HEC-1 INPUT/OUTPUT DATA
UPPER INDIAN BEND WASH
REGIONAL DRAINAGE AND FLOOD
CONTROL PLAN

VOLUME II

Prepared for:

CITY OF SCOTTSDALE
3939 Civic Center Plaza
Scottsdale, AZ 85251

Prepared by:

WATER RESOURCES ASSOCIATES, INC.
4041 N. Central Ave., Suite 1050
Phoenix, AZ 85012-3393

July 6, 1992

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Registered Professional Engineer (Civil)
CERTIFICATE NO. 13505
ROBERT L. WARD
Date Signed 7/6/92
ARIZONA, U.S.A.

July 6, 1992

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Registered Professional Engineer (Civil)
CERTIFICATE NO.
13505
ROBERT L.
WARD
Date Signed 7/6/92
ARIZONA, U.S.A.

FILE: F3.24I

(100-Year, 24-Hour, SCS Type IIA Storm)

Existing watershed drainage pattern with future land-use impervious cover. Includes drainage areas contributing to CAP Dikes 1, 2, and 3. All flows from Reata Pass are assumed to be diverted to CAP Dike 3.

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

  1         ID      UPPER INDIAN BEND WASH REGIONAL FLOOD CONTROL & DRAINAGE PLAN
  2         ID
  3         ID      BASE MODEL TAKEN FROM THE GENERAL DRAINAGE PLAN FOR PARADISE
  4         ID      VALLEY FAN TERRACE, CITY OF PHOENIX  (FILE: FR30.24I, % IMPERVIOUS COVER
  5         ID      HAS BEEN DECREASED TO REFLECT FUTURE CONDITIONS RATHER THAN MDB)
  6         ID      CITY OF PHOENIX AREAS C & D,  FUTURE CONDITIONS
  7         ID                      &
  8         ID      NORTH SCOTTSDALE GENERAL DRAINAGE PLAN (FILE: GN40.24I)
  9         ID
 10         ID
 11         ID      MODEL F3.24I -- SUB-BASIN SERIES 1 TO 38.1, 39 TO 53.1, & 1470 TO 3690.
 12         ID      FUTURE CONDITIONS WITH EXISTING DRAINAGE PATTERN.
 13         ID      100% OF REATA PASS FAN IS DIVERTED WEST TO PIMA ROAD.
 14         ID
 15         ID      THIS MODEL INCLUDES RESERVOIR ROUTING OPERATIONS FOR CAP DIKES 1, 2, & 3
 16         ID
 17         ID      BASE MODEL HAS BEEN MODIFIED TO REFLECT POSSIBLE FLOW DIVERSIONS NEAR
 18         ID      RAWHIDE WASH APEX, PINNACLE PEAK (DESERT HIGHLANDS), & PINNACLE PEAK
 19         ID      COUNTRY CLUB
 20         ID
 21         ID      MINOR D.A. DELINEATION ADJUSTMENTS HAVE ALSO BEEN MADE FOR
 22         ID      SUB-BASINS 6, 6.1, 11, 12, 13, 14, 14.1, 15, 16, 17, 18, 19, 21, 24,
 23         ID              25, 26, 27, 28, 29, 29.1, 31, 32, 33, 33.1
 24         ID              34, 35, 36, 37, 38, 38.1, 39, 43, 44, 53, 53.1.
 25         ID      SUB-BASINS 26A, 35L, 35N, 35S, 36L, 36R HAVE BEEN ADDED.
 26         ID
 27         ID      SUB-BASINS 7, 8, 9, 10, 10.1, 35, & 36 HAVE BEEN SPLIT TO ALLOW A BETTER
 28         ID      D.A. DELINEATION FOR CAP DIKES 1, 2, & 3.
 29         ID
 30         ID      CURVE NUMBER & CHANNEL ROUTING ADJUSTMENTS HAVE BEEN MADE TO ACCOMODATE
 31         ID      THE SUB-BASIN REVISIONS LISTED ABOVE.
 32         ID
 33         ID      100-YR, 24-HR STORM, USING SCS TYPE IIA RAINFALL DISTRIBUTION
 34         ID      RAINFALL FROM NOAA ATLAS, USING 25 SQ MI AREAL REDUCTION FACTOR (.968)
 35         ID
 36         ID      FUTURE LAND-USE DENSITIES FROM OCT 1987 GENERAL PLAN, BRW PLANS, AND
 37         ID      THE TONTO FOOTHILLS PLAN,   IMPERVIOUS COVER FOR SCOTTSDALE AREAS HAS
 38         ID      BEEN ADJUSTED TO REFLECT NAOS REQUIREMENTS FOR RESIDENTIAL LAND-USE
 39         ID
            *DIAGRAM
 40         IT      5 28APR90      0     300
 41         IO      5      0
 42         IN     30 28APR90      0

 43         KK   SUB1
 44         KM       RUNOFF FROM SUB-BASIN 1
 45         BA   .3371
 46         PB   4.25
 47         PC     0   .005   .009   .010   .013   .019   .021   .028   .032   .044
 48         PC   .057   .100   .660   .745   .776   .800   .816   .830   .840   .850
 49         PC   .861   .868   .878   .884   .891   .900   .905   .912   .919   .923
 50         PC   .930   .934   .939   .944   .950   .958   .961   .963   .969   .971
 51         PC   .974   .979   .981   .985   .989   .991   .993   .996  1.000
 52         LS           75    9.9
 53         UK    255  .0262    .20    100
```

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

  54      RK   7160  .0289   .045          TRAP    35     3

  55      KK   SUB2
  56      KM       RUNOFF FROM SUB-BASIN 2
  57      BA  1.2170
  58      LS           83   14.4
  59      UK    337  .0308    .20    100
  60      RK  24000  .0196   .045          TRAP    35     3

  61      KK   SUB3
  62      KM       RUNOFF FROM SUB-BASIN 3
  63      BA   .5448
  64      LS           81   10.3
  65      UK    255  .0262    .20    100
  66      RK  16400  .0201   .045          TRAP    35     3

  67      KK    CP4
  68      KM       COMBINE HYDROGRAPHS SUB1, SUB2, & SUB3
  69      HC      3

  70      KK   SUB4
  71      KM       RUNOFF FROM SUB-BASIN 4 & ROUTE CP 4
  72      BA  1.5102
  73      LS           73   16.1
  74      UK     84  .0213    .10    100
  75      RK  10633  .0191   .045          TRAP    50   100    YES

  76      KK   SUB5
  77      KM       RUNOFF FROM SUB-BASIN 5 & ROUTE SUB 4
  78      BA  1.8713
  79      LS           74   25.1
  80      UK     81  .0213    .10    100
  81      RK  11433  .0175   .045          TRAP    50   130    YES

  82      KK   SUB6
  83      KM       RUNOFF FROM SUB-BASIN 6 & ROUTE SUB 5
  84      BA  3.0669
  85      LS           74   58.1
  86      UK    146  .0213    .10    100
  87      RK  16100  .0124   .045          TRAP    50   150    YES

  88      KK    6.1    SUB
  89      KM       RUNOFF FROM SUB 6.1 & ROUTE SUB 6
  90      BA   .8659
  91      LS           74   31.4
  92      UK    146  .0213    .10    100
  93      RK   3400  .0094   .045          TRAP    50   160    YES

  94      KK  SUB7A
  95      KM       RUNOFF FROM SUB-BASIN 7A
  96      BA   .1356
  97      LS           78    9.9
  98      UK    255  .0262    .20    100
  99      RK   3900  .0231   .045          TRAP    30    10
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 100        KK  SUB8A
 101        KM      RUNOFF FROM SUB-BASIN 8A & ROUTE SUB 7A
 102        BA  .5624
 103        LS          75   12.6
 104        UK   116  .0213    .10    100
 105        RK  10200  .0196   .045         TRAP    30    100    YES

 106        KK  SUB9A
 107        KM      RUNOFF FROM SUB-BASIN 9A & ROUTE SUB 8A
 108        BA  .8874
 109        LS          74   26.3
 110        UK    95  .0213    .10    100
 111        RK  10400  .0192   .045         TRAP    30    130    YES

 112        KK  SUB10A
 113        KM      RUNOFF FROM SUB-BASIN 10A ROUTE SUB 9A
 114        BA  .8372
 115        LS          74     50
 116        UK   107  .0213    .10    100
 117        RK  12000  .0142   .045         TRAP    30    175    YES

 118        KK  10.1A    SUB
 119        KM      RUNOFF FROM SUB 10.1A & ROUTE SUB 10A
 120        BA  .5933
 121        LS          74   25.2
 122        UK   107  .0213    .10    100
 123        RK   5500  .0100   .045         TRAP    30    190    YES

 124        KK   1470    SUB
 125        KM      RUNOFF FROM SUB 1470
 126        BA  .2977
 127        PB  4.63
 128        PC     0  .005   .009   .010   .013   .019   .021   .028   .032   .044
 129        PC  .057  .100   .660   .745   .776   .800   .816   .830   .840   .850
 130        PC  .861  .868   .878   .884   .891   .900   .905   .912   .919   .923
 131        PC  .930  .934   .939   .944   .950   .958   .961   .963   .969   .971
 132        PC  .974  .979   .981   .985   .989   .991   .993   .996  1.000
 133        LS          84   14.70
 134        UK   200  .0500    .20    100
 135        RK  15000  .0293   .045         TRAP    20     3

 136        KK   1475    SUB
 137        KM      RUNOFF FROM SUB 1475 AND ROUTE SUB 1470
 138        BA  1.6895
 139        LS          84   24.72
 140        UK   285  .0419    .20    100
 141        RK  17600  .0188   .045         TRAP    25     3    YES

 142        KK   1480    SUB
 143        KM      RUNOFF FROM SUB 1480 AND ROUTE SUB 1475
 144        BA  1.0015
 145        LS          83   14.10
 146        UK   300  .0167    .20    100
 147        RK   7500  .0213   .045         TRAP    25     3    YES
```

1

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

 148        KK   1482    DIV
 149        KM       DIVERT FLOW FROM SUB 1480 TO SUB 3510
 150        DT   1481
 151        DI      0    8000
 152        DQ      0       0

 153        KK   3660    SUB
 154        KM       RUNOFF FROM SUB 3660 & ROUTE DIV 1482
 155        BA   .7554
 156        PB   4.14
 157        PC      0   .005   .009   .010   .013   .019   .021   .028   .032   .044
 158        PC   .057   .100   .660   .745   .776   .800   .816   .830   .840   .850
 159        PC   .861   .868   .878   .884   .891   .900   .905   .912   .919   .923
 160        PC   .930   .934   .939   .944   .950   .958   .961   .963   .969   .971
 161        PC   .974   .979   .981   .985   .989   .991   .993   .996  1.000
 162        LS           76     21
 163        UK    224  .0212    .15    100
 164        RK  18600  .0184    .045          TRAP     30     30    YES

 165        KK   3670    SUB
 166        KM       RUNOFF FROM SUB 3670 & ROUTE SUB 3660
 167        BA  1.4355
 168        LS           74     29
 169        UK    100  .0213    .10    100
 170        RK  10900  .0183    .045          TRAP     40     50    YES

 171        KK   3680    SUB
 172        KM       RUNOFF FROM SUB 3680 & ROUTE SUB 3670
 173        BA  2.2512
 174        LS           74     38
 175        UK    150  .0213    .10    100
 176        RK  11200  .0134    .045          TRAP     40     75    YES

 177        KK   3690    SUB
 178        KM       RUNOFF FROM SUB 3690 & ROUTE SUB 3680
 179        BA  1.4778
 180        LS           74     23
 181        UK    150  .0213    .10    100
 182        RK   7300  .0110    .045          TRAP     50    100    YES

 183        KK   3620    SUB
 184        KM       RUNOFF FROM SUB 3620
 185        BA   .6858
 186        LS           77     19
 187        UK    224  .0212    .15    100
 188        RK  16000  .0194    .045          TRAP     15     30

 189        KK   3630    SUB
 190        KM       RUNOFF FROM SUB 3630 & ROUTE SUB 3620
 191        BA   .8300
 192        LS           74     31
 193        UK    100  .0213    .10    100
 194        RK  11300  .0177    .045          TRAP     30     30    YES
```

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

195       KK   3640    SUB
196       KM       RUNOFF FROM SUB 3640 & ROUTE SUB 3630
197       BA  1.6299
198       LS            74     32
199       UK    150  .0213    .10    100
200       RK  11600  .0129   .045          TRAP     40     50    YES

201       KK   3650    SUB
202       KM       RUNOFF FROM SUB 3650 & ROUTE SUB 3640
203       BA  1.1780
204       LS            74     19
205       UK    150  .0213    .10    100
206       RK   9700  .0082   .045          TRAP    100     50    YES

207       KK    1IN     CP
208       KM       COMBINE SUB 3650, SUB 3690, SUB 6.1, & SUB 10.1A
209       KM       THIS IS THE TOTAL INFLOW TO CAP DIKE No.1
210       HC      4

211       KK   DIKE1     DAM
212       KM       ROUTE CP 1IN THROUGH CAP DIKE No.1
213       KO      1      2
214       RS      1   STOR
215       SV      0     10     68    209    429    740   1167   1750   2522   3486
216       SV   4640   5986   7534   9280  11210  13332  15646  15900  18145
217       SE   1518   1520   1522   1524   1526   1528   1530   1532   1534   1536
218       SE   1538   1540   1542   1544   1546   1548   1550  1550.2   1552
219       SS  1550.2    100    2.9    1.5
220       ST   1552    100    2.9    1.5
          * ******************************************************************************
          *
          *              BEGIN DRAINAGE AREA FOR CAP DIKE No.2
          *
          * ******************************************************************************

221       KK   SUB7B
222       KM       RUNOFF FROM SUB-BASIN 7B
223       BA   .5334
224       PB    4.25
225       PC      0   .005   .009   .010   .013   .019   .021   .028   .032   .044
226       PC    .057   .100   .660   .745   .776   .800   .816   .830   .840   .850
227       PC    .861   .868   .878   .884   .891   .900   .905   .912   .919   .923
228       PC    .930   .934   .939   .944   .950   .958   .961   .963   .969   .971
229       PC    .974   .979   .981   .985   .989   .991   .993   .996  1.000
230       LS            78     8.2
231       UK    255  .0262    .20    100
232       RK  12200  .0197   .045          TRAP     40     20

233       KK    11A     SUB
234       KM       RUNOFF FROM SUB 11A
235       BA   .3171
236       LS            74     7.9
237       UK    150  .0425    .20    100
238       RK   6200  .0226   .045          TRAP     30     50
```

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

  239     KK    8.1     CP
  240     KM        COMBINE SUB7B & SUB 11A
  241     HC      2

  242     KK   SUB8B
  243     KM        RUNOFF FROM SUB-BASIN 8B & ROUTE CP 8.1
  244     BA   .8566
  245     LS            74    11.6
  246     UK    116   .0213    .10    100
  247     RK   10550  .0196   .045          TRAP     30    100    YES

  248     KK   SUB9B
  249     KM        RUNOFF FROM SUB-BASIN 9B & ROUTE SUB 8B
  250     BA   .8767
  251     LS            74    37.6
  252     UK     95   .0213    .10    100
  253     RK   10400  .0192   .045          TRAP     30    130    YES

  254     KK  SUB10B
  255     KM        RUNOFF FROM SUB-BASIN 10B ROUTE SUB 9B
  256     BA  1.4377
  257     LS            74     31
  258     UK    107   .0213    .10    100
  259     RK   11000  .0136   .045          TRAP     30    175    YES

