    .283    .663    .735    .772    .799    .820    .838
 17           PC    .854    .868    .880    .891    .902    .912    .921    .929    .937    .945
 18           PC    .952    .959    .965    .972    .978    .984    .989    .995   1.000
 19           JD   3.67     3.0
 20           JD   3.59     10.
 21           JD   3.44    20.0
 22           JD   3.37    30.0

 23           KK     SW2
 24           KM   SUB-BASIN SW2
 25           BA    1.25
 26           LG     .15     .28    4.64     .23   14.90
 27           UI    569.   2025.   2254.   1276.    768.    474.    284.    170.    105.     53.
 28           UI     53.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 29           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 30           KK     RW4
 31           KM        TURTLEBACK WASH WITHIN SW7
 32           RS       2    FLOW      -1
 33           RC    .045    .030    .045   12780     .02
 34           RX    462     465     485     490     510     515     535     538
 35           RY     18      15      15      10      10      15      15      18

 36           KK     SW6
 37           KM   SUB-BASIN SW6
 38           BA     .98
 39           LG     .15     .28    4.54     .23   16.00
 40           UI    151.    584.    997.   1356.    826.    642.    484.    340.    266.    182.
 41           UI    139.    103.     67.     64.     26.     26.     26.     26.      0.      0.
 42           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 43           KK     SW7
 44           KM   SUB-BASIN SW7
 45           BA    1.30
 46           LG     .15     .28    4.71     .22   15.00
 47           UI    163.    617.   1111.   1661.   1175.    875.    697.    518.    392.    305.
 48           UI    215.    172.    125.     90.     80.     48.     31.     31.     31.     31.
 49           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 50           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 51           KK     CW8
 52           HC       3

 53           KK    RW10
 54           KM        TURTLEBACK WASH WITHIN SW14
 55           RS       1    FLOW      -1
 56           RC    .045     .03    .045    5550   .0198
 57           RX     423     427     477     480     520     523     573     577
 58           RY      17      13      13      10      10      13      13      17

 59           KK    SW12
 60           KM   SUB-BASIN SW12
 61           BA     .51
 62           LG     .15     .28    3.70     .26   15.30
 63           UI    337.   1157.    780.    455.    256.    139.     78.     40.     25.      0.
 64           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 65           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 66           KK    SW14
 67           KM   SUB-BASIN SW14
 68           BA     .76
 69           LG     .15     .29    3.71     .31   13.80
 70           UI    304.   1094.   1391.    792.    502.    324.    192.    120.     78.     36.
 71           UI     31.     31.      0.      0.      0.      0.      0.      0.      0.      0.
 72           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 73           KK    CW16
 74           HC       3

 75           KK    RW18
 76           KM        TURTLEBACK WASH WITHIN SW20
 77           RS       1    FLOW      -1
 78           RC    .045     .03    .045    4100    .018
 79           RX     423     427     477     480     520     523     573     577
 80           RY      17      13      13      10      10      13      13      17

 81           KK    SW20
 82           KM   SUB-BASIN SW20
 83           BA     .23
 84           LG     .15     .29    4.12     .39   12.60
 85           UI    137.    488.    364.    216.    124.     69.     38.     23.     11.     11.
 86           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 87           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 88           KK    CW22
 89           KM    WASH "W" CONFLUENCE WITH HASSAYAMPA RIVER
 90           HC       2

 91           KK     SQ2
 92           KM   SUB-BASIN SQ2
 93           BA     .37
 94           LG     .15     .30    3.61     .25    9.10
 95           UI    239.    830.    568.    334.    189.    102.     58.     30.     18.     18.
 96           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 97           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 98           KK     SR2
 99           KM   SUB-BASIN SR2
100           BA     .91
101           LG     .15     .29    3.55     .27    8.00
102           UI    138.    534.    914.   1258.    768.    597.    452.    318.    250.    171.
103           UI    131.     95.     65.     61.     25.     24.     24.     24.      0.      0.
104           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

105           KK     SR4
106           KM   SUB-BASIN SR4
107           BA     .47
108           LG     .15     .30    3.67     .29   10.00
109           UI    131.    491.    813.    511.    366.    239.    168.    105.     73.     47.
110           UI     34.     16.     16.     16.      0.      0.      0.      0.      0.      0.
111           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

112           KK     CR6
113           HC       2

114           KK     RR8
115           KM        CEMETARY WASH WITHIN SR10
116           RS       3    FLOW      -1
117           RC    .045     .03    .045   10800   .0176
118           RX     443     447     487     490     510     513     553     557
119           RY      17      13      13      10      10      13      13      17

120           KK    SR10
121           KM   SUB-BASIN SR10
122           BA    1.57
123           LG     .15     .30    3.94     .35    8.40
124           UI    173.    527.   1055.   1439.   1757.   1084.    886.    722.    552.    425.
125           UI    354.    253.    203.    161.    133.     86.     85.     54.     33.     33.
126           UI     33.     33.     33.      0.      0.      0.      0.      0.      0.      0.
127           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

128           KK    CR12
129           HC       2

130           KK    RR14
131           KM        CEMETARY WASH WITHIN SR32
132           RS       1    FLOW      -1
133           RC    .045     .03    .045    2200   .0182
134           RX     443     447     487     490     510     513     553     557
135           RY      17      13      13      10      10      13      13      17

136           KK    SR16
137           KM   SUB-BASIN SR16
138           BA     .75
139           LG     .15     .30    3.61     .28   11.20
140           UI    146.    553.    948.   1000.    618.    467.    319.    241.    160.    117.
141           UI     84.     56.     43.     22.     22.     22.     22.      0.      0.      0.
142           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 143          KK   SR18
 144          KM   SUB-BASIN SR18
 145          BA    .71
 146          LG    .15     .30    3.58     .28   11.20
 147          UI   103.    404.    694.    977.    602.    469.    358.    253.    200.    136.
 148          UI   108.     74.     54.     47.     25.     18.     18.     18.     18.      0.
 149          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 150          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 151          KK   CR20
 152          HC      2

 153          KK   RR22
 154          KM       CEMETARY WASH WITHIN SR26
 155          RS      1    FLOW      -1
 156          RC   .045     .03    .045    4800   .0188
 157          RX    439     444     494     495     505     506     556     561
 158          RY     16      11       1      10      10      11      11      16

