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Flood Control District of Maricopa County
Contract FCD 89-79

WICKENBURG AREA DRAINAGE MASTER STUDY

WATERSHED HYDROLOGY REPORT

VOLUME IIA

HEC-1 Output

Sols Wash Area

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

December 1992

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*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*            FEBRUARY 1981             *
*          REVISED 02 AUG 88           *
*                                      *
* RUN DATE  10/20/1992  TIME  08:14:48 *
*                                      *
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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; 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
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SCHEMATIC DIAGRAM OF STREAM NETWORK

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

  .       (.) 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
              .           .
              .           .
 7            .           .     SAI155
              .           .           .
              .           .           .
134           .      CAI157............
              .           V
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            .          V
137         .      RAI159
            .          .
            .          .
3           .          .      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
            .          V
231         .      RAB194
            .          .
            .          .
237         .          .      SAB195
            .          .          .
            .          .          .
            .      CAB196............
            .          .
            .          .
247         .          .      SAB200
            .          .          V
```

```
                .          .          V
254             .          .      RAB201
                .          .          .
                .          .          .
 0              .          .          .      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)  *                    *   U.S. ARMY CORPS OF ENGINEERS       *
*            FEBRUARY 1981             *                    *  THE HYDROLOGIC ENGINEERING CENTER   *
*          REVISED 02 AUG 88           *                    *          609 SECOND STREET           *
*                                      *                    *       DAVIS, CALIFORNIA 95616        *
*  RUN DATE  10/20/1992  TIME  08:14:48 *                    *           (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
                 .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
                .00       .00       .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        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
                .00       .00       .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        3.87  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        3.78  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
.00	.00	.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 3.66 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
.00	.00	.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 3.57 PRECIPITATION DEPTH

TRDA 150.00 TRANSPOSITION DRAINAGE AREA

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	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 ***

Flood Control District of Maricopa County
Contract FCD 89-79

WICKENBURG AREA DRAINAGE MASTER STUDY

WATERSHED HYDROLOGY REPORT

VOLUME IIA

HEC-1 Output

Sols Wash Area

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

December 1992

SOLS WASH AREA
2-YEAR

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

```
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
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SCHEMATIC DIAGRAM OF STREAM NETWORK

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

  J.      (.) 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
              .          .
              .          .
              .          .     SAI155
              .          .          .
              .          .          .
 134          .      CAI157............
              .          V
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            .          V
137         .     RAI159
            .          .
            .          .
 3          .          .     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
            .          V
231         .     RAB194
            .          .
            .          .
237         .          .     SAB195
            .          .          .
            .          .          .
            .     CAB196............
            .          .
            .          .
247         .          .     SAB200
            .          .          V
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            .          .          V
254         .          .      RAB201
            .          .          .
            .          .          .
0           .          .          .      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)  *                    *   U.S. ARMY CORPS OF ENGINEERS       *
*            FEBRUARY 1981             *                    *  THE HYDROLOGIC ENGINEERING CENTER   *
*          REVISED 02 AUG 88           *                    *          609 SECOND STREET           *
*                                      *                    *       DAVIS, CALIFORNIA 95616        *
*  RUN DATE  10/20/1992  TIME  08:37:34 *                    *           (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; 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

18 JD        INDEX STORM NO. 2
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                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

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		

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+                                                                                  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 ***
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SOLS WASH AREA
10-YEAR

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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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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; 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

  .       (.) 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
               .          .
               .          .
 [illegible]   .          .     SAI155
               .          .          .
               .          .          .
 134           .     CAI157............
               .          V
```

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                .          V
137             .      RAI159
                .          .
                .          .
'3              .          .      SAI160
                .          .          .
                .          .          .
150             .      CAI162............
                .          V
                .          V
153             .      RAI164
                .          .
                .          .
159             .          .      SAI165
                .          .          .
                .          .          .
165             .      CAI167............
                .          V
                .          V
168             .      RAI169
                .          .
                .          .
174             .          .      SAI170
                .          .          .
                .          .          .
181             .      CAI171............
                .          .
                .          .
184             .          .      SAJ175
                .          .          .
                .          .          .
190         NULL........................
                .
                .
'93             .      SAB180
                .          V
                .          V
199             .      RAB182
                .          .
                .          .
205             .          .      SAB185
                .          .          .
                .          .          .
212             .      CAB186............
                .          .
                .          .
215             .          .      SAB190
                .          .          V
                .          .          V
222             .          .      RAB192
                .          .          .
                .          .          .
228             .      CAB193............
                .          V
                .          V
231             .      RAB194
                .          .
                .          .
237             .          .      SAB195
                .          .          .
                .          .          .
'               .      CAB196............
                .          .
                .          .
247             .          .      SAB200
                .          .          V
```