  260     KK   10.1B    SUB
  261     KM        RUNOFF FROM SUB 10.1B & ROUTE SUB 10B
  262     BA   .8989
  263     LS            74    28.2
  264     UK    107   .0213    .10    100
  265     RK    6000  .0106   .045          TRAP     30    190    YES

  266     KK    11B    SUB
  267     KM        RUNOFF FROM SUB-BASIN 11B
  268     BA   .2547
  269     LS            74    11.9
  270     UK    150   .0425    .20    100
  271     RK    4700  .0213   .045          TRAP     30     50

  272     KK   SUB12
  273     KM        RUNOFF FROM SUB-BASIN 12 & ROUTE SUB 11B
  274     BA  1.1091
  275     LS            74    30.1
  276     UK     95   .0213    .10    100
  277     RK    9850  .0214   .045          TRAP     50    100    YES

  278     KK   SUB13
  279     KM        RUNOFF FROM SUB-BASIN 13 & ROUTE SUB 12
  280     BA  1.1938
  281     LS            74     38
  282     UK     86   .0213    .10    100
  283     RK   10533  .0192   .045          TRAP     50    130    YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  284     KK  SUB14
  285     KM      RUNOFF FROM SUB-BASIN 14 & ROUTE SUB 13
  286     BA  1.3910
  287     LS          74    46.7
  288     UK    101  .0213    .10    100
  289     RK  11200  .0142   .045         TRAP    50    150    YES

  290     KK   14.1    SUB
  291     KM      RUNOFF FROM SUB 14.1 & ROUTE SUB 14
  292     BA  .6112
  293     LS          74    43.8
  294     UK    101  .0213    .10    100
  295     RK   5800  .0112   .045         TRAP    50    160    YES

  296     KK  SUB16
  297     KM      RUNOFF FROM SUB-BASIN 16
  298     BA  1.4570
  299     LS          83     9.8
  300     UK    217  .0581    .20    100
  301     RK  14800  .0216   .045         TRAP    25      3

  302     KK  SUB17
  303     KM      RUNOFF FROM SUB-BASIN 17
  304     BA  1.1851
  305     LS          83     9.8
  306     UK    285  .0421    .20    100
  307     RK  12200  .0254   .045         TRAP    25      3

  308     KK  SUB18
  309     KM      RUNOFF FROM SUB-BASIN 18
  310     BA  1.2641
  311     LS          83     6.5
  312     UK    285  .0421    .20    100
  313     RK  10840  .0259   .045         TRAP    25      3

  314     KK  CP19A
  315     KM      COMBINE HYDROGRAPHS SUB16, SUB17, & SUB18
  316     HC      3

  317     KK  CP19B
  318     KM      ROUTE CP19A TO CP19B
  319     RK   1100  .0155  0.045         TRAP    35      3

  320     KK  SUB15
  321     KM      RUNOFF FROM SUB-BASIN 15
  322     BA  1.3702
  323     LS          82     5.4
  324     UK    217  .0581    .20    100
  325     RK  21200  .0236   .045         TRAP    25      3
```

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

326       KK  CP19C
327       KM      COMBINE HYDROGRAPHS SUB15 & CP19B
328       HC     2

329       KK  SUB19
330       KM      RUNOFF FROM SUB-BASIN 19 & ROUTE CP 19C
331       BA  .1872
332       LS          84    7.2
333       UK    275  .0800    .20    100
334       RK   3730  .0352    .045   .160   TRAP    15     3
335       RK   1800  .0200    .045          TRAP    50    30    YES

336       KK  SUB20
337       KM      RUNOFF FROM SUB-BASIN 20
338       BA  .5698
339       LS          84    3.6
340       UK    300  .0750    .20    100
341       RK   9640  .0197    .045          TRAP    15     3

342       KK   CP21
343       KM      COMBINE HYDROGRAPHS SUB19 & SUB20
344       HC     2

345       KK  SUB21
346       KM      RUNOFF FROM SUB-BASIN 21 & ROUTE CP 21
347       BA 3.6659
348       LS          80    6.4
349       UK    297  .0558    .20    100
350       RK  27600  .0196    .045          TRAP    50    30    YES

351       KK  SUB22
352       KM      RUNOFF FROM SUB-BASIN 22
353       BA 1.3860
354       LS          84    5.1
355       UK    225  .0590    .20    100
356       RK  13000  .0238    .045          TRAP    25     3

357       KK  SUB23
358       KM      RUNOFF FROM SUB-BASIN 23
359       BA  .3945
360       LS          84    6.3
361       UK    225  .0590    .20    100
362       RK  10200  .0304    .045          TRAP    20     3

363       KK   CP24
364       KM      COMBINE HYDROGRAPHS SUB22 & SUB23
365       HC     2

366       KK  SUB24
367       KM      RUNOFF FROM SUB-BASIN 24 & ROUTE CP 24
368       BA  .4907
369       LS          77    6.8
370       UK    295  .0438    .20    100
371       RK   6800  .0257    .045          TRAP    15     3    YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

372       KK  SUB25
373       KM       RUNOFF FROM SUB-BASIN 25
374       BA  1.5166
375       LS            85     9.0
376       UK    295  .0438    .20     100
377       RK  16700  .0302   .045          TRAP     25      3

378       KK   CP26
379       KM       COMBINE HYDROGRAPHS SUB24 & SUB25
380       HC      2

381       KK  SUB26
382       KM       RUNOFF FROM SUB-BASIN 26 & ROUTE CP 26
383       BA  .2231
384       LS            78     6.9
385       UK    200  .0250    .20     100
386       RK   1400  .0217   .045          TRAP     60      7    YES

387       KK   26.1     DIV
388       KM       DIVERT FLOW FROM SUB 26 TO SUB 26A
389       DT   26.2
390       DI      0    500    1000   10000
391       DQ      0    250     500    5000

392       KK   21.1      CP
393       KM       ROUTE DIV 26.1 TO OUTLET OF SUB 21
394       RK  10600  .0263   .045          TRAP     35     10

395       KK   CP27
396       KM       COMBINE SUB 21 & CP 21.1
397       HC      2

398       KK   26.2     RET
399       KM       RETRIEVE DIVERTED FLOW FROM CP 26
400       DR   26.2

401       KK  SUB26A
402       KM       RUNOFF FROM SUB 26A & ROUTE RET 26.2
403       BA  .5251
404       LS            74   14.50
405       UK    200  .0250    .20     100
406       RK  10000  .0263   .045          TRAP     35     10    YES

407       KK   27.1      CP
408       KM       COMBINE CP 27 & SUB 26A
409       HC      2

410       KK  SUB27
411       KM       RUNOFF FROM SUB-BASIN 27 & ROUTE CP 27.1
412       BA  .6385
413       LS            73    16.3
414       UK    159  .0213    .10     100
415       RK   3200  .0310   .045          TRAP   1500      2    YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

416       KK  SUB28
417       KM       RUNOFF FROM SUB-BASIN 28 & ROUTE SUB 27
418       BA  1.5890
419       LS           74    57.1
420       UK     96  .0213    .10    100
421       RK   9333  .0303    .045          TRAP    2500      2    YES

422       KK  SUB29
423       KM       RUNOFF FROM SUB-BASIN 29 & ROUTE SUB 28
424       BA  1.8007
425       LS           74    41.3
426       UK     88  .0213    .10    100
427       RK  10900  .0147    .045          TRAP    3500      2    YES

428       KK   29.1    SUB
429       KM       RUNOFF FROM SUB 29.1 & ROUTE SUB 29
430       BA  1.3896
431       LS           74    28.6
432       UK     88  .0213    .10    100
433       RK   5500  .0118    .045          TRAP    3750      2    YES

434       KK  SUB30
435       KM       RUNOFF FROM SUB-BASIN 30
436       BA  1.3296
437       LS           82     6.6
438       UK    110  .0408    .20    100
439       RK  10640  .0371    .045          TRAP      50    100

440       KK   34R    SUB
441       KM       RUNOFF FROM SUB 34R
442       BA   .6421
443       LS           77     9.9
444       UK    110  .0408    .20    100
445       RK   6800  .0644    .045          TRAP      50    100

446       KK   31.1     CP
447       KM       COMBINE SUB 34R & SUB 30
448       HC       2

449       KK  SUB31
450       KM       RUNOFF FROM SUB-BASIN 31 & ROUTE CP 31.1
451       BA  1.3839
452       LS           73    15.1
453       UK    102  .0213    .10    100
454       RK   9450  .0228    .045          TRAP      50    130    YES

455       KK   35N    SUB
456       KM       RUNOFF FROM SUB-BASIN 35N
457       KM       THIS BASIN DRAINS TO A CBC AT THE EAST SIDE OF DESERT HIGHLANDS
458       BA   .4068
459       LS           82    31.8
460       UK    265  .0381    .20    100
461       RK   5200  .0269    .045          TRAP      25      4
```

1

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

462       KK   35N2     DIV
463       KM       DIVERT FLOW THROUGH BLOCK WALL OPENINGS AT EAST SIDE OF DESERT HIGHLANDS
464       DT   35N1
465       DI     0    100    1000
466       DQ     0     40     400

467       KK   35L1      CP
468       KM       ROUTE DIV 35N2 TO CP 35L1
469       RK   7500  .0367   .045          TRAP     50      5

470       KK    35L     SUB
471       KM       RUNOFF FROM SUB 35L
472       BA  .6521
473       LS            78    12.7
474       UK    265  .0381    .20     100
475       RK   9400  .0463   .045          TRAP     50    100

476       KK   35L2      CP
477       KM       COMBINE SUB 35L & CP 35L1
478       HC      2

479       KK    36L     SUB
480       KM       RUNOFF FROM SUB 36L & ROUTE CP 35L2
481       BA  .5861
482       LS            74    10.9
483       UK    116  .0213    .10     100
484       RK   7200  .0269   .045          TRAP     50    130     YES

485       KK    36V     DIV
486       KM       DIVERT OVERFLOWS THROUGH PINNACLE PEAK C.C. GOLF COURSE TO SUB 37
487       DT    36T
488       DI      0    500    1000    2000    5000
489       DQ      0      0     300     800    2000

490       KK   32.1      CP
491       KM       COMBINE SUB 31 & DIV 36V
492       HC      2

493       KK  SUB32
494       KM       RUNOFF FROM SUB-BASIN 32 & ROUTE CP 32.1
495       BA 1.0201
496       LS            74    19.1
497       UK     67  .0213    .10     100
498       RK   9300  .0214   .045          TRAP     50    130     YES

499       KK  SUB33
500       KM       RUNOFF FROM SUB-BASIN 33 & ROUTE SUB 32
501       BA 1.0998
502       LS            74    47.7
503       UK     89  .0213    .10     100
504       RK   9500  .0161   .045          TRAP     50    175     YES
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1

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

505       KK   33.1     SUB
506       KM       RUNOFF FROM SUB 33.1 & ROUTE SUB 33
507       BA  .7805
508       LS           74    59.4
509       UK    89  .0213    .10     100
510       RK   6700  .0116   .045          TRAP     50    190    YES

511       KK    2IN     CP
512       KM       COMBINE SUB 10.1B, SUB 14.1, SUB 29.1, & SUB 33.1
513       KM       THIS IS THE TOTAL INFLOW TO CAP DIKE No.2
514       HC     4

515       KK   DIKE2     DAM
516       KM       ROUTE CP 2IN THROUGH CAP DIKE No.2
517       KO     1      2
518       RS     1    STOR
519       SV     0      2     48    169    342    546    775   1031   1332   1732
520       SV  2273   2958   3796   4783   5904   7170   8578  10131  11834  12000
521       SE  1514   1516   1518   1520   1522   1524   1526   1528   1530   1532
522       SE  1534   1536   1538   1540   1542   1544   1546   1548   1550 1550.2
523       SS  1550    100    2.9    1.5
524       ST 1550.2   100    2.9    1.5
          * ***************************************************************************
          *
          *            BEGIN DRAINAGE AREA FOR CAP DIKE No.3
          *
          * ***************************************************************************

525       KK   35N1     RET
526       KM       RETRIEVE DIVERTED FLOW FROM SUB 35N
527       DR   35N1

528       KK    35R     SUB
529       KM       RUNOFF FROM SUB 35R & ROUTE RET 35N1
530       BA  .4455
531       LS           77    10.4
532       UK   265  .0381    .20     100
533       RK  7700  .0357   .045          TRAP     50    100    YES

534       KK    36R     SUB
535       KM       RUNOFF FROM SUB 36R & ROUTE SUB 35R
536       BA  .6579
537       LS           73    21.1
538       UK   116  .0213    .10     100
539       RK  6500  .0331   .045          TRAP     50    130    YES

540       KK    36T     RET
541       KM       RETRIEVE OVERFLOWS FROM PINNACLE PEAK C.C. GOLF COURSE
542       DR    36T
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

543       KK   36R1      CP
544       KM        COMBINE RET 36T & SUB 36R
545       HC      2

546       KK  SUB37
547       KM        RUNOFF FROM SUB-BASIN 37 & ROUTE CP 36R1
548       BA  1.1443
549       LS            74    16.3
550       UK     61  .0213    .10     100
551       RK   8433  .0237   .045          TRAP     50    130    YES

552       KK  SUB38
553       KM        RUNOFF FROM SUB-BASIN 38 & ROUTE SUB 37
554       BA  1.2275
555       LS            74    59.7
556       UK     84  .0213    .10     100
557       RK   8300  .0176   .045          TRAP     50    150    YES

558       KK   38.1     SUB
559       KM        RUNOFF FROM SUB 38.1 & ROUTE SUB 38
560       KM        CORE SOUTH AREA IMPERVIOUS COVER TAKEN FROM 1987 SLA REPORT
561       BA  1.0122
562       LS            74      90
563       UK     84  .0213    .10     100
564       RK   6800  .0121   .045          TRAP     50    160    YES
          *    ************************************************************************
          *
          *          INSERT SUB-BASINS 39 TO 53
          *          FUTURE LAND USE CONDITIONS WITH EXISTING DRAINAGE PATTERN
          *          DATA IS TAKEN FROM MODEL GN40.24I/CAP3.24I
          *          GENERAL DRAINAGE PLAN FOR NORTH SCOTTSDALE
          *
          *          100-YEAR, 24-HOUR STORM, SCS TYPE IIA RAINFALL DISTRIBUTION
          *          RAINFALL FROM NOAA ATLAS, USING 10 SQ MI AREAL REDUCTION FACTOR
          *          LAND USE DENSITIES FROM GENERAL PLAN & TONTO FOOTHILLS PLAN
          *
          *    ************************************************************************

565       KK  SUB39
566       KM        RUNOFF FROM SUB-BASIN 39
567       BA  1.9302
568       LS            85    23.4
569       UK    330  .0433    .20     100
570       RK  11240  .0253   .045          TRAP     30      3