 159          KK   SR24
 160          KM   SUB-BASIN SR24
 161          BA    .44
 162          LG    .15     .30    3.59     .28   12.70
 163          UI   110.    419.    730.    489.    350.    239.    168.    107.     75.     51.
 164          UI    37.     19.     14.     14.     14.      0.      0.      0.      0.      0.
 165          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 166          KK   RR25
 167          KM       CEMETARY WASH WITHIN SR26
 168          RS      1    FLOW      -1
 169          RC   .045     .03    .045    4800   .0167
 170          RX    450     454     494     495     505     506     546     550
 171          RY     15      11      11      10      10      11      11      15

 172          KK   SR26
 173          KM   SUB-BASIN SR26
 174          BA    .95
 175          LG    .15     .30    3.59     .28   12.10
 176          UI   229.    870.   1533.   1078.    761.    530.    368.    242.    171.    116.
 177          UI    78.     51.     31.     31.     31.      0.      0.      0.      0.      0.
 178          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 179          KK   CR28
 180          HC      3

 181          KK   RR30
 182          KM       CEMETARY WASH WITHIN SR32
 183          RS      2    FLOW      -1
 184          RC   .045     .03    .045    9200   .0163
 185          RX    439     444     494     495     505     506     556     561
 186          RY     16      11      11      10      10      11      11      16
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 187          KK   SR32
 188          KM   SUB-BASIN SR32
 189          BA    .94
 190          LG    .15     .30    3.86     .33   11.30
 191          UI   167.    637.   1085.   1290.    779.    600.    424.    315.    218.    160.
 192          UI   113.     80.     67.     32.     26.     26.     26.      0.      0.      0.
 193          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 194          KK   CR34
 195          HC      3

 196          KK   RR36
 197          KM       CEMETARY WASH WITHIN SR38
 198          RS      1    FLOW      -1
 199          RC   .045     .03    .045    3000   .0167
 200          RX    435     438     483     485     515     517     562     566
 201          RY     16      12      12      10      10      12      12      16

 202          KK   SR38
 203          KM   SUB-BASIN SR38
 204          BA    .79
 205          LG    .15     .28    3.85     .25   14.60
 206          UI   104.    415.    723.   1062.    682.    528.    412.    295.    233.    166.
 207          UI   122.     93.     71.     50.     43.     20.     20.     20.     20.      0.
 208          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 209          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 210          KK   CR40
 211          HC      2

 212          KK   RR42
 213          KM       CEMETARY WASH WITHIN SR44
 214          RS      1    FLOW      -1
 215          RC   .045     .03    .045    5200   .0154
 216          RX    443     447     477     480     520     523     553     557
 217          RY     17      13      13      10      10      13      13      17

 218          KK   SR44
 219          KM   SUB-BASIN SR44
 220          BA   1.05
 221          LG    .15     .29    3.59     .28   14.20
 222          UI   313.   1159.   1854.   1131.    803.    515.    354.    227.    152.     95.
 223          UI    61.     37.     37.     37.      0.      0.      0.      0.      0.      0.
 224          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 225          KK   CR46
 226          HC      2

 227          KK   RR48
 228          KM       CEMETARY WASH WITHIN SR50
 229          RS      2    FLOW      -1
 230          RC   .045     .03    .045    7800   .0167
 231          RX    434     438     478     482     518     522     562     566
 232          RY     18      14      14      10      10      14      14      18
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 233          KK    SR50
 234          KM   SUB-BASIN SR50
 235          BA     .56
 236          LG     .15     .31    3.76     .30    5.10
 237          UI    159.    596.    976.    606.    434.    281.    198.    122.     85.     54.
 238          UI     38.     19.     19.     19.      0.      0.      0.      0.      0.      0.
 239          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 240          KK    CR52
 241          KM    WASH "R" CONFLUENCE WITH HASSAYAMPA RIVER
 242          HC       2

 243          KK   NUL
 244          KM   COMBINING WASHES W, Q, & R TO REDUCE THE NO. OF FREE HYDROGRAPHS
 245          HC   3.

 246          KK    SAG2
 247          KM   SUB-BASIN SAG2
 248          BA     .18
 249          LG     .15     .32    3.72     .29    1.50
 250          UI    119.    408.    275.    161.     91.     49.     28.     14.      9.      0.
 251          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 252          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 253          KK    SAD2
 254          KM   SUB-BASIN SAD2
 255          BA     .98
 256          LG     .14     .31    3.81     .31    7.20
 257          UI     95.    230.    498.    688.    963.    809.    564.    477.    399.    322.
 258          UI    244.    213.    169.    125.    107.     85.     73.     50.     46.     43.
 259          UI     18.     18.     18.     18.     18.     18.      0.      0.      0.      0.
 260          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 261          KK    DAD4
 262          KM        SUNSET DAM - EXISTING CONDITIONS
 263          KM        RATING CURVE FROM SCS TR20, DATE 2-5-71
 264          KM         DISCHARGES PER SCS TR20
 265          KM         STORAGE VOLS PER CONSTRUCTION PLANS & FIELD OBSERVED BOTTOM ELEV.
 266          KM        TOP OF SEDIMENT STORAGE 2124.0 PER SCS
 267          RS       1    ELEV  2112.5
 268          SV       0    8.44  24.615  40.635  63.375  72.225    90.8
 269          SQ       0    22.0   23.25   24.00   24.60   196.0   605.0
 270          SE  2112.5  2120.0  2125.0  2128.0  2131.0  2132.0  2134.0

 271          KK    RAD6
 272          KM    WASH AD - SURFACE & PIPELINE FLOW
 273          RS       1    FLOW      -1
 274          RC    .045     .03    .045    2400   .0167
 275          RX     434     438     478     482     518     522     562     566
 276          RY      18      14      14      10      10      14      14      18
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 277          KK   SAD8
 278          KM   SUB-BASIN SAD8
 279          BA    .53
 280          LG    .14     .33    4.20     .39    6.10
 281          UI   103.    389.    666.    708.    437.    330.    226.    171.    113.     83.
 282          UI    60.     39.     31.     15.     15.     15.     15.      0.      0.      0.
 283          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 284          KK   SAE10
 285          KM   SUB-BASIN SAE10
 286          BA    .95
 287          LG    .15     .30    3.58     .27    6.40
 288          UI   102.    294.    601.    817.   1071.    663.    540.    445.    352.    262.
 289          UI   224.    166.    126.    108.     78.     63.     50.     48.     19.     19.
 290          UI    19.     19.     19.     19.      0.      0.      0.      0.      0.      0.
 291          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 292          KK   DAE12
 293          KM        SUNNYCOVE DAM - EXISTING CONDITIONS
 294          KM        RATING CRVE FROM SCS TR20, DATE 2-5-71
 295          KM          STORAGE VOLS PER CONSTRUCTION PLANS & FIELD OBSERVED BOTTOM ELEV.
 296          KM          TOP OF SEDIMENT STORAGE 2156.0
 297          KM          DISCHARGES PER SCS RATING CURVE
 298          RS       1    ELEV    2134
 299          SV       0   11.19   88.84 215.665  223.19   272.7   310.0
 300          SQ       0    23.5    24.5    25.9    26.0    26.4    26.7
 301          SE  2134.0  2150.0  2160.0  2169.5  2170.0  2173.0  2175.0