```
                .          .          V
254             .          .     RAB201
                .          .          .
                .          .          .
 0              .          .          .     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)  *                    *   U.S. ARMY CORPS OF ENGINEERS       *
*          FEBRUARY 1981               *                    *  THE HYDROLOGIC ENGINEERING CENTER   *
*         REVISED 02 AUG 88            *                    *         609 SECOND STREET            *
*                                      *                    *      DAVIS, CALIFORNIA 95616         *
* RUN DATE  10/20/1992  TIME  08:16:15 *                    *          (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

18 JD          INDEX STORM NO. 2
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```
                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

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		

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+                                                                                  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 ***
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SOLS WASH AREA
25-YEAR

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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.
```

```
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
.        (.) 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
             .           .           .
             .           .           .
134          .      CAI157............
             .           V
```

```
                .          V
137             .     RAI159
                .          .
                .          .
43              .          .      SAI160
                .          .          .
                .          .          .
150             .     CAI162............
                .          V
                .          V
153             .     RAI164
                .          .
                .          .
159             .          .      SAI165
                .          .          .
                .          .          .
165             .     CAI167............
                .          V
                .          V
168             .     RAI169
                .          .
                .          .
174             .          .      SAI170
                .          .          .
                .          .          .
181             .     CAI171............
                .          .
                .          .
184             .          .      SAJ175
                .          .          .
                .          .          .
190          NULL........................
                .
                .
73              .     SAB180
                .          V
                .          V
199             .     RAB182
                .          .
                .          .
205             .          .      SAB185
                .          .          .
                .          .          .
212             .     CAB186............
                .          .
                .          .
215             .          .      SAB190
                .          .          V
                .          .          V
222             .          .      RAB192
                .          .          .
                .          .          .
228             .     CAB193............
                .          V
                .          V
231             .     RAB194
                .          .
                .          .
237             .          .      SAB195
                .          .          .
                .          .          .
4               .     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)  *                    *   U.S. ARMY CORPS OF ENGINEERS       *
*            FEBRUARY 1981             *                    *  THE HYDROLOGIC ENGINEERING CENTER   *
*          REVISED 02 AUG 88           *                    *         609 SECOND STREET            *
*                                      *                    *      DAVIS, CALIFORNIA 95616         *
*  RUN DATE  10/20/1992  TIME  08:36:05 *                    *         (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

18 JD          INDEX STORM NO. 2
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```
                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

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 ***

SOLS WASH AREA
50-YEAR

```
****************************************
*                                      *
*   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              *
*                                      *
****************************************
```

```
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; 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.
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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

.        (.) 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
             .          .
             .          .
7            .          .     SAI155
             .          .          .
             .          .          .
134          .      CAI157............
             .          V
```

```
          .          V
137       .      RAI159
          .          .
          .          .
73        .          .      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
          .          V
231       .      RAB194
          .          .
          .          .
237       .          .      SAB195
          .          .          .
          .          .          .
4         .      CAB196............
          .          .
          .          .
247       .          .      SAB200
          .          .          V
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                .          .          V
254             .          .     RAB201
                .          .          .
                .          .          .
'0              .          .          .     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)  *                    *   U.S. ARMY CORPS OF ENGINEERS       *
*            FEBRUARY 1981             *                    *  THE HYDROLOGIC ENGINEERING CENTER   *
*          REVISED 02 AUG 88           *                    *         609 SECOND STREET            *
*                                      *                    *      DAVIS, CALIFORNIA 95616         *
*  RUN DATE  10/20/1992  TIME  08:40:13 *                    *          (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

18 JD        INDEX STORM NO. 2
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                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
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```
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

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
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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	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 ***

SOLS WASH AREA
100-YEAR