571       KK  SUB40
572       KM        RUNOFF FROM SUB-BASIN 40
573       BA  .5844
574       LS            83     9.9
575       UK    160  .0627    .20     100
576       RK   7000  .0350   .045          TRAP     20      3
```

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

577         KK   CP41
578         KM       COMBINE HYDROGRAPHS SUB39 & SUB40
579         HC     2

580         KK  SUB41
581         KM       RUNOFF FROM SUB-BASIN 41 & ROUTE CP 41
582         BA  .7911
583         LS           74    10.1
584         UK    280  .2386    .20    100
585         RK   9400  .0282   .045          TRAP     50      3    YES

586         KK  SUB42
587         KM       RUNOFF FROM SUB-BASIN 42
588         BA  .5844
589         LS           78    23.3
590         UK    280  .2386    .20    100
591         RK   8750  .0573   .045          TRAP     20      3

592         KK  SUB43
593         KM       RUNOFF FROM SUB-BASIN 43
594         BA 1.0665
595         LS           85    10.5
596         UK    260  .0515    .20    100
597         RK   7400  .0255   .045          TRAP     25      3

598         KK  SUB44
599         KM       RUNOFF FROM SUB-BASIN 44
600         BA  .8389
601         LS           85     8.1
602         UK    260  .0515    .20    100
603         RK   9840  .0622   .045          TRAP     25      3

604         KK   CP45
605         KM       COMBINE HYDROGRAPHS SUB43 & SUB44
606         HC     2

607         KK  SUB45
608         KM       RUNOFF FROM SUB-BASIN 45 & ROUTE CP 45
609         BA  .2037
610         LS           81    14.5
611         UK    125  .1166    .20    100
612         RK   3600  .0366   .045          TRAP     30      3    YES

613         KK SUB45A
614         KM       RUNOFF FROM SUB 45A
615         BA  .1720
616         LS           86     6.9
617         UK    275  .2200    .20    100
618         RK   5400  .0411   .045          TRAP     15      3
```

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

619       KK  SUB46
620       KM      RUNOFF FROM SUB-BASIN 46
621       BA  .9268
622       LS          86    3.7
623       UK   265  .4958    .20    100
624       RK  3300  .2271    .045   .111   TRAP    10     3
625       RK  7100  .0535    .045          TRAP    25     3

626       KK   CP47
627       KM      COMBINE HYDROGRAPHS SUB45, SUB45A, & SUB46
628       HC     3

629       KK  SUB47
630       KM      RUNOFF FROM SUB-BASIN 47 & ROUTE CP 47
631       BA  .3757
632       LS          77    8.6
633       UK   375  .1000    .20    100
634       RK  9600  .0217    .045          TRAP    50     3    YES

635       KK   CP48
636       KM      COMBINE HYDROGRAPHS SUB41, SUB42, & SUB47
637       HC     3

638       KK  SUB48
639       KM      RUNOFF FROM SUB-BASIN 48 & ROUTE CP 48
640       BA  .0438
641       LS          73    6.9
642       UK   150  .0733    .20    100
643       RK  1300  .0338    .045          TRAP    75     3    YES

644       KK  SUB50
645       KM      RUNOFF FROM SUB-BASIN 50
646       BA  .3580
647       LS          84    2.8
648       UK   300  .3555    .20    100
649       RK   730  .1506    .045   .036   TRAP    10     3
650       RK  6400  .0453    .045          TRAP    25     3

651       KK   CP51
652       KM      COMBINE HYDROGRAPHS SUB 48 & SUB 50
653       HC     2

654       KK   2004    DIV
655       KM      DIVERT FLOW TO SUB 2005
656       KM      THIS DIVERT OCCURS AT A BRAIDED CHANNEL BIFURCATION LOCATED 1000 FEET
657       KM      SOUTH OF THE EAST END OF PINNACLE PEAK ROAD.
658       KM      THIS IS AN ACTIVE ALLUVIAL FAN APEX.
659       DT   2003
660       DI     0  15000
661       DQ     0      0
```

1

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

662       KK  SUB49
663       KM      RUNOFF FROM SUB-BASIN 49
664       BA  .3528
665       LS          79    6.9
666       UK   135  .0758   .20    100
667       RK  5400  .0370   .045         TRAP    30     3

668       KK   49.1     CP
669       KM      COMBINE SUB 49 & NON-DIVERTED FLOW FROM DIV 2004
670       HC     2

671       KK  SUB51
672       KM      RUNOFF FROM SUB-BASIN 51 & ROUTE CP 49.1
673       BA 1.0675
674       LS          72   12.9
675       UK    94  .0213   .10    100
676       RK  6400  .0329   .045         TRAP  1500     2    YES

677       KK  SUB52
678       KM      RUNOFF FROM SUB-BASIN 52 & ROUTE SUB 51
679       BA 1.3557
680       LS          71   17.2
681       UK    76  .0213   .10    100
682       RK  6633  .0300   .045         TRAP  2500     2    YES

683       KK  SUB53
684       KM      RUNOFF FROM SUB-BASIN 53 & ROUTE SUB 52
685       BA 1.6328
686       LS          74   58.5
687       UK    67  .0213   .10    100
688       RK  7767  .0196   .045         TRAP  3500     2    YES

689       KK   53.1    SUB
690       KM      RUNOFF FROM SUB 53.1 & ROUTE SUB 53
691       KM      CORE SOUTH AREA IMPERVIOUS COVER TAKEN FROM 1987 SLA REPORT
692       BA 1.4664
693       LS          74     90
694       UK    67  .0213   .10    100
695       RK  6500  .0134   .045         TRAP  3500     2    YES

696       KK   3IN     CP
697       KM      COMBINE SUB 53.1 & SUB 38.1
698       KM      THIS IS THE TOTAL INFLOW INTO CAP DIKE NO.3
699       HC     2

700       KK  DIKE3    DAM
701       KM      ROUTE CP 3IN THROUGH CAP DIKE NO.3
702       KO     1     2
703       RS     1   STOR
704       SV     0     2     7    15    27    43    68   125   243   447
705       SV   749  1130  1586  2112  2695  3328  4001  4757  5580  6484
706       SE  1504  1506  1508  1510  1512  1514  1516  1518  1520  1522
707       SE  1524  1526  1528  1530  1532  1534  1536  1538  1540  1542
708       SS  1541   100   2.9   1.5
```