 302          KK   RAE14
 303          KM     WASH AE - SURFACE & PIPELINE FLOW
 304          RS       3    FLOW      -1
 305          RC    .045     .03    .045    5800   .0155
 306          RX     441     445     475     487     513     525     555     559
 307          RY      18      14      14      10      10      14      14      18

 308          KK   CAE16
 309          KM    WASH "AE" CONFLUENCE WITH HASSAYAMPA RIVER
 310          HC       3
 311          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

 23         SW2
             V
             V
 30         RW4
             .
             .
 36          .         SW6
             .           .
             .           .
 43          .           .         SW7
             .           .           .
             .           .           .
 51         CW8.......................
             V
             V
 53        RW10
             .
             .
 59          .        SW12
             .           .
             .           .
 66          .           .        SW14
             .           .           .
             .           .           .
 73        CW16.......................
             V
             V
 75        RW18
             .
             .
 81          .        SW20
             .           .
             .           .
 88        CW22............
             .
             .
 91          .         SQ2
             .           .
             .           .
 98          .           .         SR2
             .           .           .
             .           .           .
105          .           .           .         SR4
             .           .           .           .
             .           .           .           .
112          .           .         CR6............
             .           .           V
             .           .           V
             .           .         RR8
             .           .           .
             .           .           .
120          .           .           .         SR10
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                .         .
128             .         .     CR12............
                .         .       V
                .         .       V
0               .         .     RR14
                .         .       .
                .         .       .
136             .         .       .       SR16
                .         .       .         .
                .         .       .         .
143             .         .       .         .       SR18
                .         .       .         .         .
                .         .       .         .         .
151             .         .       .       CR20............
                .         .       .         V
                .         .       .         V
153             .         .       .       RR22
                .         .       .         .
                .         .       .         .
159             .         .       .         .       SR24
                .         .       .         .         V
                .         .       .         .         V
166             .         .       .         .       RR25
                .         .       .         .         .
                .         .       .         .         .
172             .         .       .         .         .       SR26
                .         .       .         .         .         .
                .         .       .         .         .         .
179             .         .       .       CR28......................
                .         .       .         V
                .         .       .         V
181             .         .       .       RR30
                .         .       .         .
                .         .       .         .
187             .         .       .         .       SR32
                .         .       .         .         .
                .         .       .         .         .
194             .         .     CR34......................
                .         .       V
                .         .       V
196             .         .     RR36
                .         .       .
                .         .       .
202             .         .       .       SR38
                .         .       .         .
                .         .       .         .
210             .         .     CR40............
                .         .       V
                .         .       V
212             .         .     RR42
                .         .       .
                .         .       .
218             .         .       .       SR44
                .         .       .         .
                .         .       .         .
                .         .     CR46............
                .         .       V
                .         .       V
227             .         .     RR48
                .         .       .
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                .         .         .
233             .         .         .       SR50
                .         .         .         .
                .         .         .         .
0               .         .       CR52............
                .         .         .
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243       NUL  ........................
                .
                .
246             .       SAG2
                .         .
                .         .
253             .         .       SAD2
                .         .         V
                .         .         V
261             .         .       DAD4
                .         .         V
                .         .         V
271             .         .       RAD6
                .         .         .
                .         .         .
277             .         .         .       SAD8
                .         .         .         .
                .         .         .         .
284             .         .         .         .      SAE10
                .         .         .         .         V
                .         .         .         .         V
292             .         .         .         .      DAE12
                .         .         .         .         V
                .         .         .         .         V
302             .         .         .         .      RAE14
                .         .         .         .         .
                .         .         .         .         .
308             .         .       CAE16........................
```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

```
****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*     BY THE COE IN FEBRUARY 1981      *
*          REVISED 02 AUG 88           *
*                                      *
* RUN DATE  04/23/1991  TIME  12:02:59 *
*                                      *
****************************************
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****************************************
*                                      *
*     DODSON AND ASSOCIATES, INC.      *
*   HYDROLOGIST AND CIVIL ENGINEERS    *
*      7015 W TIDWELL SUITE 107        *
*        HOUSTON, TEXAS  77092         *
*           (713) 895-8322             *
*                                      *
****************************************
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                    WICKENBURG ADMS - CONTRACT FCD 89-79
                    WASHES W (TURTLEBACK), R (CEMETARY), AE,AD, AC (TRIB. TO SOLS WASH)
                    SCS TYPE II STORM - 24 HR: PHOENIX MOUNTAIN S-GRAPH
                    AREAL REDUCTION FACTORS PER NWS HYDRO-40
                    SUNSET & SUNNYCOVE DAMS
                     RATING CURVES FROM SCS TR20, DATE 2-5-71
                     STORAGE VOLS PER CONSTRUCTION PLANS & FIELD OBSERVED BOTTOM ELEV.
                     RATING CURVES MODIFIED TO REFLECT EXST. EMERGENCY SPILLWAYS
                    W1-50;50-YEAR EVENT

 11 IO        OUTPUT CONTROL VARIABLES
                    IPRNT          5  PRINT CONTROL
                    IPLOT          0  PLOT CONTROL
                    QSCAL         0.  HYDROGRAPH PLOT SCALE

  IT          HYDROGRAPH TIME DATA
                     NMIN          6  MINUTES IN COMPUTATION INTERVAL
                    IDATE      1   0  STARTING DATE
                    ITIME       0000  STARTING TIME
                       NQ        300  NUMBER OF HYDROGRAPH ORDINATES
                   NDDATE      2   0  ENDING DATE
                   NDTIME       0554  ENDING TIME
                    ICENT         19  CENTURY MARK

              COMPUTATION INTERVAL     .10 HOURS
                   TOTAL TIME BASE   29.90 HOURS

         ENGLISH UNITS
              DRAINAGE AREA         SQUARE MILES
              PRECIPITATION DEPTH   INCHES
              LENGTH, ELEVATION     FEET
              FLOW                  CUBIC FEET PER SECOND
              STORAGE VOLUME        ACRE-FEET
              SURFACE AREA          ACRES
              TEMPERATURE           DEGREES FAHRENHEIT

 13 JD        INDEX STORM NO. 1
                    STRM       3.74  PRECIPITATION DEPTH
                    TRDA        .01  TRANSPOSITION DRAINAGE AREA

 14 PI          PRECIPITATION PATTERN
                   .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
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.01	.01	.01	.01	.01	.08	.08	.08	.08	.08
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
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19 JD INDEX STORM NO. 2

STRM 3.67 PRECIPITATION DEPTH

TRDA 3.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

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.01	.01	.01	.01	.01	.08	.08	.08	.08	.08
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20 JD INDEX STORM NO. 3

STRM 3.59 PRECIPITATION DEPTH

TRDA 10.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

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21 JD INDEX STORM NO. 4

STRM 3.44 PRECIPITATION DEPTH

TRDA 20.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
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22 JD INDEX STORM NO. 5

STRM 3.37 PRECIPITATION DEPTH

TRDA 30.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
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RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
HYDROGRAPH AT	SW2	1628.	12.00	185.	52.	41.	1.25		
ROUTED TO	RW4	1481.	12.20	185.	52.	41.	1.25	13.80	12.20
HYDROGRAPH AT	SW6	1053.	12.10	148.	41.	33.	.98		
HYDROGRAPH AT	SW7	1329.	12.20	195.	54.	44.	1.30		
3 COMBINED AT	CW8	3816.	12.20	522.	146.	117.	3.53		
ROUTED TO	RW10	3512.	12.30	522.	146.	117.	3.53	13.88	12.30
HYDROGRAPH AT	SW12	708.	12.00	76.	21.	17.	.51		
HYDROGRAPH AT	SW14	936.	12.10	106.	29.	24.	.76		
3 COMBINED AT	CW16	4469.	12.20	696.	194.	156.	4.80		
ROUTED TO	RW18	4309.	12.30	696.	194.	156.	4.80	14.32	12.30
HYDROGRAPH AT	SW20	281.	12.00	30.	8.	7.	.23		
2 COMBINED AT	CW22	4408.	12.30	724.	202.	163.	5.03		
HYDROGRAPH AT	SQ2	507.	12.00	52.	14.	11.	.37		
HYDROGRAPH AT	SR2	943.	12.10	124.	33.	26.	.91		
HYDROGRAPH AT	SR4	553.	12.10	63.	17.	14.	.47		
2 COMBINED AT	CR6	1491.	12.10	186.	50.	40.	1.38		
ROUTED TO	RR8	1211.	12.40	186.	50.	40.	1.38	13.34	12.40
HYDROGRAPH AT	SR10	1333.	12.20	196.	53.	42.	1.57		
2 COMBINED AT	CR12	2392.	12.30	381.	102.	82.	2.95		
ROUTED TO	RR14	2353.	12.30	381.	102.	82.	2.95	14.24	12.30
HYDROGRAPH AT	SR16	828.	12.10	104.	28.	23.	.75		
HYDROGRAPH AT	SR18	728.	12.10	99.	27.	22.	.71		
2 COMBINED AT	CR20	1551.	12.10	202.	55.	44.	1.46		
ROUTED TO	RR22	1460.	12.20	202.	55.	44.	1.46	8.02	12.20
HYDROGRAPH AT	SR24	518.	12.10	62.	17.	14.	.44		
ROUTED TO	RR25	397.	12.20	62.	17.	14.	.44	11.68	12.30

HYDROGRAPH AT	SR26	1104.	12.10	133.	37.	29.	.95		
3 COMBINED AT	CR28	2839.	12.20	395.	108.	87.	2.85		
ROUTED TO	RR30	2442.	12.40	395.	108.	87.	2.85	13.26	12.40
HYDROGRAPH AT	SR32	968.	12.10	124.	34.	27.	.94		
3 COMBINED AT	CR34	5317.	12.30	879.	239.	192.	6.74		
ROUTED TO	RR36	5264.	12.40	879.	239.	192.	6.74	14.72	12.40
HYDROGRAPH AT	SR38	818.	12.20	117.	33.	26.	.79		
2 COMBINED AT	CR40	5776.	12.30	990.	270.	217.	7.53		
ROUTED TO	RR42	5611.	12.40	990.	270.	217.	7.53	15.24	12.50
HYDROGRAPH AT	SR44	1276.	12.10	151.	42.	34.	1.05		
2 COMBINED AT	CR46	6088.	12.40	1133.	310.	249.	8.58		
ROUTED TO	RR48	5815.	12.50	1132.	310.	249.	8.58	15.71	12.60
HYDROGRAPH AT	SR50	641.	12.10	70.	18.	15.	.56		
2 COMBINED AT	CR52	5968.	12.50	1198.	327.	263.	9.14		
3 COMBINED AT	NUL	9177.	12.40	1892.	521.	420.	14.54		
HYDROGRAPH AT	SAG2	233.	12.00	22.	5.	4.	.18		
HYDROGRAPH AT	SAD2	778.	12.20	124.	33.	27.	.98		
ROUTED TO	DAD4	24.	14.20	24.	19.	15.	.98	2129.13	14.10
ROUTED TO	RAD6	24.	14.30	24.	19.	15.	.98	10.19	14.30
HYDROGRAPH AT	SAD8	506.	12.10	61.	16.	13.	.53		
HYDROGRAPH AT	SAE10	850.	12.20	126.	33.	27.	.95		
ROUTED TO	DAE12	24.	14.00	24.	18.	15.	.95	2155.00	14.00
ROUTED TO	RAE14	24.	14.40	24.	18.	15.	.95	10.26	14.50
3 COMBINED AT	CAE16	525.	12.10	103.	52.	42.	2.46		

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

HEC-1 OUTPUT
WEST TRIBUTARIES AREA
100-YEAR RETURN PERIOD

FN = W1-100

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*****************************************
*                                       *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *
*      BY THE COE IN FEBRUARY 1981      *
*            REVISED 02 AUG 88          *
*                                       *
*  RUN DATE  04/23/1991  TIME  12:03:32 *
*                                       *
*****************************************
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*****************************************
*                                       *
*     DODSON AND ASSOCIATES, INC.       *
*   HYDROLOGIST AND CIVIL ENGINEERS     *
*      7015 W TIDWELL SUITE 107         *
*        HOUSTON, TEXAS  77092          *
*           (713) 895-8322              *
*                                       *
*****************************************
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X     X  XXXXXXX   XXXXX          X
X     X  X        X     X        XX
X     X  X        X              X
XXXXXXX  XXXX     X       XXXXX  X
X     X  X        X              X
X     X  X        X     X        X
X     X  XXXXXXX   XXXXX         XXX
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THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