1

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

709       ST   1542     100     2.9     1.5
710       ZZ
```

SCHEMATIC DIAGRAM OF STREAM NETWORK

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

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

  43     SUB1
          .
          .
  55       .      SUB2
          .        .
          .        .
  61       .        .      SUB3
          .        .        .
          .        .        .
  67     CP4.......................
          V
          V
  70     SUB4 ***
          V
          V
  76     SUB5 ***
          V
          V
  82     SUB6 ***
          V
          V
  88     6.1 ***
          .
          .
  94       .     SUB7A
          .        V
          .        V
 100       .     SUB8A ***
          .        V
          .        V
 106       .     SUB9A ***
          .        V
          .        V
 112       .     SUB10A ***
          .        V
          .        V
 118       .     10.1A ***
          .        .
          .        .
 124       .        .      1470
          .        .        V
          .        .        V
 136       .        .      1475 ***
          .        .        V
          .        .        V
 142       .        .      1480 ***
          .        .        .
          .        .        .
 150       .        .        .-------->   1481
 148       .        .      1482
          .        .        V
          .        .        V
 153       .        .      3660 ***
          .        .        V
          .        .        V
 165       .        .      3670 ***
          .        .        V
          .        .        V
```

```
171     .       .       3680 ***
        .       .        V
        .       .        V
177     .       .       3690 ***
        .       .        .
        .       .        .
183     .       .        .       3620
        .       .        .        V
        .       .        .        V
189     .       .        .       3630 ***
        .       .        .        V
        .       .        .        V
195     .       .        .       3640 ***
        .       .        .        V
        .       .        .        V
201     .       .        .       3650 ***
        .       .        .        .
        .       .        .        .
207    1IN.................................
       V
       V
211   DIKE1
       .
       .
221     .     SUB7B
        .       .
        .       .
233     .       .       11A
        .       .        .
        .       .        .
239     .      8.1............
        .       V
        .       V
242     .     SUB8B ***
        .       V
        .       V
248     .     SUB9B ***
        .       V
        .       V
254     .    SUB10B ***
        .       V
        .       V
260     .     10.1B ***
        .       .
        .       .
266     .       .       11B
        .       .        V
        .       .        V
272     .       .      SUB12 ***
        .       .        V
        .       .        V
278     .       .      SUB13 ***
        .       .        V
        .       .        V
284     .       .      SUB14 ***
        .       .        V
        .       .        V
290     .       .      14.1 ***
        .       .        .
        .       .        .
296     .       .        .      SUB16
        .       .        .        .
        .       .        .        .
302     .       .        .        .      SUB17
        .       .        .        .        .
```

```
308   .   .   .   .   .   SUB18
      .   .   .   .   .   .
      .   .   .   .   .   .
314   .   .   .   CP19A.......................
      .   .   .   V
      .   .   .   V
317   .   .   .   CP19B
      .   .   .   .
      .   .   .   .
320   .   .   .   .   SUB15
      .   .   .   .   .
      .   .   .   .   .
326   .   .   .   CP19C............
      .   .   .   V
      .   .   .   V
329   .   .   .   SUB19 ***
      .   .   .   .
      .   .   .   .
336   .   .   .   .   SUB20
      .   .   .   .   .
      .   .   .   .   .
342   .   .   .   CP21............
      .   .   .   V
      .   .   .   V
345   .   .   .   SUB21 ***
      .   .   .   .
      .   .   .   .
351   .   .   .   .   SUB22
      .   .   .   .   .
      .   .   .   .   .
357   .   .   .   .   .   SUB23
      .   .   .   .   .   .
      .   .   .   .   .   .
363   .   .   .   .   CP24............
      .   .   .   .   V
      .   .   .   .   V
366   .   .   .   .   SUB24 ***
      .   .   .   .   .
      .   .   .   .   .
372   .   .   .   .   .   SUB25
      .   .   .   .   .   .
      .   .   .   .   .   .
378   .   .   .   .   CP26............
      .   .   .   .   V
      .   .   .   .   V
381   .   .   .   .   SUB26 ***
      .   .   .   .   .
      .   .   .   .   .
389   .   .   .   .   .-------> 26.2
387   .   .   .   .   26.1
      .   .   .   .   V
      .   .   .   .   V
392   .   .   .   .   21.1
      .   .   .   .   .
      .   .   .   .   .
395   .   .   .   CP27............
      .   .   .   .
      .   .   .   .
400   .   .   .   .   .<------- 26.2
398   .   .   .   .   26.2
      .   .   .   .   V
      .   .   .   .   V
401   .   .   .   .   SUB26A ***
      .   .   .   .   .
```

```
        .     .     .     .     .
407     .     .     .   27.1............
        .     .     .     V
        .     .     .     V
410     .     .     .   SUB27 ***
        .     .     .     V
        .     .     .     V
416     .     .     .   SUB28 ***
        .     .     .     V
        .     .     .     V
422     .     .     .   SUB29 ***
        .     .     .     V
        .     .     .     V
428     .     .     .   29.1 ***
        .     .     .     .
        .     .     .     .
434     .     .     .     .     SUB30
        .     .     .     .       .
        .     .     .     .       .
440     .     .     .     .       .       34R
        .     .     .     .       .        .
        .     .     .     .       .        .
446     .     .     .     .     31.1............
        .     .     .     .       V
        .     .     .     .       V
449     .     .     .     .     SUB31 ***
        .     .     .     .       .
        .     .     .     .       .
455     .     .     .     .       .       35N
        .     .     .     .       .        .
        .     .     .     .       .        .
464     .     .     .     .       .        .-------->   35N1
462     .     .     .     .       .       35N2
        .     .     .     .       .        V
        .     .     .     .       .        V
467     .     .     .     .       .       35L1
        .     .     .     .       .        .
        .     .     .     .       .        .
470     .     .     .     .       .        .        35L
        .     .     .     .       .        .         .
        .     .     .     .       .        .         .
476     .     .     .     .       .       35L2............
        .     .     .     .       .        V
        .     .     .     .       .        V
479     .     .     .     .       .       36L ***
        .     .     .     .       .        .
        .     .     .     .       .        .
487     .     .     .     .       .        .-------->   36T
485     .     .     .     .       .       36V
        .     .     .     .       .        .
        .     .     .     .       .        .
490     .     .     .     .     32.1............
        .     .     .     .       V
        .     .     .     .       V
493     .     .     .     .     SUB32 ***
        .     .     .     .       V
        .     .     .     .       V
499     .     .     .     .     SUB33 ***
        .     .     .     .       V
        .     .     .     .       V
505     .     .     .     .     33.1 ***
        .     .     .     .       .
        .     .     .     .       .
511     .     2IN.....................................
        .     V
```

```
          .      V
515       .    DIKE2
          .      .
          .      .
527       .      .      .<-------   35N1
525       .      .    35N1
          .      .      V
          .      .      V
528       .      .      35R ***
          .      .      V
          .      .      V
534       .      .      36R ***
          .      .      .
          .      .      .
542       .      .      .      .<-------   36T
540       .      .      .    36T
          .      .      .      .
          .      .      .      .
543       .      .    36R1............
          .      .      V
          .      .      V
546       .      .    SUB37 ***
          .      .      V
          .      .      V
552       .      .    SUB38 ***
          .      .      V
          .      .      V
558       .      .    38.1 ***
          .      .      .
          .      .      .
565       .      .      .    SUB39
          .      .      .      .
          .      .      .      .
571       .      .      .      .    SUB40
          .      .      .      .      .
          .      .      .      .      .
577       .      .      .    CP41............
          .      .      .      V
          .      .      .      V
580       .      .      .    SUB41 ***
          .      .      .      .
          .      .      .      .
586       .      .      .      .    SUB42
          .      .      .      .      .
          .      .      .      .      .
592       .      .      .      .      .    SUB43
          .      .      .      .      .      .
          .      .      .      .      .      .
598       .      .      .      .      .      .    SUB44
          .      .      .      .      .      .      .
          .      .      .      .      .      .      .
604       .      .      .      .      .    CP45............
          .      .      .      .      .      V
          .      .      .      .      .      V
607       .      .      .      .      .    SUB45 ***
          .      .      .      .      .      .
          .      .      .      .      .      .
613       .      .      .      .      .      .    SUB45A
          .      .      .      .      .      .      .
          .      .      .      .      .      .      .
619       .      .      .      .      .      .      .    SUB46
          .      .      .      .      .      .      .      .
          .      .      .      .      .      .      .      .
626       .      .      .      .      .    CP47........................
          .      .      .      .      .      V
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                .       .       .       .       .       V
629             .       .       .       .       .     SUB47 ***
                .       .       .       .       .       .
                .       .       .       .       .       .
635             .       .       .     CP48.......................
                .       .       .      V
                .       .       .      V
638             .       .       .    SUB48 ***
                .       .       .      .
                .       .       .      .
644             .       .       .       .     SUB50
                .       .       .      .       .
                .       .       .      .       .
651             .       .       .     CP51............
                .       .       .      .
                .       .       .      .
659             .       .       .       .-------->   2003
654             .       .       .     2004
                .       .       .      .
                .       .       .      .
662             .       .       .       .     SUB49
                .       .       .      .       .
                .       .       .      .       .
668             .       .       .     49.1............
                .       .       .      V
                .       .       .      V
671             .       .       .    SUB51 ***
                .       .       .      V
                .       .       .      V
677             .       .       .    SUB52 ***
                .       .       .      V
                .       .       .      V
683             .       .       .    SUB53 ***
                .       .       .      V
                .       .       .      V
689             .       .       .    53.1 ***
                .       .       .      .
                .       .       .      .
696             .       .     3IN............
                .       .      V
                .       .      V
700             .       .    DIKE3
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(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

1 ****

FLOOD HYDROGRAPH PACKAGE HEC-1 (IBM XT 512K VERSION) -FEB 1,1985
U.S. ARMY CORPS OF ENGINEERS, THE HYDROLOGIC ENGINEERING CENTER, 609 SECOND STREET, DAVIS, CA. 95616
****

UPPER INDIAN BEND WASH REGIONAL FLOOD CONTROL & DRAINAGE PLAN

BASE MODEL TAKEN FROM THE GENERAL DRAINAGE PLAN FOR PARADISE
VALLEY FAN TERRACE, CITY OF PHOENIX (FILE: FR30.24I, % IMPERVIOUS COVER
HAS BEEN DECREASED TO REFLECT FUTURE CONDITIONS RATHER THAN MDB)
CITY OF PHOENIX AREAS C & D, FUTURE CONDITIONS
&
NORTH SCOTTSDALE GENERAL DRAINAGE PLAN (FILE: GN40.24I)

MODEL F3.24I -- SUB-BASIN SERIES 1 TO 38.1, 39 TO 53.1, & 1470 TO 3690.
FUTURE CONDITIONS WITH EXISTING DRAINAGE PATTERN.
100% OF REATA PASS FAN IS DIVERTED WEST TO PIMA ROAD.

THIS MODEL INCLUDES RESERVOIR ROUTING OPERATIONS FOR CAP DIKES 1, 2, & 3

BASE MODEL HAS BEEN MODIFIED TO REFLECT POSSIBLE FLOW DIVERSIONS NEAR
RAWHIDE WASH APEX, PINNACLE PEAK (DESERT HIGHLANDS), & PINNACLE PEAK
COUNTRY CLUB

MINOR D.A. DELINEATION ADJUSTMENTS HAVE ALSO BEEN MADE FOR
SUB-BASINS 6, 6.1, 11, 12, 13, 14, 14.1, 15, 16, 17, 18, 19, 21, 24,
25, 26, 27, 28, 29, 29.1, 31, 32, 33, 33.1
34, 35, 36, 37, 38, 38.1, 39, 43, 44, 53, 53.1.
SUB-BASINS 26A, 35L, 35N, 35S, 36L, 36R HAVE BEEN ADDED.

SUB-BASINS 7, 8, 9, 10, 10.1, 35, & 36 HAVE BEEN SPLIT TO ALLOW A BETTER
D.A. DELINEATION FOR CAP DIKES 1, 2, & 3.

CURVE NUMBER & CHANNEL ROUTING ADJUSTMENTS HAVE BEEN MADE TO ACCOMODATE
THE SUB-BASIN REVISIONS LISTED ABOVE.

100-YR, 24-HR STORM, USING SCS TYPE IIA RAINFALL DISTRIBUTION
RAINFALL FROM NOAA ATLAS, USING 25 SQ MI AREAL REDUCTION FACTOR (.968)

FUTURE LAND-USE DENSITIES FROM OCT 1987 GENERAL PLAN, BRW PLANS, AND
THE TONTO FOOTHILLS PLAN, IMPERVIOUS COVER FOR SCOTTSDALE AREAS HAS
BEEN ADJUSTED TO REFLECT NAOS REQUIREMENTS FOR RESIDENTIAL LAND-USE

41 IO OUTPUT CONTROL VARIABLES

IPRNT	5	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE

IT HYDROGRAPH TIME DATA

NMIN	5	MINUTES IN COMPUTATION INTERVAL
IDATE	28APR90	STARTING DATE
ITIME	0000	STARTING TIME
NQ	300	NUMBER OF HYDROGRAPH ORDINATES
NDDATE	29APR90	ENDING DATE
NDTIME	0055	ENDING TIME

COMPUTATION INTERVAL .08 HOURS
TOTAL TIME BASE 24.92 HOURS

ENGLISH UNITS

*** ***

OF PMF	RESERVOIR W.S.ELEV	DEPTH OVER DAM	STORAGE AC-FT	OUTFLOW CFS	OVER TOP HOURS	MAX OUTFLOW HOURS	FAILURE HOURS
1.00	1535.77	.00	3377.	0.	.00	.00	.00

1 SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION DIKE2

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1514.00	1550.00	1550.20
STORAGE	0.	11834.	12000.
OUTFLOW	0.	0.	26.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1539.58	.00	4576.	0.	.00	.00	.00

1 SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION DIKE3

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1504.00	1541.00	1542.00
STORAGE	0.	6032.	6484.
OUTFLOW	0.	0.	290.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1531.89	.00	2663.	0.	.00	.00	.00

*** NORMAL END OF

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	AREA		BASIN STAGE	MAXIMUM MAX STAGE	TIME OF	Q/A
+	HYDROGRAPH AT SUB1	402.	6.17	56.	18.	17.	.34						1182
+	HYDROGRAPH AT SUB2	1055.	6.33	266.	83.	80.	1.22						865
+	HYDROGRAPH AT SUB3	437.	6.33	108.	34.	33.	.54						809
+	3 COMBINED AT CP4	1830.	6.25	429.	135.	130.	2.10						
+	HYDROGRAPH AT SUB4	2049.	6.58	677.	217.	209.	3.61	1.51					568
+	HYDROGRAPH AT SUB5	2379.	6.67	1024.	332.	320.	5.48	1.87					434
+	HYDROGRAPH AT SUB6	3464.	6.58	1782.	583.	561.	8.55	3.07					405
+	HYDROGRAPH AT 6.1	4160.	6.17	1951.	638.	615.	9.41	0.87					442
+	HYDROGRAPH AT SUB7A	203.	6.17	25.	8.	8.	.14						1450
+	HYDROGRAPH AT SUB8A	432.	6.33	123.	39.	38.	.70	0.57					617
+	HYDROGRAPH AT SUB9A	871.	6.25	298.	95.	92.	1.59	0.89					548
+	HYDROGRAPH AT SUB10A	1045.	6.67	491.	159.	153.	2.42	0.84					432
+	HYDROGRAPH AT 10.1A	1143.	6.75	597.	195.	188.	3.02	0.59					378
+	HYDROGRAPH AT 1470	507.	6.17	78.	24.	23.	.30						1690
+	HYDROGRAPH AT 1475	3520.	6.17	552.	169.	163.	1.99	1.69					1769
+	HYDROGRAPH AT 1480	4923.	6.17	813.	249.	239.	2.99	1.00					1646
+	DIVERSION TO 1481	0.	6.17	0.	0.	0.	2.99						
+	HYDROGRAPH AT 1482	4923.	6.17	813.	249.	239.	2.99						
+	HYDROGRAPH AT 3660	3237.	6.67	926.	290.	279.	3.74	0.76					866

	HYDROGRAPH AT								
+	3670	3185.	7.00	1185.	378.	364.	5.18	1.44	615
	HYDROGRAPH AT								
+	3680	3263.	7.25	1637.	527.	508.	7.43	2.25	439
	HYDROGRAPH AT								
+	3690	3541.	6.42	1879.	610.	587.	8.91	1.48	397
	HYDROGRAPH AT								
+	3620	496.	6.42	129.	41.	39.	.69		719
	HYDROGRAPH AT								
+	3630	1021.	6.17	296.	94.	90.	1.52	0.83	672
	HYDROGRAPH AT								
+	3640	1994.	6.17	622.	197.	190.	3.15	1.63	633
	HYDROGRAPH AT								
+	3650	2049.	6.67	809.	260.	251.	4.32	1.18	474
	4 COMBINED AT								
+	1IN	10388.	6.58	5235.	1703.	1640.	25.66		405
	ROUTED TO								
+	DIKE1	0.	.08	0.	0.	0.	25.66		
+							1535.77	24.92	
	HYDROGRAPH AT								
+	SUB7B	426.	6.42	96.	31.	29.	.53		804
	HYDROGRAPH AT								
+	11A	321.	6.17	50.	16.	15.	.32		1003
	2 COMBINED AT								
+	8.1	697.	6.25	146.	46.	45.	.85		
	HYDROGRAPH AT								
+	SUB8B	855.	6.58	284.	92.	88.	1.71	0.86	500
	HYDROGRAPH AT								
+	SUB9B	1091.	6.58	471.	153.	147.	2.58	0.88	423
	HYDROGRAPH AT								
+	SUB10B	1558.	6.58	752.	246.	237.	4.02	1.44	388
	HYDROGRAPH AT								
+	10.1B	1794.	6.67	918.	302.	291.	4.92	0.90	365
	HYDROGRAPH AT								
+	11B	333.	6.17	42.	13.	13.	.25		1332
	HYDROGRAPH AT								
+	SUB12	1362.	6.17	277.	87.	83.	1.36	1.11	1001
	HYDROGRAPH AT								
+	SUB13	1831.	6.33	544.	171.	164.	2.56	1.19	715
	HYDROGRAPH AT								
+	SUB14	2212.	6.58	871.	275.	265.	3.95	1.39	560
	HYDROGRAPH AT								
+	14.1	2317.	6.75	1004.	319.	307.	4.56	0.61	508

+	HYDROGRAPH AT SUB16	2476.	6.08	317.	97.	94.	1.46		1696
+	HYDROGRAPH AT SUB17	2003.	6.08	257.	79.	76.	1.19		1683
+	HYDROGRAPH AT SUB18	2319.	6.08	269.	83.	80.	1.26		1840
+	3 COMBINED AT CP19A	6799.	6.08	843.	260.	250.	3.91		
+	ROUTED TO CP19B	6528.	6.17	843.	260.	250.	3.91		
+	HYDROGRAPH AT SUB15	1533.	6.17	275.	86.	83.	1.37		1119
+	2 COMBINED AT CP19C	8060.	6.17	1118.	346.	333.	5.28		
+	HYDROGRAPH AT SUB19	8079.	6.17	1159.	359.	345.	5.46	0.19	1480.
+	HYDROGRAPH AT SUB20	1019.	6.08	123.	38.	37.	.57		1788
+	2 COMBINED AT CP21	9051.	6.17	1282.	396.	382.	6.03		
+	HYDROGRAPH AT SUB21	5879.	6.67	1908.	610.	588.	9.70	3.67	606
+	HYDROGRAPH AT SUB22	2676.	6.08	303.	93.	90.	1.39		1925
+	HYDROGRAPH AT SUB23	733.	6.08	87.	27.	26.	.39		1879
+	2 COMBINED AT CP24	3409.	6.08	389.	120.	115.	1.78		
+	HYDROGRAPH AT SUB24	3684.	6.17	478.	147.	142.	2.27	0.49	1623
+	HYDROGRAPH AT SUB25	2506.	6.17	349.	107.	103.	1.52		1649
+	2 COMBINED AT CP26	6190.	6.17	826.	254.	245.	3.79		1633
+	HYDROGRAPH AT SUB26	6214.	6.17	866.	267.	257.	4.01	0.22	1550
+	DIVERSION TO 26.2	3107.	6.17	433.	134.	129.	4.01		
+	HYDROGRAPH AT 26.1	3107.	6.17	433.	134.	129.	4.01		
+	ROUTED TO 21.1	2718.	6.33	427.	133.	128.	4.01		
+	2 COMBINED AT CP27	7564.	6.50	2335.	743.	716.	13.71		

	HYDROGRAPH AT								
+	26.2	3107.	6.17	433.	134.	129.	.00		
	HYDROGRAPH AT								
+	SUB26A	3255.	6.33	518.	162.	156.	.53		6141
	2 COMBINED AT								
+	27.1	10182.	6.42	2853.	905.	871.	14.24		715
	HYDROGRAPH AT								
+	SUB27	10264.	6.50	2947.	938.	903.	14.87	0.64	
	HYDROGRAPH AT								
+	SUB28	9433.	6.83	3218.	1051.	1012.	16.46	1.59	573
	HYDROGRAPH AT								
+	SUB29	7643.	7.50	3352.	1143.	1101.	18.26	1.80	
	HYDROGRAPH AT								
+	29.1	7490.	7.83	3446.	1210.	1165.	19.65	1.39	381
	HYDROGRAPH AT								
+	SUB30	1948.	6.17	279.	86.	83.	1.33		
	HYDROGRAPH AT								
+	34R	977.	6.08	116.	36.	35.	.64		
	2 COMBINED AT								
+	31.1	2903.	6.17	395.	122.	118.	1.97		
	HYDROGRAPH AT								
+	SUB31	2813.	6.33	625.	197.	190.	3.36	1.38	
	HYDROGRAPH AT								
+	35N	946.	6.08	102.	31.	30.	.41		
	DIVERSION TO								
+	35N1	378.	6.08	41.	12.	12.	.41		
	HYDROGRAPH AT								
+	35N2	568.	6.08	61.	19.	18.	.41		
	ROUTED TO								
+	35L1	476.	6.17	61.	18.	18.	.41		
	HYDROGRAPH AT								
+	35L	685.	6.25	124.	39.	37.	.65		
	2 COMBINED AT								
+	35L2	1159.	6.25	185.	57.	55.	1.06		
	HYDROGRAPH AT								
+	36L	1175.	6.42	280.	88.	85.	1.64	0.59	
	DIVERSION TO								
+	36T	387.	6.42	41.	10.	10.	1.64		
	HYDROGRAPH AT								
+	36V	787.	6.42	239.	78.	75.	1.64		
	2 COMBINED AT								
+	32.1	3576.	6.33	864.	275.	265.	5.00		
	HYDROGRAPH AT								

+	SUB32	3469.	6.67	1033.	333.	320.	6.02	1.02
	HYDROGRAPH AT							
+	SUB33	3251.	7.00	1270.	414.	399.	7.12	1.00
	HYDROGRAPH AT							
+	33.1	3200.	7.33	1452.	476.	459.	7.90	0.78
	4 COMBINED AT							
+	2IN	13250.	7.67	6771.	2308.	2223.	37.03	
	ROUTED TO							
+	DIKE2	0.	.08	0.	0.	0.	37.03	
+							1539.58	24.92
	HYDROGRAPH AT							
+	35N1	378.	6.08	41.	12.	12.	.00	
	HYDROGRAPH AT							
+	35R	650.	6.25	121.	38.	37.	.45	
	HYDROGRAPH AT							
+	36R	1056.	6.17	242.	76.	74.	1.10	0.66
	HYDROGRAPH AT							
+	36T	387.	6.42	41.	10.	10.	.00	
	2 COMBINED AT							
+	36R1	1324.	6.33	284.	87.	84.	1.10	
	HYDROGRAPH AT							
+	SUB37	1695.	6.42	487.	152.	146.	2.25	1.14
	HYDROGRAPH AT							
+	SUB38	2589.	6.17	818.	256.	246.	3.48	1.23
	HYDROGRAPH AT							
+	38.1	3490.	6.17	1155.	361.	347.	4.49	1.01
	HYDROGRAPH AT							
+	SUB39	4477.	6.08	489.	149.	143.	1.93	
	HYDROGRAPH AT							
+	SUB40	1343.	6.08	132.	40.	39.	.58	
	2 COMBINED AT							
+	CP41	5821.	6.08	622.	189.	182.	2.51	2319
	HYDROGRAPH AT							
+	SUB41	6325.	6.17	775.	236.	227.	3.31	0.79
	HYDROGRAPH AT							
+	SUB42	1252.	6.08	126.	39.	37.	.58	
	HYDROGRAPH AT							
+	SUB43	2512.	6.08	255.	77.	75.	1.07	
	HYDROGRAPH AT							
+	SUB44	1951.	6.08	198.	60.	58.	.84	
	2 COMBINED AT							
+	CP45	4463.	6.08	453.	138.	132.	1.91	
	HYDROGRAPH AT							
+	SUB45	4602.	6.08	498.	151.	146.	2.11	0.20

```
      HYDROGRAPH AT
+                SUB45A    425.   6.08      43.      13.      12.     .17

      HYDROGRAPH AT
+                SUB46    2271.   6.08     230.      69.      66.     .93

      3 COMBINED AT
+                 CP47    7298.   6.08     771.     233.     224.    3.21

      HYDROGRAPH AT
+                SUB47    7150.   6.17     870.     263.     253.    3.58   0.38

      3 COMBINED AT
+                 CP48   14513.   6.17    1769.     537.     517.    7.47

      HYDROGRAPH AT
+                SUB48   14273.   6.17    1774.     539.     519.    7.52   0.04

      HYDROGRAPH AT
+                SUB50     824.   6.08      81.      25.      24.     .36

      2 COMBINED AT
+                 CP51   14935.   6.17    1855.     563.     543.    7.88          1895

      DIVERSION TO
+                 2003       0.   6.17       0.       0.       0.    7.88

      HYDROGRAPH AT
+                 2004   14935.   6.17    1855.     563.     543.    7.88

      HYDROGRAPH AT
+                SUB49     713.   6.08      68.      21.      20.     .35

      2 COMBINED AT
+                 49.1   15505.   6.17    1923.     584.     563.    8.23

      HYDROGRAPH AT
+                SUB51   15441.   6.33    2182.     664.     639.    9.30   1.07

      HYDROGRAPH AT
+                SUB52   15242.   6.42    2341.     727.     700.   10.65   1.36          1431.