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

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

  1           ID        WICKENBURG ADMS - CONTRACT FCD 89-79
  2           ID        WASHES W (TURTLEBACK), R (CEMETARY), AE,AD, AC (TRIB. TO SOLS WASH)
  3           ID        SCS TYPE II STORM - 24 HR: PHOENIX MOUNTAIN S-GRAPH
  4           ID        AREAL REDUCTION FACTORS PER NWS HYDRO-40
  5           ID        SUNSET & SUNNYCOVE DAMS
  6           ID         RATING CURVES FROM SCS TR20, DATE 2-5-71
  7           ID         STORAGE VOLS PER CONSTRUCTION PLANS & FIELD OBSERVED BOTTOM ELEV.
  8           ID         RATING CURVES MODIFIED TO REFLECT EXST. EMERGENCY SPILLWAYS
  9           ID        W1-100:100-YEAR EVENT
              *DIAGRAM
 10           IT      6                   300
 11           IO      5
 12           IN     30
 13           JD   4.19     .01
 14           PC   .000    .005    .011    .016    .022    .028    .035    .041    .048    .056
 15           PC   .068    .071    .080    .089    .098    .109    .120    .133    .147    .163
 16           PC   .181    .204    .235    .283    .663    .735    .772    .799    .820    .838
 17           PC   .854    .868    .880    .891    .902    .912    .921    .929    .937    .945
 18           PC   .952    .959    .965    .972    .978    .984    .989    .995   1.000
 19           JD   4.10     3.0
 20           JD   4.02     10.
 21           JD   3.85    20.0
 22           JD   3.77    30.0

 23           KK    SW2
 24           KM   SUB-BASIN SW2
 25           BA   1.25
 26           LG    .15     .28    4.64     .23   14.90
 27           UI   569.   2025.   2254.   1276.    768.    474.    284.    170.    105.     53.
 28           UI    53.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 29           UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 30           KK    RW4
 31           KM        TURTLEBACK WASH WITHIN SW7
 32           RS      2    FLOW      -1
 33           RC   .045    .030    .045   12780     .02
 34           RX   462     465     485     490     510     515     535     538
 35           RY    18      15      15      10      10      15      15      18

 36           KK    SW6
 37           KM   SUB-BASIN SW6
 38           BA    .98
 39           LG    .15     .28    4.54     .23   16.00
 40           UI   151.    584.    997.   1356.    826.    642.    484.    340.    266.    182.
 41           UI   139.    103.     67.     64.     26.     26.     26.     26.      0.      0.
 42           UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 43           KK    SW7
 44           KM   SUB-BASIN SW7
 45           BA   1.30
 46           LG    .15     .28    4.71     .22   15.00
 47           UI   163.    617.   1111.   1661.   1175.    875.    697.    518.    392.    305.
 48           UI   215.    172.    125.     90.     80.     48.     31.     31.     31.     31.
 49           UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 50           UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 51           KK     CW8
 52           HC       3

 53           KK    RW10
 54           KM        TURTLEBACK WASH WITHIN SW14
 55           RS       1    FLOW      -1
 56           RC    .045     .03    .045    5550   .0198
 57           RX     423     427     477     480     520     523     573     577
 58           RY      17      13      13      10      10      13      13      17

 59           KK    SW12
 60           KM   SUB-BASIN SW12
 61           BA     .51
 62           LG     .15     .28    3.70     .26   15.30
 63           UI    337.   1157.    780.    455.    256.    139.     78.     40.     25.      0.
 64           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 65           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 66           KK    SW14
 67           KM   SUB-BASIN SW14
 68           BA     .76
 69           LG     .15     .29    3.71     .31   13.80
 70           UI    304.   1094.   1391.    792.    502.    324.    192.    120.     78.     36.
 71           UI     31.     31.      0.      0.      0.      0.      0.      0.      0.      0.
 72           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 73           KK    CW16
 74           HC       3

 75           KK    RW18
 76           KM        TURTLEBACK WASH WITHIN SW20
 77           RS       1    FLOW      -1
 78           RC    .045     .03    .045    4100    .018
 79           RX     423     427     477     480     520     523     573     577
 80           RY      17      13      13      10      10      13      13      17

 81           KK    SW20
 82           KM   SUB-BASIN SW20
 83           BA     .23
 84           LG     .15     .29    4.12     .39   12.60
 85           UI    137.    488.    364.    216.    124.     69.     38.     23.     11.     11.
 86           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 87           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 88           KK    CW22
 89           KM   WASH "W" CONFLUENCE WITH HASSAYAMPA RIVER
 90           HC       2

 91           KK     SQ2
 92           KM   SUB-BASIN SQ2
 93           BA     .37
 94           LG     .15     .30    3.61     .25    9.10
 95           UI    239.    830.    568.    334.    189.    102.     58.     30.     18.     18.
 96           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  97          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

  98          KK     SR2
  99          KM   SUB-BASIN SR2
 100          BA     .91
 101          LG     .15     .29    3.55     .27    8.00
 102          UI    138.    534.    914.   1258.    768.    597.    452.    318.    250.    171.
 103          UI    131.     95.     65.     61.     25.     24.     24.     24.      0.      0.
 104          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 105          KK     SR4
 106          KM   SUB-BASIN SR4
 107          BA     .47
 108          LG     .15     .30    3.67     .29   10.00
 109          UI    131.    491.    813.    511.    366.    239.    168.    105.     73.     47.
 110          UI     34.     16.     16.     16.      0.      0.      0.      0.      0.      0.
 111          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 112          KK     CR6
 113          HC       2

 114          KK     RR8
 115          KM        CEMETARY WASH WITHIN SR10
 116          RS       3    FLOW      -1
 117          RC    .045     .03    .045   10800   .0176
 118          RX     443     447     487     490     510     513     553     557
 119          RY      17      13      13      10      10      13      13      17

 120          KK    SR10
 121          KM   SUB-BASIN SR10
 122          BA    1.57
 123          LG     .15     .30    3.94     .35    8.40
 124          UI    173.    527.   1055.   1439.   1757.   1084.    886.    722.    552.    425.
 125          UI    354.    253.    203.    161.    133.     86.     85.     54.     33.     33.
 126          UI     33.     33.     33.      0.      0.      0.      0.      0.      0.      0.
 127          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 128          KK    CR12
 129          HC       2

 130          KK    RR14
 131          KM        CEMETARY WASH WITHIN SR32
 132          RS       1    FLOW      -1
 133          RC    .045     .03    .045    2200   .0182
 134          RX     443     447     487     490     510     513     553     557
 135          RY      17      13      13      10      10      13      13      17

 136          KK    SR16
 137          KM   SUB-BASIN SR16
 138          BA     .75
 139          LG     .15     .30    3.61     .28   11.20
 140          UI    146.    553.    948.   1000.    618.    467.    319.    241.    160.    117.
 141          UI     84.     56.     43.     22.     22.     22.     22.      0.      0.      0.
 142          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 143          KK   SR18
 144          KM   SUB-BASIN SR18
 145          BA    .71
 146          LG    .15     .30    3.58     .28   11.20
 147          UI   103.    404.    694.    977.    602.    469.    358.    253.    200.    136.
 148          UI   108.     74.     54.     47.     25.     18.     18.     18.     18.      0.
 149          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 150          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 151          KK   CR20
 152          HC      2

 153          KK   RR22
 154          KM       CEMETARY WASH WITHIN SR26
 155          RS      1   FLOW      -1
 156          RC   .045     .03    .045    4800   .0188
 157          RX    439     444     494     495     505     506     556     561
 158          RY     16      11       1      10      10      11      11      16

 159          KK   SR24
 160          KM   SUB-BASIN SR24
 161          BA    .44
 162          LG    .15     .30    3.59     .28   12.70
 163          UI   110.    419.    730.    489.    350.    239.    168.    107.     75.     51.
 164          UI    37.     19.     14.     14.     14.      0.      0.      0.      0.      0.
 165          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 166          KK   RR25
 167          KM       CEMETARY WASH WITHIN SR26
 168          RS      1   FLOW      -1
 169          RC   .045     .03    .045    4800   .0167
 170          RX    450     454     494     495     505     506     546     550
 171          RY     15      11      11      10      10      11      11      15

 172          KK   SR26
 173          KM   SUB-BASIN SR26
 174          BA    .95
 175          LG    .15     .30    3.59     .28   12.10
 176          UI   229.    870.   1533.   1078.    761.    530.    368.    242.    171.    116.
 177          UI    78.     51.     31.     31.     31.      0.      0.      0.      0.      0.
 178          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 179          KK   CR28
 180          HC      3

 181          KK   RR30
 182          KM       CEMETARY WASH WITHIN SR32
 183          RS      2   FLOW      -1
 184          RC   .045     .03    .045    9200   .0163
 185          RX    439     444     494     495     505     506     556     561
 186          RY     16      11      11      10      10      11      11      16
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 187          KK    SR32
 188          KM   SUB-BASIN SR32
 189          BA     .94
 190          LG     .15     .30    3.86     .33   11.30
 191          UI    167.    637.   1085.   1290.    779.    600.    424.    315.    218.    160.
 192          UI    113.     80.     67.     32.     26.     26.     26.      0.      0.      0.
 193          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 194          KK    CR34
 195          HC       3

 196          KK    RR36
 197          KM        CEMETARY WASH WITHIN SR38
 198          RS       1    FLOW      -1
 199          RC    .045     .03    .045    3000   .0167
 200          RX     435     438     483     485     515     517     562     566
 201          RY      16      12      12      10      10      12      12      16

 202          KK    SR38
 203          KM   SUB-BASIN SR38
 204          BA     .79
 205          LG     .15     .28    3.85     .25   14.60
 206          UI    104.    415.    723.   1062.    682.    528.    412.    295.    233.    166.
 207          UI    122.     93.     71.     50.     43.     20.     20.     20.     20.      0.
 208          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 209          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 210          KK    CR40
 211          HC       2

 212          KK    RR42
 213          KM        CEMETARY WASH WITHIN SR44
 214          RS       1    FLOW      -1
 215          RC    .045     .03    .045    5200   .0154
 216          RX     443     447     477     480     520     523     553     557
 217          RY      17      13      13      10      10      13      13      17

 218          KK    SR44
 219          KM   SUB-BASIN SR44
 220          BA    1.05
 221          LG     .15     .29    3.59     .28   14.20
 222          UI    313.   1159.   1854.   1131.    803.    515.    354.    227.    152.     95.
 223          UI     61.     37.     37.     37.      0.      0.      0.      0.      0.      0.
 224          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 225          KK    CR46
 226          HC       2

 227          KK    RR48
 228          KM        CEMETARY WASH WITHIN SR50
 229          RS       2    FLOW      -1
 230          RC    .045     .03    .045    7800   .0167
 231          RX     434     438     478     482     518     522     562     566
 232          RY      18      14      14      10      10      14      14      18
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

233         KK   SR50
234         KM   SUB-BASIN SR50
235         BA    .56
236         LG    .15     .31    3.76     .30    5.10
237         UI   159.    596.    976.    606.    434.    281.    198.    122.     85.     54.
238         UI    38.     19.     19.     19.      0.      0.      0.      0.      0.      0.
239         UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

240         KK   CR52
241         KM   WASH "R" CONFLUENCE WITH HASSAYAMPA RIVER
242         HC     2

243         KK   NUL
244         KM   COMBINING WASHES W, Q, & R TO REDUCE THE NO. OF FREE HYDROGRAPHS
245         HC   3.