      HYDROGRAPH AT
+                SUB53   11676.   6.75    2652.     847.     816.   12.28   1.63          950

      HYDROGRAPH AT
+                 53.1   10046.   7.00    3017.     982.     946.   13.75   1.47

      2 COMBINED AT
+                  3IN   12429.   7.00    4164.    1343.    1294.   18.24          -31

      ROUTED TO
+                DIKE3       0.    .08       0.       0.       0.   18.24
+                                                                   1531.89     24.92
1                   SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION    DIKE1


PLAN  1 .............          INITIAL VALUE    SPILLWAY CREST    TOP OF DAM
                    ELEVATION       1518.00          1550.20         1552.00
                    STORAGE            0.            15900.          18145.
                    OUTFLOW            0.               0.            700.


          RATIO    MAXIMUM    MAXIMUM    MAXIMUM    MAXIMUM    DURATION    TIME OF    TIME OF
```

FILE: F4.24I

(100-Year, 24-Hour, SCS Type IIA Storm)

Existing watershed drainage pattern with future land-use impervious cover. Includes drainage areas contributing to CAP Dikes 1, 2, and 3. All flows from Reata Pass are assumed to be diverted to CAP Dike 4.

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

  1       ID      UPPER INDIAN BEND WASH REGIONAL FLOOD CONTROL & DRAINAGE PLAN
  2       ID
  3       ID      BASE MODEL TAKEN FROM THE GENERAL DRAINAGE PLAN FOR PARADISE
  4       ID      VALLEY FAN TERRACE, CITY OF PHOENIX  (FILE: FR30.24I, % IMPERVIOUS COVER
  5       ID      HAS BEEN DECREASED TO REFLECT FUTURE CONDITIONS RATHER THAN MDB)
  6       ID      CITY OF PHOENIX AREAS C & D,  FUTURE CONDITIONS
  7       ID                      &
  8       ID      NORTH SCOTTSDALE GENERAL DRAINAGE PLAN (FILE: GN40.24I)
  9       ID
 10       ID
 11       ID      MODEL F4.24I -- SUB-BASIN SERIES 1 TO 38.1, 39 TO 53.1, & 1470 TO 3690.
 12       ID      FUTURE CONDITIONS WITH EXISTING DRAINAGE PATTERN.
 13       ID      100% OF REATA PASS FAN IS DIVERTED SOUTH TO CAP DIKE 4
 14       ID
 15       ID      THIS MODEL INCLUDES RESERVOIR ROUTING OPERATIONS FOR CAP DIKES 1, 2, & 3
 16       ID
 17       ID      BASE MODEL HAS BEEN MODIFIED TO REFLECT POSSIBLE FLOW DIVERSIONS NEAR
 18       ID      RAWHIDE WASH APEX, PINNACLE PEAK (DESERT HIGHLANDS), & PINNACLE PEAK
 19       ID      COUNTRY CLUB
 20       ID
 21       ID      MINOR D.A. DELINEATION ADJUSTMENTS HAVE ALSO BEEN MADE FOR
 22       ID      SUB-BASINS 6, 6.1, 11, 12, 13, 14, 14.1, 15, 16, 17, 18, 19, 21, 24,
 23       ID              25, 26, 27, 28, 29, 29.1, 31, 32, 33, 33.1
 24       ID              34, 35, 36, 37, 38, 38.1, 39, 43, 44, 53, 53.1.
 25       ID      SUB-BASINS 26A, 35L, 35N, 35S, 36L, 36R HAVE BEEN ADDED.
 26       ID
 27       ID      SUB-BASINS 7, 8, 9, 10, 10.1, 35, & 36 HAVE BEEN SPLIT TO ALLOW A BETTER
 28       ID      D.A. DELINEATION FOR CAP DIKES 1, 2, & 3.
 29       ID
 30       ID      CURVE NUMBER & CHANNEL ROUTING ADJUSTMENTS HAVE BEEN MADE TO ACCOMODATE
 31       ID      THE SUB-BASIN REVISIONS LISTED ABOVE.
 32       ID
 33       ID      100-YR, 24-HR STORM, USING SCS TYPE IIA RAINFALL DISTRIBUTION
 34       ID      RAINFALL FROM NOAA ATLAS, USING 25 SQ MI AREAL REDUCTION FACTOR (.968)
 35       ID
 36       ID      FUTURE LAND-USE DENSITIES FROM OCT 1987 GENERAL PLAN, BRW PLANS, AND
 37       ID      THE TONTO FOOTHILLS PLAN,    IMPERVIOUS COVER FOR SCOTTSDALE AREAS HAS
 38       ID      BEEN ADJUSTED TO REFLECT NAOS REQUIREMENTS FOR RESIDENTIAL LAND-USE
 39       ID
         *DIAGRAM
 40       IT      5 28APR90      0    300
 41       IO      5      0
 42       IN     30 28APR90      0

 43       KK   SUB1
 44       KM       RUNOFF FROM SUB-BASIN 1
 45       BA  .3371
 46       PB  4.25
 47       PC     0   .005   .009   .010   .013   .019   .021   .028   .032   .044
 48       PC  .057   .100   .660   .745   .776   .800   .816   .830   .840   .850
 49       PC  .861   .868   .878   .884   .891   .900   .905   .912   .919   .923
 50       PC  .930   .934   .939   .944   .950   .958   .961   .963   .969   .971
 51       PC  .974   .979   .981   .985   .989   .991   .993   .996  1.000
 52       LS          75    9.9
 53       UK   255  .0262    .20    100
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  54      RK   7160  .0289   .045          TRAP    35     3

  55      KK   SUB2
  56      KM       RUNOFF FROM SUB-BASIN 2
  57      BA  1.2170
  58      LS           83   14.4
  59      UK    337  .0308    .20    100
  60      RK  24000  .0196   .045          TRAP    35     3

  61      KK   SUB3
  62      KM       RUNOFF FROM SUB-BASIN 3
  63      BA   .5448
  64      LS           81   10.3
  65      UK    255  .0262    .20    100
  66      RK  16400  .0201   .045          TRAP    35     3

  67      KK    CP4
  68      KM       COMBINE HYDROGRAPHS SUB1, SUB2, & SUB3
  69      HC      3

  70      KK   SUB4
  71      KM       RUNOFF FROM SUB-BASIN 4 & ROUTE CP 4
  72      BA  1.5102
  73      LS           73   16.1
  74      UK     84  .0213    .10    100
  75      RK  10633  .0191   .045          TRAP    50   100    YES

  76      KK   SUB5
  77      KM       RUNOFF FROM SUB-BASIN 5 & ROUTE SUB 4
  78      BA  1.8713
  79      LS           74   25.1
  80      UK     81  .0213    .10    100
  81      RK  11433  .0175   .045          TRAP    50   130    YES

  82      KK   SUB6
  83      KM       RUNOFF FROM SUB-BASIN 6 & ROUTE SUB 5
  84      BA  3.0669
  85      LS           74   58.1
  86      UK    146  .0213    .10    100
  87      RK  16100  .0124   .045          TRAP    50   150    YES

  88      KK    6.1    SUB
  89      KM       RUNOFF FROM SUB 6.1 & ROUTE SUB 6
  90      BA   .8659
  91      LS           74   31.4
  92      UK    146  .0213    .10    100
  93      RK   3400  .0094   .045          TRAP    50   160    YES

  94      KK  SUB7A
  95      KM       RUNOFF FROM SUB-BASIN 7A
  96      BA   .1356
  97      LS           78    9.9
  98      UK    255  .0262    .20    100
  99      RK   3900  .0231   .045          TRAP    30    10
```

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

  100     KK  SUB8A
  101     KM      RUNOFF FROM SUB-BASIN 8A & ROUTE SUB 7A
  102     BA  .5624
  103     LS          75   12.6
  104     UK   116  .0213    .10    100
  105     RK  10200  .0196   .045         TRAP    30    100    YES

  106     KK  SUB9A
  107     KM      RUNOFF FROM SUB-BASIN 9A & ROUTE SUB 8A
  108     BA  .8874
  109     LS          74   26.3
  110     UK    95  .0213    .10    100
  111     RK  10400  .0192   .045         TRAP    30    130    YES

  112     KK  SUB10A
  113     KM      RUNOFF FROM SUB-BASIN 10A ROUTE SUB 9A
  114     BA  .8372
  115     LS          74     50
  116     UK   107  .0213    .10    100
  117     RK  12000  .0142   .045         TRAP    30    175    YES

  118     KK  10.1A    SUB
  119     KM      RUNOFF FROM SUB 10.1A & ROUTE SUB 10A
  120     BA  .5933
  121     LS          74   25.2
  122     UK   107  .0213    .10    100
  123     RK   5500  .0100   .045         TRAP    30    190    YES

  124     KK   1470    SUB
  125     KM      RUNOFF FROM SUB 1470
  126     BA  .2977
  127     PB  4.63
  128     PC     0   .005   .009   .010   .013   .019   .021   .028   .032   .044
  129     PC  .057   .100   .660   .745   .776   .800   .816   .830   .840   .850
  130     PC  .861   .868   .878   .884   .891   .900   .905   .912   .919   .923
  131     PC  .930   .934   .939   .944   .950   .958   .961   .963   .969   .971
  132     PC  .974   .979   .981   .985   .989   .991   .993   .996  1.000
  133     LS          84   14.70
  134     UK   200  .0500    .20    100
  135     RK  15000  .0293   .045         TRAP    20     3

  136     KK   1475    SUB
  137     KM      RUNOFF FROM SUB 1475 AND ROUTE SUB 1470
  138     BA  1.6895
  139     LS          84   24.72
  140     UK   285  .0419    .20    100
  141     RK  17600  .0188   .045         TRAP    25     3    YES

  142     KK   1480    SUB
  143     KM      RUNOFF FROM SUB 1480 AND ROUTE SUB 1475
  144     BA  1.0015
  145     LS          83   14.10
  146     UK   300  .0167    .20    100
  147     RK   7500  .0213   .045         TRAP    25     3    YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  148     KK   1482    DIV
  149     KM        DIVERT FLOW FROM SUB 1480 TO SUB 3510
  150     DT   1481
  151     DI      0   8000
  152     DQ      0      0

  153     KK   3660    SUB
  154     KM        RUNOFF FROM SUB 3660 & ROUTE DIV 1482
  155     BA   .7554
  156     PB   4.14
  157     PC      0   .005   .009   .010   .013   .019   .021   .028   .032   .044
  158     PC   .057   .100   .660   .745   .776   .800   .816   .830   .840   .850
  159     PC   .861   .868   .878   .884   .891   .900   .905   .912   .919   .923
  160     PC   .930   .934   .939   .944   .950   .958   .961   .963   .969   .971
  161     PC   .974   .979   .981   .985   .989   .991   .993   .996  1.000
  162     LS           76     21
  163     UK    224  .0212    .15    100
  164     RK  18600  .0184    .045          TRAP     30     30    YES

  165     KK   3670    SUB
  166     KM        RUNOFF FROM SUB 3670 & ROUTE SUB 3660
  167     BA  1.4355
  168     LS           74     29
  169     UK    100  .0213    .10    100
  170     RK  10900  .0183    .045          TRAP     40     50    YES

  171     KK   3680    SUB
  172     KM        RUNOFF FROM SUB 3680 & ROUTE SUB 3670
  173     BA  2.2512
  174     LS           74     38
  175     UK    150  .0213    .10    100
  176     RK  11200  .0134    .045          TRAP     40     75    YES

  177     KK   3690    SUB
  178     KM        RUNOFF FROM SUB 3690 & ROUTE SUB 3680
  179     BA  1.4778
  180     LS           74     23
  181     UK    150  .0213    .10    100
  182     RK   7300  .0110    .045          TRAP     50    100    YES

  183     KK   3620    SUB
  184     KM        RUNOFF FROM SUB 3620
  185     BA   .6858
  186     LS           77     19
  187     UK    224  .0212    .15    100
  188     RK  16000  .0194    .045          TRAP     15     30

  189     KK   3630    SUB
  190     KM        RUNOFF FROM SUB 3630 & ROUTE SUB 3620
  191     BA   .8300
  192     LS           74     31
  193     UK    100  .0213    .10    100
  194     RK  11300  .0177    .045          TRAP     30     30    YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

195       KK   3640    SUB
196       KM       RUNOFF FROM SUB 3640 & ROUTE SUB 3630
197       BA  1.6299
198       LS           74     32
199       UK    150  .0213    .10    100
200       RK  11600  .0129   .045          TRAP     40     50    YES

201       KK   3650    SUB
202       KM       RUNOFF FROM SUB 3650 & ROUTE SUB 3640
203       BA  1.1780
204       LS           74     19
205       UK    150  .0213    .10    100
206       RK   9700  .0082   .045          TRAP    100     50    YES

207       KK    1IN     CP
208       KM       COMBINE SUB 3650, SUB 3690, SUB 6.1, & SUB 10.1A
209       KM       THIS IS THE TOTAL INFLOW TO CAP DIKE No.1
210       HC      4

211       KK   DIKE1     DAM
212       KM       ROUTE CP 1IN THROUGH CAP DIKE No.1
213       RS      1    STOR
214       SV      0     10     68    209    429    740   1167   1750   2522   3486
215       SV   4640   5986   7534   9280  11210  13332  15646  15900  18145
216       SE   1518   1520   1522   1524   1526   1528   1530   1532   1534   1536
217       SE   1538   1540   1542   1544   1546   1548   1550  1550.2   1552
218       SS 1550.2    100    2.9    1.5
219       ST   1552    100    2.9    1.5
        * ***************************************************************************
        *
        *              BEGIN DRAINAGE AREA FOR CAP DIKE No.2
        *
        * ***************************************************************************

220       KK   SUB7B
221       KM       RUNOFF FROM SUB-BASIN 7B
222       BA   .5334
223       PB    4.25
224       PC      0   .005   .009   .010   .013   .019   .021   .028   .032   .044
225       PC   .057   .100   .660   .745   .776   .800   .816   .830   .840   .850
226       PC   .861   .868   .878   .884   .891   .900   .905   .912   .919   .923
227       PC   .930   .934   .939   .944   .950   .958   .961   .963   .969   .971
228       PC   .974   .979   .981   .985   .989   .991   .993   .996  1.000
229       LS           78    8.2
230       UK    255  .0262    .20    100
231       RK  12200  .0197   .045          TRAP     40     20

232       KK    11A     SUB
233       KM       RUNOFF FROM SUB 11A
234       BA   .3171
235       LS           74    7.9
236       UK    150  .0425    .20    100
237       RK   6200  .0226   .045          TRAP     30     50
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  238     KK    8.1      CP
  239     KM        COMBINE SUB7B & SUB 11A
  240     HC      2

  241     KK   SUB8B
  242     KM        RUNOFF FROM SUB-BASIN 8B & ROUTE CP 8.1
  243     BA   .8566
  244     LS            74    11.6
  245     UK    116   .0213    .10     100
  246     RK   10550  .0196   .045          TRAP     30    100     YES