246         KK   SAG2
247         KM   SUB-BASIN SAG2
248         BA    .18
249         LG    .15     .32    3.72     .29    1.50
250         UI   119.    408.    275.    161.     91.     49.     28.     14.      9.      0.
251         UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
252         UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

253         KK   SAD2
254         KM   SUB-BASIN SAD2
255         BA    .98
256         LG    .14     .31    3.81     .31    7.20
257         UI    95.    230.    498.    688.    963.    809.    564.    477.    399.    322.
258         UI   244.    213.    169.    125.    107.     85.     73.     50.     46.     43.
259         UI    18.     18.     18.     18.     18.     18.      0.      0.      0.      0.
260         UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

261         KK   DAD4
262         KM       SUNSET DAM - EXISTING CONDITIONS
263         KM       RATING CURVE FROM SCS TR20, DATE 2-5-71
264         KM        DISCHARGES PER SCS TR20
265         KM        STORAGE VOLS PER CONSTRUCTION PLANS & FIELD OBSERVED BOTTOM ELEV.
266         KM       TOP OF SEDIMENT STORAGE 2124.0 PER SCS
267         RS      1    ELEV  2112.5
268         SV      0    8.44  24.615  40.635  63.375  72.225    90.8
269         SQ      0    22.0   23.25   24.00   24.60   196.0   605.0
270         SE  2112.5  2120.0  2125.0  2128.0  2131.0  2132.0  2134.0

271         KK   RAD6
272         KM   WASH AD - SURFACE & PIPELINE FLOW
273         RS      1    FLOW      -1
274         RC   .045     .03    .045    2400   .0167
275         RX    434     438     478     482     518     522     562     566
276         RY     18      14      14      10      10      14      14      18
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 277          KK   SAD8
 278          KM   SUB-BASIN SAD8
 279          BA    .53
 280          LG    .14     .33    4.20     .39    6.10
 281          UI   103.    389.    666.    708.    437.    330.    226.    171.    113.     83.
 282          UI    60.     39.     31.     15.     15.     15.     15.      0.      0.      0.
 283          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 284          KK   SAE10
 285          KM   SUB-BASIN SAE10
 286          BA    .95
 287          LG    .15     .30    3.58     .27    6.40
 288          UI   102.    294.    601.    817.   1071.    663.    540.    445.    352.    262.
 289          UI   224.    166.    126.    108.     78.     63.     50.     48.     19.     19.
 290          UI    19.     19.     19.     19.      0.      0.      0.      0.      0.      0.
 291          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 292          KK   DAE12
 293          KM        SUNNYCOVE DAM - EXISTING CONDITIONS
 294          KM        RATING CRVE FROM SCS TR20, DATE 2-5-71
 295          KM          STORAGE VOLS PER CONSTRUCTION PLANS & FIELD OBSERVED BOTTOM ELEV.
 296          KM          TOP OF SEDIMENT STORAGE 2156.0
 297          KM          DISCHARGES PER SCS RATING CURVE
 298          RS      1    ELEV    2134     -
 299          SV      0   11.19   88.84 215.665  223.19   272.7   310.0
 300          SQ      0    23.5    24.5    25.9    26.0    26.4    26.7
 301          SE  2134.0  2150.0  2160.0  2169.5  2170.0  2173.0  2175.0

 302          KK   RAE14
 303          KM     WASH AE - SURFACE & PIPELINE FLOW
 304          RS      3    FLOW      -1
 305          RC   .045     .03    .045    5800   .0155
 306          RX    441     445     475     487     513     525     555     559
 307          RY     18      14      14      10      10      14      14      18

 308          KK   CAE16
 309          KM    WASH "AE" CONFLUENCE WITH HASSAYAMPA RIVER
 310          HC      3
 311          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

 23         SW2
             V
             V
 30         RW4
             .
             .
 36          .        SW6
             .          .
             .          .
 43          .          .        SW7
             .          .          .
             .          .          .
 51         CW8.......................
             V
             V
 53        RW10
             .
             .
 59          .       SW12
             .          .
             .          .
 66          .          .       SW14
             .          .          .
             .          .          .
 73        CW16.......................
             V
             V
 75        RW18
             .
             .
 81          .       SW20
             .          .
             .          .
 88        CW22............
             .
             .
 91          .        SQ2
             .          .
             .          .
 98          .          .        SR2
             .          .          .
             .          .          .
105          .          .          .        SR4
             .          .          .          .
             .          .          .          .
112          .          .        CR6............
             .          .          V
             .          .          V
             .          .        RR8
             .          .          .
             .          .          .
120          .          .          .       SR10
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128          CR12............
                V
                V
             RR14

136                SR16

143                          SR18

151                CR20............
                      V
                      V
153                RR22

159                          SR24
                                V
                                V
166                          RR25

172                                        SR26

179                CR28........................
                      V
                      V
181                RR30

187                          SR32

194          CR34........................
                V
                V
196          RR36

202                SR38

210          CR40............
                V
                V
212          RR42

218                SR44

             CR46............
                V
                V
227          RR48
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                .         .         .
233             .         .         .        SR50
                .         .         .          .
                .         .         .          .
[illegible]0    .         .       CR52.........
                .         .         .
                .         .         .
243       NUL   ......................
                .
                .
246             .       SAG2
                .         .
                .         .
253             .         .       SAD2
                .         .         V
                .         .         V
261             .         .       DAD4
                .         .         V
                .         .         V
271             .         .       RAD6
                .         .         .
                .         .         .
277             .         .         .        SAD8
                .         .         .          .
                .         .         .          .
284             .         .         .          .      SAE10
                .         .         .          .        V
                .         .         .          .        V
292             .         .         .          .      DAE12
                .         .         .          .        V
                .         .         .          .        V
[illegible]02   .         .         .          .      RAE14
                .         .         .          .        .
                .         .         .          .        .
308             .         .      CAE16.......................
```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

```
****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*     BY THE COE IN FEBRUARY 1981      *
*          REVISED 02 AUG 88           *
*                                      *
* RUN DATE  04/23/1991  TIME  12:03:32 *
*                                      *
****************************************
```

```
****************************************
*                                      *
*    DODSON AND ASSOCIATES, INC.       *
*  HYDROLOGIST AND CIVIL ENGINEERS     *
*     7015 W TIDWELL SUITE 107         *
*       HOUSTON, TEXAS  77092          *
*          (713) 895-8322              *
*                                      *
****************************************
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```
                    WICKENBURG ADMS - CONTRACT FCD 89-79
                    WASHES W (TURTLEBACK), R (CEMETARY), AE,AD, AC (TRIB. TO SOLS WASH)
                    SCS TYPE II STORM - 24 HR: PHOENIX MOUNTAIN S-GRAPH
                    AREAL REDUCTION FACTORS PER NWS HYDRO-40
                    SUNSET & SUNNYCOVE DAMS
                     RATING CURVES FROM SCS TR20, DATE 2-5-71
                     STORAGE VOLS PER CONSTRUCTION PLANS & FIELD OBSERVED BOTTOM ELEV.
                     RATING CURVES MODIFIED TO REFLECT EXST. EMERGENCY SPILLWAYS
                    W1-100:100-YEAR EVENT

 11 IO        OUTPUT CONTROL VARIABLES
                    IPRNT          5  PRINT CONTROL
                    IPLOT          0  PLOT CONTROL
                    QSCAL         0.  HYDROGRAPH PLOT SCALE