  247     KK   SUB9B
  248     KM        RUNOFF FROM SUB-BASIN 9B & ROUTE SUB 8B
  249     BA   .8767
  250     LS            74    37.6
  251     UK     95   .0213    .10     100
  252     RK   10400  .0192   .045          TRAP     30    130     YES

  253     KK  SUB10B
  254     KM        RUNOFF FROM SUB-BASIN 10B ROUTE SUB 9B
  255     BA  1.4377
  256     LS            74      31
  257     UK    107   .0213    .10     100
  258     RK   11000  .0136   .045          TRAP     30    175     YES

  259     KK   10.1B     SUB
  260     KM        RUNOFF FROM SUB 10.1B & ROUTE SUB 10B
  261     BA   .8989
  262     LS            74    28.2
  263     UK    107   .0213    .10     100
  264     RK    6000  .0106   .045          TRAP     30    190     YES

  265     KK    11B      SUB
  266     KM        RUNOFF FROM SUB-BASIN 11B
  267     BA   .2547
  268     LS            74    11.9
  269     UK    150   .0425    .20     100
  270     RK    4700  .0213   .045          TRAP     30     50

  271     KK   SUB12
  272     KM        RUNOFF FROM SUB-BASIN 12 & ROUTE SUB 11B
  273     BA  1.1091
  274     LS            74    30.1
  275     UK     95   .0213    .10     100
  276     RK    9850  .0214   .045          TRAP     50    100     YES

  277     KK   SUB13
  278     KM        RUNOFF FROM SUB-BASIN 13 & ROUTE SUB 12
  279     BA  1.1938
  280     LS            74      38
  281     UK     86   .0213    .10     100
  282     RK   10533  .0192   .045          TRAP     50    130     YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  283     KK  SUB14
  284     KM      RUNOFF FROM SUB-BASIN 14 & ROUTE SUB 13
  285     BA  1.3910
  286     LS          74   46.7
  287     UK   101  .0213    .10    100
  288     RK  11200  .0142   .045         TRAP    50    150    YES

  289     KK   14.1    SUB
  290     KM      RUNOFF FROM SUB 14.1 & ROUTE SUB 14
  291     BA   .6112
  292     LS          74   43.8
  293     UK   101  .0213    .10    100
  294     RK   5800  .0112   .045         TRAP    50    160    YES

  295     KK  SUB16
  296     KM      RUNOFF FROM SUB-BASIN 16
  297     BA  1.4570
  298     LS          83    9.8
  299     UK   217  .0581    .20    100
  300     RK  14800  .0216   .045         TRAP    25      3

  301     KK  SUB17
  302     KM      RUNOFF FROM SUB-BASIN 17
  303     BA  1.1851
  304     LS          83    9.8
  305     UK   285  .0421    .20    100
  306     RK  12200  .0254   .045         TRAP    25      3

  307     KK  SUB18
  308     KM      RUNOFF FROM SUB-BASIN 18
  309     BA  1.2641
  310     LS          83    6.5
  311     UK   285  .0421    .20    100
  312     RK  10840  .0259   .045         TRAP    25      3

  313     KK  CP19A
  314     KM      COMBINE HYDROGRAPHS SUB16, SUB17, & SUB18
  315     HC     3

  316     KK  CP19B
  317     KM      ROUTE CP19A TO CP19B
  318     RK   1100  .0155  0.045         TRAP    35      3

  319     KK  SUB15
  320     KM      RUNOFF FROM SUB-BASIN 15
  321     BA  1.3702
  322     LS          82    5.4
  323     UK   217  .0581    .20    100
  324     RK  21200  .0236   .045         TRAP    25      3
1
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  325     KK  CP19C
  326     KM      COMBINE HYDROGRAPHS SUB15 & CP19B
  327     HC     2

  328     KK  SUB19
  329     KM      RUNOFF FROM SUB-BASIN 19 & ROUTE CP 19C
  330     BA  .1872
  331     LS          84    7.2
  332     UK    275  .0800   .20   100
  333     RK   3730  .0352  .045  .160  TRAP    15     3
  334     RK   1800  .0200  .045        TRAP    50    30   YES

  335     KK  SUB20
  336     KM      RUNOFF FROM SUB-BASIN 20
  337     BA  .5698
  338     LS          84    3.6
  339     UK    300  .0750   .20   100
  340     RK   9640  .0197  .045        TRAP    15     3

  341     KK   CP21
  342     KM      COMBINE HYDROGRAPHS SUB19 & SUB20
  343     HC     2

  344     KK  SUB21
  345     KM      RUNOFF FROM SUB-BASIN 21 & ROUTE CP 21
  346     BA  3.6659
  347     LS          80    6.4
  348     UK    297  .0558   .20   100
  349     RK  27600  .0196  .045        TRAP    50    30   YES

  350     KK  SUB22
  351     KM      RUNOFF FROM SUB-BASIN 22
  352     BA  1.3860
  353     LS          84    5.1
  354     UK    225  .0590   .20   100
  355     RK  13000  .0238  .045        TRAP    25     3

  356     KK  SUB23
  357     KM      RUNOFF FROM SUB-BASIN 23
  358     BA  .3945
  359     LS          84    6.3
  360     UK    225  .0590   .20   100
  361     RK  10200  .0304  .045        TRAP    20     3

  362     KK   CP24
  363     KM      COMBINE HYDROGRAPHS SUB22 & SUB23
  364     HC     2

  365     KK  SUB24
  366     KM      RUNOFF FROM SUB-BASIN 24 & ROUTE CP 24
  367     BA  .4907
  368     LS          77    6.8
  369     UK    295  .0438   .20   100
  370     RK   6800  .0257  .045        TRAP    15     3   YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

371       KK  SUB25
372       KM      RUNOFF FROM SUB-BASIN 25
373       BA  1.5166
374       LS          85    9.0
375       UK    295  .0438    .20    100
376       RK  16700  .0302    .045         TRAP    25     3

377       KK   CP26
378       KM      COMBINE HYDROGRAPHS SUB24 & SUB25
379       HC     2

380       KK  SUB26
381       KM      RUNOFF FROM SUB-BASIN 26 & ROUTE CP 26
382       BA  .2231
383       LS          78    6.9
384       UK    200  .0250    .20    100
385       RK   1400  .0217    .045         TRAP    60     7    YES

386       KK   26.1    DIV
387       KM      DIVERT FLOW FROM SUB 26 TO SUB 26A
388       DT   26.2
389       DI     0    500    1000   10000
390       DQ     0    250     500    5000

391       KK   21.1     CP
392       KM      ROUTE DIV 26.1 TO OUTLET OF SUB 21
393       RK  10600  .0263    .045         TRAP    35    10

394       KK   CP27
395       KM      COMBINE SUB 21 & CP 21.1
396       HC     2

397       KK   26.2    RET
398       KM      RETRIEVE DIVERTED FLOW FROM CP 26
399       DR   26.2

400       KK  SUB26A
401       KM      RUNOFF FROM SUB 26A & ROUTE RET 26.2
402       BA  .5251
403       LS          74   14.50
404       UK    200  .0250    .20    100
405       RK  10000  .0263    .045         TRAP    35    10    YES

406       KK   27.1     CP
407       KM      COMBINE CP 27 & SUB 26A
408       HC     2

409       KK  SUB27
410       KM      RUNOFF FROM SUB-BASIN 27 & ROUTE CP 27.1
411       BA  .6385
412       LS          73   16.3
413       UK    159  .0213    .10    100
414       RK   3200  .0310    .045         TRAP  1500     2    YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

415       KK  SUB28
416       KM      RUNOFF FROM SUB-BASIN 28 & ROUTE SUB 27
417       BA  1.5890
418       LS          74   57.1
419       UK    96  .0213    .10    100
420       RK  9333  .0303   .045         TRAP   2500     2    YES

421       KK  SUB29
422       KM      RUNOFF FROM SUB-BASIN 29 & ROUTE SUB 28
423       BA  1.8007
424       LS          74   41.3
425       UK    88  .0213    .10    100
426       RK 10900  .0147   .045         TRAP   3500     2    YES

427       KK   29.1    SUB
428       KM      RUNOFF FROM SUB 29.1 & ROUTE SUB 29
429       BA  1.3896
430       LS          74   28.6
431       UK    88  .0213    .10    100
432       RK  5500  .0118   .045         TRAP   3750     2    YES

433       KK  SUB30
434       KM      RUNOFF FROM SUB-BASIN 30
435       BA  1.3296
436       LS          82    6.6
437       UK   110  .0408    .20    100
438       RK 10640  .0371   .045         TRAP     50   100

439       KK   34R    SUB
440       KM      RUNOFF FROM SUB 34R
441       BA   .6421
442       LS          77    9.9
443       UK   110  .0408    .20    100
444       RK  6800  .0644   .045         TRAP     50   100

445       KK   31.1     CP
446       KM      COMBINE SUB 34R & SUB 30
447       HC      2

448       KK  SUB31
449       KM      RUNOFF FROM SUB-BASIN 31 & ROUTE CP 31.1
450       BA  1.3839
451       LS          73   15.1
452       UK   102  .0213    .10    100
453       RK  9450  .0228   .045         TRAP     50   130    YES

454       KK   35N    SUB
455       KM      RUNOFF FROM SUB-BASIN 35N
456       KM      THIS BASIN DRAINS TO A CBC AT THE EAST SIDE OF DESERT HIGHLANDS
457       BA   .4068
458       LS          82   31.8
459       UK   265  .0381    .20    100
460       RK  5200  .0269   .045         TRAP     25     4
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  461     KK   35N2     DIV
  462     KM       DIVERT FLOW THROUGH BLOCK WALL OPENINGS AT EAST SIDE OF DESERT HIGHLANDS
  463     DT   35N1
  464     DI     0    100    1000
  465     DQ     0     40     400

  466     KK   35L1      CP
  467     KM       ROUTE DIV 35N2 TO CP 35L1
  468     RK   7500  .0367   .045          TRAP     50      5

  469     KK    35L     SUB
  470     KM       RUNOFF FROM SUB 35L
  471     BA  .6521
  472     LS           78    12.7
  473     UK    265  .0381    .20     100
  474     RK   9400  .0463   .045          TRAP     50    100

  475     KK   35L2      CP
  476     KM       COMBINE SUB 35L & CP 35L1
  477     HC      2

  478     KK    36L     SUB
  479     KM       RUNOFF FROM SUB 36L & ROUTE CP 35L2
  480     BA  .5861
  481     LS           74    10.9
  482     UK    116  .0213    .10     100
  483     RK   7200  .0269   .045          TRAP     50    130     YES

  484     KK    36V     DIV
  485     KM       DIVERT OVERFLOWS THROUGH PINNACLE PEAK C.C. GOLF COURSE TO SUB 37
  486     DT    36T
  487     DI     0    500    1000    2000    5000
  488     DQ     0      0     300     800    2000

  489     KK   32.1      CP
  490     KM       COMBINE SUB 31 & DIV 36V
  491     HC      2

  492     KK  SUB32
  493     KM       RUNOFF FROM SUB-BASIN 32 & ROUTE CP 32.1
  494     BA 1.0201
  495     LS           74    19.1
  496     UK     67  .0213    .10     100
  497     RK   9300  .0214   .045          TRAP     50    130     YES

  498     KK  SUB33
  499     KM       RUNOFF FROM SUB-BASIN 33 & ROUTE SUB 32
  500     BA 1.0998
  501     LS           74    47.7
  502     UK     89  .0213    .10     100
  503     RK   9500  .0161   .045          TRAP     50    175     YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  504     KK   33.1     SUB
  505     KM        RUNOFF FROM SUB 33.1 & ROUTE SUB 33
  506     BA   .7805
  507     LS            74    59.4
  508     UK     89   .0213    .10     100
  509     RK   6700   .0116    .045          TRAP     50     190     YES

  510     KK    2IN      CP
  511     KM        COMBINE SUB 10.1B, SUB 14.1, SUB 29.1, & SUB 33.1
  512     KM        THIS IS THE TOTAL INFLOW TO CAP DIKE No.2
  513     HC       4

  514     KK   DIKE2     DAM
  515     KM        ROUTE CP 2IN THROUGH CAP DIKE No.2
  516     RS       1    STOR
  517     SV       0       2     48     169     342     546     775    1031    1332    1732
  518     SV    2273    2958   3796    4783    5904    7170    8578   10131   11834   12000
  519     SE    1514    1516   1518    1520    1522    1524    1526    1528    1530    1532
  520     SE    1534    1536   1538    1540    1542    1544    1546    1548    1550  1550.2
  521     SS    1550     100    2.9     1.5
  522     ST  1550.2     100    2.9     1.5
        * ******************************************************************************
        *
        *            BEGIN DRAINAGE AREA FOR CAP DIKE No.3
        *
        * ******************************************************************************

  523     KK    35N1     RET
  524     KM        RETRIEVE DIVERTED FLOW FROM SUB 35N
  525     DR    35N1

  526     KK     35R     SUB
  527     KM        RUNOFF FROM SUB 35R & ROUTE RET 35N1
  528     BA   .4455
  529     LS            77    10.4
  530     UK    265   .0381    .20     100
  531     RK   7700   .0357    .045          TRAP     50     100     YES

  532     KK     36R     SUB
  533     KM        RUNOFF FROM SUB 36R & ROUTE SUB 35R
  534     BA   .6579
  535     LS            73    21.1
  536     UK    116   .0213    .10     100
  537     RK   6500   .0331    .045          TRAP     50     130     YES

  538     KK     36T     RET
  539     KM        RETRIEVE OVERFLOWS FROM PINNACLE PEAK C.C. GOLF COURSE
  540     DR     36T
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1

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

541       KK   36R1      CP
542       KM       COMBINE RET 36T & SUB 36R
543       HC      2

544       KK   SUB37
545       KM       RUNOFF FROM SUB-BASIN 37 & ROUTE CP 36R1
546       BA  1.1443
547       LS            74    16.3
548       UK     61   .0213    .10     100
549       RK   8433   .0237    .045          TRAP     50     130     YES

550       KK   SUB38
551       KM       RUNOFF FROM SUB-BASIN 38 & ROUTE SUB 37
552       BA  1.2275
553       LS            74    59.7
554       UK     84   .0213    .10     100
555       RK   8300   .0176    .045          TRAP     50     150     YES

556       KK   38.1     SUB
557       KM       RUNOFF FROM SUB 38.1 & ROUTE SUB 38
558       KM       CORE SOUTH AREA IMPERVIOUS COVER TAKEN FROM 1987 SLA REPORT
559       BA  1.0122
560       LS            74      90
561       UK     84   .0213    .10     100
562       RK   6800   .0121    .045          TRAP     50     160     YES
          *    ************************************************************************
          *
          *            INSERT SUB-BASINS 39 TO 53
          *            FUTURE LAND USE CONDITIONS WITH EXISTING DRAINAGE PATTERN
          *            DATA IS TAKEN FROM MODEL GN40.24I/CAP3.24I
          *            GENERAL DRAINAGE PLAN FOR NORTH SCOTTSDALE
          *
          *            100-YEAR, 24-HOUR STORM, SCS TYPE IIA RAINFALL DISTRIBUTION
          *            RAINFALL FROM NOAA ATLAS, USING 10 SQ MI AREAL REDUCTION FACTOR
          *            LAND USE DENSITIES FROM GENERAL PLAN & TONTO FOOTHILLS PLAN
          *
          *    ************************************************************************

563       KK   SUB39
564       KM       RUNOFF FROM SUB-BASIN 39
565       BA  1.9302
566       LS            85    23.4
567       UK    330   .0433    .20     100
568       RK  11240   .0253    .045          TRAP     30       3

569       KK   SUB40
570       KM       RUNOFF FROM SUB-BASIN 40
571       BA   .5844
572       LS            83     9.9
573       UK    160   .0627    .20     100
574       RK   7000   .0350    .045          TRAP     20       3
```

1

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

575       KK   CP41
576       KM       COMBINE HYDROGRAPHS SUB39 & SUB40
577       HC     2

578       KK   SUB41
579       KM       RUNOFF FROM SUB-BASIN 41 & ROUTE CP 41
580       BA   .7911
581       LS           74    10.1
582       UK    280  .2386    .20     100
583       RK   9400  .0282   .045          TRAP     50      3    YES

584       KK   SUB42
585       KM       RUNOFF FROM SUB-BASIN 42
586       BA   .5844
587       LS           78    23.3
588       UK    280  .2386    .20     100
589       RK   8750  .0573   .045          TRAP     20      3

590       KK   SUB43
591       KM       RUNOFF FROM SUB-BASIN 43
592       BA  1.0665
593       LS           85    10.5
594       UK    260  .0515    .20     100
595       RK   7400  .0255   .045          TRAP     25      3

596       KK   SUB44
597       KM       RUNOFF FROM SUB-BASIN 44
598       BA   .8389
599       LS           85     8.1
600       UK    260  .0515    .20     100
601       RK   9840  .0622   .045          TRAP     25      3

602       KK   CP45
603       KM       COMBINE HYDROGRAPHS SUB43 & SUB44
604       HC     2

605       KK   SUB45
606       KM       RUNOFF FROM SUB-BASIN 45 & ROUTE CP 45
607       BA   .2037
608       LS           81    14.5
609       UK    125  .1166    .20     100
610       RK   3600  .0366   .045          TRAP     30      3    YES

611       KK  SUB45A
612       KM       RUNOFF FROM SUB 45A
613       BA   .1720
614       LS           86     6.9
615       UK    275  .2200    .20     100
616       RK   5400  .0411   .045          TRAP     15      3
```

1

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

  617     KK  SUB46
  618     KM      RUNOFF FROM SUB-BASIN 46
  619     BA  .9268
  620     LS          86    3.7
  621     UK   265  .4958    .20    100
  622     RK  3300  .2271   .045   .111   TRAP    10     3
  623     RK  7100  .0535   .045          TRAP    25     3

  624     KK   CP47
  625     KM      COMBINE HYDROGRAPHS SUB45, SUB45A, & SUB46
  626     HC     3

  627     KK  SUB47
  628     KM      RUNOFF FROM SUB-BASIN 47 & ROUTE CP 47
  629     BA  .3757
  630     LS          77    8.6
  631     UK   375  .1000    .20    100
  632     RK  9600  .0217   .045          TRAP    50     3    YES

  633     KK   CP48
  634     KM      COMBINE HYDROGRAPHS SUB41, SUB42, & SUB47
  635     HC     3

  636     KK  SUB48
  637     KM      RUNOFF FROM SUB-BASIN 48 & ROUTE CP 48
  638     BA  .0438
  639     LS          73    6.9
  640     UK   150  .0733    .20    100
  641     RK  1300  .0338   .045          TRAP    75     3    YES

  642     KK  SUB50
  643     KM      RUNOFF FROM SUB-BASIN 50
  644     BA  .3580
  645     LS          84    2.8
  646     UK   300  .3555    .20    100
  647     RK   730  .1506   .045   .036   TRAP    10     3
  648     RK  6400  .0453   .045          TRAP    25     3

  649     KK   CP51
  650     KM      COMBINE HYDROGRAPHS SUB 48 & SUB 50
  651     HC     2

  652     KK   2004     DIV
  653     KM      DIVERT FLOW TO SUB 2005
  654     KM      THIS DIVERT OCCURS AT A BRAIDED CHANNEL BIFURCATION LOCATED 1000 FEET
  655     KM      SOUTH OF THE EAST END OF PINNACLE PEAK ROAD.
  656     KM      THIS IS AN ACTIVE ALLUVIAL FAN APEX.
  657     DT   2003
  658     DI     0  15000
  659     DQ     0  15000
1
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

660       KK  SUB49
661       KM      RUNOFF FROM SUB-BASIN 49
662       BA  .3528
663       LS          79    6.9
664       UK    135  .0758    .20    100
665       RK   5400  .0370    .045         TRAP     30      3

666       KK   49.1     CP
667       KM      COMBINE SUB 49 & NON-DIVERTED FLOW FROM DIV 2004
668       HC      2

669       KK  SUB51
670       KM      RUNOFF FROM SUB-BASIN 51 & ROUTE CP 49.1
671       BA  1.0675
672       LS          72   12.9
673       UK     94  .0213    .10    100
674       RK   6400  .0329    .045         TRAP   1500      2    YES

675       KK  SUB52
676       KM      RUNOFF FROM SUB-BASIN 52 & ROUTE SUB 51
677       BA  1.3557
678       LS          71   17.2
679       UK     76  .0213    .10    100
680       RK   6633  .0300    .045         TRAP   2500      2    YES

681       KK  SUB53
682       KM      RUNOFF FROM SUB-BASIN 53 & ROUTE SUB 52
683       BA  1.6328
684       LS          74   58.5
685       UK     67  .0213    .10    100
686       RK   7767  .0196    .045         TRAP   3500      2    YES

687       KK   53.1     SUB
688       KM      RUNOFF FROM SUB 53.1 & ROUTE SUB 53
689       KM      CORE SOUTH AREA IMPERVIOUS COVER TAKEN FROM 1987 SLA REPORT
690       BA  1.4664
691       LS          74     90
692       UK     67  .0213    .10    100
693       RK   6500  .0134    .045         TRAP   3500      2    YES

694       KK    3IN     CP
695       KM      COMBINE SUB 53.1 & SUB 38.1
696       KM      THIS IS THE TOTAL INFLOW INTO CAP DIKE NO.3
697       HC      2

698       KK  DIKE3     DAM
699       KM      ROUTE CP 3IN THROUGH CAP DIKE NO.3
700       KO      1      2
701       RS      1   STOR
702       SV      0      2      7     15     27     43     68    125    243    447
703       SV    749   1130   1586   2112   2695   3328   4001   4757   5580   6484
704       SE   1504   1506   1508   1510   1512   1514   1516   1518   1520   1522
705       SE   1524   1526   1528   1530   1532   1534   1536   1538   1540   1542
706       SS   1541    100    2.9    1.5
```

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

707       ST   1542    100    2.9    1.5
708       ZZ
```

1

SCHEMATIC DIAGRAM OF STREAM NETWORK

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

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

  43     SUB1
          .
          .
  55       .      SUB2
          .        .
          .        .
  61       .        .      SUB3
          .        .        .
          .        .        .
  67     CP4.......................
          V
          V
  70     SUB4 ***
          V
          V
  76     SUB5 ***
          V
          V
  82     SUB6 ***
          V
          V
  88     6.1 ***
          .
          .
  94       .     SUB7A
          .        V
          .        V
 100       .     SUB8A ***
          .        V
          .        V
 106       .     SUB9A ***
          .        V
          .        V
 112       .     SUB10A ***
          .        V
          .        V
 118       .     10.1A ***
          .        .
          .        .
 124       .        .      1470
          .        .        V
          .        .        V
 136       .        .      1475 ***
          .        .        V
          .        .        V
 142       .        .      1480 ***
          .        .        .
          .        .        .
 150       .        .        .-------->   1481
 148       .        .      1482
          .        .        V
          .        .        V
 153       .        .      3660 ***
          .        .        V
          .        .        V
 165       .        .      3670 ***
          .        .        V
          .        .        V
```

```
171     .       .       3680 ***
        .       .        V
        .       .        V
177     .       .       3690 ***
        .       .        .
        .       .        .
183     .       .        .       3620
        .       .        .        V
        .       .        .        V
189     .       .        .       3630 ***
        .       .        .        V
        .       .        .        V
195     .       .        .       3640 ***
        .       .        .        V
        .       .        .        V
201     .       .        .       3650 ***
        .       .        .        .
        .       .        .        .
207    1IN.....................................
       V
       V
211   DIKE1
       .
       .
220     .     SUB7B
        .       .
        .       .
232     .       .       11A
        .       .        .
        .       .        .
238     .      8.1............
        .       V
        .       V
241     .     SUB8B ***
        .       V
        .       V
247     .     SUB9B ***
        .       V
        .       V
253     .    SUB10B ***
        .       V
        .       V
259     .    10.1B ***
        .       .
        .       .
265     .       .       11B
        .       .        V
        .       .        V
271     .       .       SUB12 ***
        .       .        V
        .       .        V
277     .       .       SUB13 ***
        .       .        V
        .       .        V
283     .       .       SUB14 ***
        .       .        V
        .       .        V
289     .       .       14.1 ***
        .       .        .
        .       .        .
295     .       .        .       SUB16
        .       .        .        .
        .       .        .        .
301     .       .        .        .       SUB17
        .       .        .        .        .
```

```
                .    .    .    .    .
307             .    .    .    .    .    SUB18
                .    .    .    .    .    .
                .    .    .    .    .    .
313             .    .    .    CP19A.......................
                .    .    .    V
                .    .    .    V
316             .    .    .    CP19B
                .    .    .    .
                .    .    .    .
319             .    .    .    .    SUB15
                .    .    .    .    .
                .    .    .    .    .
325             .    .    .    CP19C............
                .    .    .    V
                .    .    .    V
328             .    .    .    SUB19 ***
                .    .    .    .
                .    .    .    .
335             .    .    .    .    SUB20
                .    .    .    .    .
                .    .    .    .    .
341             .    .    .    CP21............
                .    .    .    V
                .    .    .    V
344             .    .    .    SUB21 ***
                .    .    .    .
                .    .    .    .
350             .    .    .    .    SUB22
                .    .    .    .    .
                .    .    .    .    .
356             .    .    .    .    .    SUB23
                .    .    .    .    .    .
                .    .    .    .    .    .
362             .    .    .    .    CP24............
                .    .    .    .    V
                .    .    .    .    V
365             .    .    .    .    SUB24 ***
                .    .    .    .    .
                .    .    .    .    .
371             .    .    .    .    .    SUB25
                .    .    .    .    .    .
                .    .    .    .    .    .
377             .    .    .    .    CP26............
                .    .    .    .    V
                .    .    .    .    V
380             .    .    .    .    SUB26 ***
                .    .    .    .    .
                .    .    .    .    .
388             .    .    .    .    .-------> 26.2
386             .    .    .    .    26.1
                .    .    .    .    V
                .    .    .    .    V
391             .    .    .    .    21.1
                .    .    .    .    .
                .    .    .    .    .
394             .    .    .    CP27............
                .    .    .    .
                .    .    .    .
399             .    .    .    .    .<------- 26.2
397             .    .    .    .    26.2
                .    .    .    .    V
                .    .    .    .    V
400             .    .    .    .    SUB26A ***
                .    .    .    .    .
```

```
                .         .         .         .         .
406             .         .         .       27.1............
                .         .         .         V
                .         .         .         V
409             .         .         .       SUB27 ***
                .         .         .         V
                .         .         .         V
415             .         .         .       SUB28 ***
                .         .         .         V
                .         .         .         V
421             .         .         .       SUB29 ***
                .         .         .         V
                .         .         .         V
427             .         .         .       29.1 ***
                .         .         .         .
                .         .         .         .
433             .         .         .         .       SUB30
                .         .         .         .         .
                .         .         .         .         .
439             .         .         .         .         .       34R
                .         .         .         .         .         .
                .         .         .         .         .         .
445             .         .         .         .       31.1............
                .         .         .         .         V
                .         .         .         .         V
448             .         .         .         .       SUB31 ***
                .         .         .         .         .
                .         .         .         .         .
454             .         .         .         .         .       35N
                .         .         .         .         .         .
                .         .         .         .         .         .
463             .         .         .         .         .         .-------> 35N1
461             .         .         .         .         .       35N2
                .         .         .         .         .         V
                .         .         .         .         .         V
466             .         .         .         .         .       35L1
                .         .         .         .         .         .
                .         .         .         .         .         .
469             .         .         .         .         .         .       35L
                .         .         .         .         .         .         .
                .         .         .         .         .         .         .
475             .         .         .         .         .       35L2............
                .         .         .         .         .         V
                .         .         .         .         .         V
478             .         .         .         .         .       36L ***
                .         .         .         .         .         .
                .         .         .         .         .         .
486             .         .         .         .         .         .-------> 36T
484             .         .         .         .         .       36V
                .         .         .         .         .         .
                .         .         .         .         .         .
489             .         .         .         .       32.1............
                .         .         .         .         V
                .         .         .         .         V
492             .         .         .         .       SUB32 ***
                .         .         .         .         V
                .         .         .         .         V
498             .         .         .         .       SUB33 ***
                .         .         .         .         V
                .         .         .         .         V
504             .         .         .         .       33.1 ***
                .         .         .         .         .
                .         .         .         .         .
510             .       2IN.................................
                .         V
```

```
          .      V
514       .    DIKE2
          .      .
          .      .
525       .      .      .<-------   35N1
523       .      .    35N1
          .      .     V
          .      .     V
526       .      .    35R ***
          .      .     V
          .      .     V
532       .      .    36R ***
          .      .     .
          .      .     .
540       .      .     .      .<-------   36T
538       .      .     .    36T
          .      .     .      .
          .      .     .      .
541       .      .    36R1............
          .      .     V
          .      .     V
544       .      .   SUB37 ***
          .      .     V
          .      .     V
550       .      .   SUB38 ***
          .      .     V
          .      .     V
556       .      .    38.1 ***
          .      .     .
          .      .     .
563       .      .     .    SUB39
          .      .     .      .
          .      .     .      .
569       .      .     .      .    SUB40
          .      .     .      .      .
          .      .     .      .      .
575       .      .     .    CP41............
          .      .     .      V
          .      .     .      V
578       .      .     .    SUB41 ***
          .      .     .      .
          .      .     .      .
584       .      .     .      .    SUB42
          .      .     .      .      .
          .      .     .      .      .
590       .      .     .      .      .    SUB43
          .      .     .      .      .      .
          .      .     .      .      .      .
596       .      .     .      .      .      .    SUB44
          .      .     .      .      .      .      .
          .      .     .      .      .      .      .
602       .      .     .      .      .    CP45............
          .      .     .      .      .      V
          .      .     .      .      .      V
605       .      .     .      .      .    SUB45 ***
          .      .     .      .      .      .
          .      .     .      .      .      .
611       .      .     .      .      .      .    SUB45A
          .      .     .      .      .      .      .
          .      .     .      .      .      .      .
617       .      .     .      .      .      .      .    SUB46
          .      .     .      .      .      .      .      .
          .      .     .      .      .      .      .      .
624       .      .     .      .      .    CP47........................
          .      .     .      .      .      V
```