  IT          HYDROGRAPH TIME DATA
                     NMIN          6  MINUTES IN COMPUTATION INTERVAL
                    IDATE      1   0  STARTING DATE
                    ITIME       0000  STARTING TIME
                       NQ        300  NUMBER OF HYDROGRAPH ORDINATES
                   NDDATE      2   0  ENDING DATE
                   NDTIME       0554  ENDING TIME
                    ICENT         19  CENTURY MARK

              COMPUTATION INTERVAL     .10 HOURS
                   TOTAL TIME BASE   29.90 HOURS

         ENGLISH UNITS
              DRAINAGE AREA         SQUARE MILES
              PRECIPITATION DEPTH   INCHES
              LENGTH, ELEVATION     FEET
              FLOW                  CUBIC FEET PER SECOND
              STORAGE VOLUME        ACRE-FEET
              SURFACE AREA          ACRES
              TEMPERATURE           DEGREES FAHRENHEIT

 13 JD        INDEX STORM NO. 1
                     STRM       4.19  PRECIPITATION DEPTH
                     TRDA        .01  TRANSPOSITION DRAINAGE AREA

 14 PI          PRECIPITATION PATTERN
                  .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
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19 JD INDEX STORM NO. 2

STRM 4.10 PRECIPITATION DEPTH

TRDA 3.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

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20 JD INDEX STORM NO. 3

STRM 4.02 PRECIPITATION DEPTH

TRDA 10.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

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21 JD INDEX STORM NO. 4

STRM 3.85 PRECIPITATION DEPTH

TRDA 20.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

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22 JD INDEX STORM NO. 5

STRM 3.77 PRECIPITATION DEPTH

TRDA 30.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

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

OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
HYDROGRAPH AT	SW2	1873.	12.00	216.	60.	48.	1.25		
ROUTED TO	RW4	1720.	12.20	216.	60.	48.	1.25	14.17	12.20
HYDROGRAPH AT	SW6	1212.	12.10	172.	48.	39.	.98		
HYDROGRAPH AT	SW7	1531.	12.20	227.	63.	51.	1.30		
3 COMBINED AT	CW8	4412.	12.20	610.	170.	136.	3.53		
ROUTED TO	RW10	4092.	12.30	609.	170.	136.	3.53	14.15	12.30
HYDROGRAPH AT	SW12	814.	12.00	88.	25.	20.	.51		
HYDROGRAPH AT	SW14	1083.	12.10	124.	34.	28.	.76		
3 COMBINED AT	CW16	5244.	12.20	813.	226.	182.	4.80		
ROUTED TO	RW18	5058.	12.30	813.	226.	182.	4.80	14.62	12.30
HYDROGRAPH AT	SW20	330.	12.00	35.	10.	8.	.23		
2 COMBINED AT	CW22	5180.	12.20	846.	235.	189.	5.03		
HYDROGRAPH AT	SQ2	584.	12.00	61.	16.	13.	.37		
HYDROGRAPH AT	SR2	1089.	12.10	146.	39.	31.	.91		
HYDROGRAPH AT	SR4	641.	12.10	75.	20.	16.	.47		
2 COMBINED AT	CR6	1724.	12.10	220.	59.	47.	1.38		
ROUTED TO	RR8	1419.	12.40	220.	59.	47.	1.38	13.54	12.40
HYDROGRAPH AT	SR10	1559.	12.20	228.	61.	49.	1.57		
2 COMBINED AT	CR12	2797.	12.30	446.	120.	96.	2.95		
ROUTED TO	RR14	2744.	12.30	446.	120.	96.	2.95	14.49	12.30
HYDROGRAPH AT	SR16	958.	12.10	123.	33.	27.	.75		
HYDROGRAPH AT	SR18	841.	12.10	116.	32.	25.	.71		
2 COMBINED AT	CR20	1793.	12.10	238.	65.	52.	1.46		
ROUTED TO	RR22	1695.	12.20	238.	65.	52.	1.46	8.44	12.20
HYDROGRAPH AT	SR24	599.	12.10	73.	20.	16.	.44		
ROUTED TO	RR25	472.	12.20	73.	20.	16.	.44	11.78	12.20

HYDROGRAPH AT	SR26	1276.	12.10	156.	43.	34.	.95		
3 COMBINED AT	CR28	3304.	12.20	464.	127.	102.	2.85		
ROUTED TO	RR30	2890.	12.40	464.	127.	102.	2.85	13.53	12.40
HYDROGRAPH AT	SR32	1127.	12.10	144.	39.	32.	.94		
3 COMBINED AT	CR34	6308.	12.30	1034.	280.	225.	6.74		
ROUTED TO	RR36	6226.	12.40	1034.	280.	225.	6.74	15.11	12.40
HYDROGRAPH AT	SR38	943.	12.20	137.	38.	30.	.79		
2 COMBINED AT	CR40	6870.	12.30	1164.	316.	254.	7.53		
ROUTED TO	RR42	6717.	12.40	1164.	316.	254.	7.53	15.72	12.40
HYDROGRAPH AT	SR44	1471.	12.10	177.	49.	39.	1.05		
2 COMBINED AT	CR46	7299.	12.40	1332.	363.	292.	8.58		
ROUTED TO	RR48	7061.	12.50	1332.	363.	292.	8.58	16.18	12.50
HYDROGRAPH AT	SR50	746.	12.10	83.	22.	17.	.56		
2 COMBINED AT	CR52	7251.	12.50	1409.	383.	308.	9.14		
3 COMBINED AT	NUL	11118.	12.40	2224.	610.	491.	14.54		
HYDROGRAPH AT	SAG2	272.	12.00	26.	7.	5.	.18		
HYDROGRAPH AT	SAD2	907.	12.20	146.	39.	31.	.98		
ROUTED TO	DAD4	61.	13.70	31.	20.	17.	.98	2130.34	14.20
ROUTED TO	RAD6	58.	13.90	31.	20.	16.	.98	10.19	14.40
HYDROGRAPH AT	SAD8	600.	12.10	72.	19.	15.	.53		
HYDROGRAPH AT	SAE10	985.	12.20	149.	39.	31.	.95		
ROUTED TO	DAE12	24.	14.00	24.	19.	15.	.95	2156.28	14.10
ROUTED TO	RAE14	24.	14.50	24.	18.	15.	.95	10.26	14.60
3 COMBINED AT	CAE16	620.	12.10	120.	57.	46.	2.46		

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