```
                .    .    .    .    .    V
627             .    .    .    .    .    SUB47 ***
                .    .    .    .    .    .
                .    .    .    .    .    .
633             .    .    .    CP48.......................
                .    .    .    V
                .    .    .    V
636             .    .    .    SUB48 ***
                .    .    .    .
                .    .    .    .
642             .    .    .    .    SUB50
                .    .    .    .    .
                .    .    .    .    .
649             .    .    .    CP51............
                .    .    .    .
                .    .    .    .
657             .    .    .    .-------> 2003
652             .    .    .    2004
                .    .    .    .
                .    .    .    .
660             .    .    .    .    SUB49
                .    .    .    .    .
                .    .    .    .    .
666             .    .    .    49.1............
                .    .    .    V
                .    .    .    V
669             .    .    .    SUB51 ***
                .    .    .    V
                .    .    .    V
675             .    .    .    SUB52 ***
                .    .    .    V
                .    .    .    V
681             .    .    .    SUB53 ***
                .    .    .    V
                .    .    .    V
687             .    .    .    53.1 ***
                .    .    .    .
                .    .    .    .
694             .    .    3IN............
                .    .    V
                .    .    V
698             .    .    DIKE3
```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

1 ****

FLOOD HYDROGRAPH PACKAGE HEC-1 (IBM XT 512K VERSION) -FEB 1,1985
U.S. ARMY CORPS OF ENGINEERS, THE HYDROLOGIC ENGINEERING CENTER, 609 SECOND STREET, DAVIS, CA. 95616
****

UPPER INDIAN BEND WASH REGIONAL FLOOD CONTROL & DRAINAGE PLAN

BASE MODEL TAKEN FROM THE GENERAL DRAINAGE PLAN FOR PARADISE
VALLEY FAN TERRACE, CITY OF PHOENIX (FILE: FR30.24I, % IMPERVIOUS COVER
HAS BEEN DECREASED TO REFLECT FUTURE CONDITIONS RATHER THAN MDB)
CITY OF PHOENIX AREAS C & D, FUTURE CONDITIONS
&
NORTH SCOTTSDALE GENERAL DRAINAGE PLAN (FILE: GN40.24I)

MODEL F4.24I -- SUB-BASIN SERIES 1 TO 38.1, 39 TO 53.1, & 1470 TO 3690.
FUTURE CONDITIONS WITH EXISTING DRAINAGE PATTERN.
100% OF REATA PASS FAN IS DIVERTED SOUTH TO CAP DIKE 4

THIS MODEL INCLUDES RESERVOIR ROUTING OPERATIONS FOR CAP DIKES 1, 2, & 3

BASE MODEL HAS BEEN MODIFIED TO REFLECT POSSIBLE FLOW DIVERSIONS NEAR
RAWHIDE WASH APEX, PINNACLE PEAK (DESERT HIGHLANDS), & PINNACLE PEAK
COUNTRY CLUB

MINOR D.A. DELINEATION ADJUSTMENTS HAVE ALSO BEEN MADE FOR
SUB-BASINS 6, 6.1, 11, 12, 13, 14, 14.1, 15, 16, 17, 18, 19, 21, 24,
25, 26, 27, 28, 29, 29.1, 31, 32, 33, 33.1
34, 35, 36, 37, 38, 38.1, 39, 43, 44, 53, 53.1.
SUB-BASINS 26A, 35L, 35N, 35S, 36L, 36R HAVE BEEN ADDED.

SUB-BASINS 7, 8, 9, 10, 10.1, 35, & 36 HAVE BEEN SPLIT TO ALLOW A BETTER
D.A. DELINEATION FOR CAP DIKES 1, 2, & 3.

CURVE NUMBER & CHANNEL ROUTING ADJUSTMENTS HAVE BEEN MADE TO ACCOMODATE
THE SUB-BASIN REVISIONS LISTED ABOVE.

100-YR, 24-HR STORM, USING SCS TYPE IIA RAINFALL DISTRIBUTION
RAINFALL FROM NOAA ATLAS, USING 25 SQ MI AREAL REDUCTION FACTOR (.968)

FUTURE LAND-USE DENSITIES FROM OCT 1987 GENERAL PLAN, BRW PLANS, AND
THE TONTO FOOTHILLS PLAN, IMPERVIOUS COVER FOR SCOTTSDALE AREAS HAS
BEEN ADJUSTED TO REFLECT NAOS REQUIREMENTS FOR RESIDENTIAL LAND-USE

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

 IT        HYDROGRAPH TIME DATA
             NMIN         5  MINUTES IN COMPUTATION INTERVAL
            IDATE    28APR90  STARTING DATE
            ITIME       0000  STARTING TIME
               NQ        300  NUMBER OF HYDROGRAPH ORDINATES
           NDDATE    29APR90  ENDING DATE
           NDTIME       0055  ENDING TIME

          COMPUTATION INTERVAL     .08 HOURS
             TOTAL TIME BASE   24.92 HOURS

     ENGLISH UNITS
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1

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

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT	SUB1	402.	6.17	56.	18.	17.	.34		
+	HYDROGRAPH AT	SUB2	1055.	6.33	266.	83.	80.	1.22		
+	HYDROGRAPH AT	SUB3	437.	6.33	108.	34.	33.	.54		
+	3 COMBINED AT	CP4	1830.	6.25	429.	135.	130.	2.10		
+	HYDROGRAPH AT	SUB4	2049.	6.58	677.	217.	209.	3.61		
+	HYDROGRAPH AT	SUB5	2379.	6.67	1024.	332.	320.	5.48		
+	HYDROGRAPH AT	SUB6	3464.	6.58	1782.	583.	561.	8.55		
+	HYDROGRAPH AT	6.1	4160.	6.17	1951.	638.	615.	9.41		
+	HYDROGRAPH AT	SUB7A	203.	6.17	25.	8.	8.	.14		
+	HYDROGRAPH AT	SUB8A	432.	6.33	123.	39.	38.	.70		
+	HYDROGRAPH AT	SUB9A	871.	6.25	298.	95.	92.	1.59		
+	HYDROGRAPH AT	SUB10A	1045.	6.67	491.	159.	153.	2.42		
+	HYDROGRAPH AT	10.1A	1143.	6.75	597.	195.	188.	3.02		
+	HYDROGRAPH AT	1470	507.	6.17	78.	24.	23.	.30		
+	HYDROGRAPH AT	1475	3520.	6.17	552.	169.	163.	1.99		
+	HYDROGRAPH AT	1480	4923.	6.17	813.	249.	239.	2.99		
+	DIVERSION TO	1481	0.	6.17	0.	0.	0.	2.99		
+	HYDROGRAPH AT	1482	4923.	6.17	813.	249.	239.	2.99		
+	HYDROGRAPH AT	3660	3237.	6.67	926.	290.	279.	3.74		

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      HYDROGRAPH AT
+                3670   3185.   7.00     1185.     378.     364.     5.18

      HYDROGRAPH AT
+                3680   3263.   7.25     1637.     527.     508.     7.43

      HYDROGRAPH AT
+                3690   3541.   6.42     1879.     610.     587.     8.91

      HYDROGRAPH AT
+                3620    496.   6.42      129.      41.      39.      .69

      HYDROGRAPH AT
+                3630   1021.   6.17      296.      94.      90.     1.52

      HYDROGRAPH AT
+                3640   1994.   6.17      622.     197.     190.     3.15

      HYDROGRAPH AT
+                3650   2049.   6.67      809.     260.     251.     4.32

      4 COMBINED AT
+                 1IN  10388.   6.58     5235.    1703.    1640.    25.66

      ROUTED TO
+               DIKE1      0.    .08        0.       0.       0.    25.66
+                                                                 1535.77     24.92

      HYDROGRAPH AT
+               SUB7B    426.   6.42       96.      31.      29.      .53

      HYDROGRAPH AT
+                 11A    321.   6.17       50.      16.      15.      .32

      2 COMBINED AT
+                 8.1    697.   6.25      146.      46.      45.      .85

      HYDROGRAPH AT
+               SUB8B    855.   6.58      284.      92.      88.     1.71

      HYDROGRAPH AT
+               SUB9B   1091.   6.58      471.     153.     147.     2.58

      HYDROGRAPH AT
+              SUB10B   1558.   6.58      752.     246.     237.     4.02

      HYDROGRAPH AT
+               10.1B   1794.   6.67      918.     302.     291.     4.92

      HYDROGRAPH AT
+                 11B    333.   6.17       42.      13.      13.      .25

      HYDROGRAPH AT
+               SUB12   1362.   6.17      277.      87.      83.     1.36

      HYDROGRAPH AT
+               SUB13   1831.   6.33      544.     171.     164.     2.56

      HYDROGRAPH AT
+               SUB14   2212.   6.58      871.     275.     265.     3.95

      HYDROGRAPH AT
+                 14.1  2317.   6.75     1004.     319.     307.     4.56
```

	HYDROGRAPH AT						
+	SUB16	2476.	6.08	317.	97.	94.	1.46
	HYDROGRAPH AT						
+	SUB17	2003.	6.08	257.	79.	76.	1.19
	HYDROGRAPH AT						
+	SUB18	2319.	6.08	269.	83.	80.	1.26
	3 COMBINED AT						
+	CP19A	6799.	6.08	843.	260.	250.	3.91
	ROUTED TO						
+	CP19B	6528.	6.17	843.	260.	250.	3.91
	HYDROGRAPH AT						
+	SUB15	1533.	6.17	275.	86.	83.	1.37
	2 COMBINED AT						
+	CP19C	8060.	6.17	1118.	346.	333.	5.28
	HYDROGRAPH AT						
+	SUB19	8079.	6.17	1159.	359.	345.	5.46
	HYDROGRAPH AT						
+	SUB20	1019.	6.08	123.	38.	37.	.57
	2 COMBINED AT						
+	CP21	9051.	6.17	1282.	396.	382.	6.03
	HYDROGRAPH AT						
+	SUB21	5879.	6.67	1908.	610.	588.	9.70
	HYDROGRAPH AT						
+	SUB22	2676.	6.08	303.	93.	90.	1.39
	HYDROGRAPH AT						
+	SUB23	733.	6.08	87.	27.	26.	.39
	2 COMBINED AT						
+	CP24	3409.	6.08	389.	120.	115.	1.78
	HYDROGRAPH AT						
+	SUB24	3684.	6.17	478.	147.	142.	2.27
	HYDROGRAPH AT						
+	SUB25	2506.	6.17	349.	107.	103.	1.52
	2 COMBINED AT						
+	CP26	6190.	6.17	826.	254.	245.	3.79
	HYDROGRAPH AT						
+	SUB26	6214.	6.17	866.	267.	257.	4.01
	DIVERSION TO						
+	26.2	3107.	6.17	433.	134.	129.	4.01
	HYDROGRAPH AT						
+	26.1	3107.	6.17	433.	134.	129.	4.01
	ROUTED TO						
+	21.1	2718.	6.33	427.	133.	128.	4.01
	2 COMBINED AT						
+	CP27	7564.	6.50	2335.	743.	716.	13.71

	HYDROGRAPH AT						
+	26.2	3107.	6.17	433.	134.	129.	.00
	HYDROGRAPH AT						
+	SUB26A	3255.	6.33	518.	162.	156.	.53
	2 COMBINED AT						
+	27.1	10182.	6.42	2853.	905.	871.	14.24
	HYDROGRAPH AT						
+	SUB27	10264.	6.50	2947.	938.	903.	14.87
	HYDROGRAPH AT						
+	SUB28	9433.	6.83	3218.	1051.	1012.	16.46
	HYDROGRAPH AT						
+	SUB29	7643.	7.50	3352.	1143.	1101.	18.26
	HYDROGRAPH AT						
+	29.1	7490.	7.83	3446.	1210.	1165.	19.65
	HYDROGRAPH AT						
+	SUB30	1948.	6.17	279.	86.	83.	1.33
	HYDROGRAPH AT						
+	34R	977.	6.08	116.	36.	35.	.64
	2 COMBINED AT						
+	31.1	2903.	6.17	395.	122.	118.	1.97
	HYDROGRAPH AT						
+	SUB31	2813.	6.33	625.	197.	190.	3.36
	HYDROGRAPH AT						
+	35N	946.	6.08	102.	31.	30.	.41
	DIVERSION TO						
+	35N1	378.	6.08	41.	12.	12.	.41
	HYDROGRAPH AT						
+	35N2	568.	6.08	61.	19.	18.	.41
	ROUTED TO						
+	35L1	476.	6.17	61.	18.	18.	.41
	HYDROGRAPH AT						
+	35L	685.	6.25	124.	39.	37.	.65
	2 COMBINED AT						
+	35L2	1159.	6.25	185.	57.	55.	1.06
	HYDROGRAPH AT						
+	36L	1175.	6.42	280.	88.	85.	1.64
	DIVERSION TO						
+	36T	387.	6.42	41.	10.	10.	1.64
	HYDROGRAPH AT						
+	36V	787.	6.42	239.	78.	75.	1.64
	2 COMBINED AT						
+	32.1	3576.	6.33	864.	275.	265.	5.00
	HYDROGRAPH AT						

1474

+	SUB32	3469.	6.67	1033.	333.	320.	6.02	
	HYDROGRAPH AT							
+	SUB33	3251.	7.00	1270.	414.	399.	7.12	
	HYDROGRAPH AT							
+	33.1	3200.	7.33	1452.	476.	459.	7.90	
	4 COMBINED AT							
+	2IN	13250.	7.67	6771.	2308.	2223.	37.03	
	ROUTED TO							
+	DIKE2	0.	.08	0.	0.	0.	37.03	
+							1539.58	24.92
	HYDROGRAPH AT							
+	35N1	378.	6.08	41.	12.	12.	.00	
	HYDROGRAPH AT							
+	35R	650.	6.25	121.	38.	37.	.45	
	HYDROGRAPH AT							
+	36R	1056.	6.17	242.	76.	74.	1.10	
	HYDROGRAPH AT							
+	36T	387.	6.42	41.	10.	10.	.00	
	2 COMBINED AT							
+	36R1	1324.	6.33	284.	87.	84.	1.10	1204
	HYDROGRAPH AT							
+	SUB37	1695.	6.42	487.	152.	146.	2.25	
	HYDROGRAPH AT							
+	SUB38	2589.	6.17	818.	256.	246.	3.48	
	HYDROGRAPH AT							
+	38.1	3490.	6.17	1155.	361.	347.	4.49	
	HYDROGRAPH AT							
+	SUB39	4477.	6.08	489.	149.	143.	1.93	
	HYDROGRAPH AT							
+	SUB40	1343.	6.08	132.	40.	39.	.58	
	2 COMBINED AT							
+	CP41	5821.	6.08	622.	189.	182.	2.51	
	HYDROGRAPH AT							
+	SUB41	6325.	6.17	775.	236.	227.	3.31	
	HYDROGRAPH AT							
+	SUB42	1252.	6.08	126.	39.	37.	.58	
	HYDROGRAPH AT							
+	SUB43	2512.	6.08	255.	77.	75.	1.07	
	HYDROGRAPH AT							
+	SUB44	1951.	6.08	198.	60.	58.	.84	
	2 COMBINED AT							
+	CP45	4463.	6.08	453.	138.	132.	1.91	2337
	HYDROGRAPH AT							
+	SUB45	4602.	6.08	498.	151.	146.	2.11	

	HYDROGRAPH AT							
+	SUB45A	425.	6.08	43.	13.	12.	.17	
	HYDROGRAPH AT							
+	SUB46	2271.	6.08	230.	69.	66.	.93	
	3 COMBINED AT							
+	CP47	7298.	6.08	771.	233.	224.	3.21	2274
	HYDROGRAPH AT							
+	SUB47	7150.	6.17	870.	263.	253.	3.58	
	3 COMBINED AT							
+	CP48	14513.	6.17	1769.	537.	517.	7.47	1943
	HYDROGRAPH AT							
+	SUB48	14273.	6.17	1774.	539.	519.	7.52	
	HYDROGRAPH AT							
+	SUB50	824.	6.08	81.	25.	24.	.36	
	2 COMBINED AT							
+	CP51	14935.	6.17	1855.	563.	543.	7.88	1895
	DIVERSION TO							
+	2003	14935.	.08	1855.	563.	543.	7.88	
	HYDROGRAPH AT							
+	2004	0.	.08	0.	0.	0.	7.88	
	HYDROGRAPH AT							
+	SUB49	713.	6.08	68.	21.	20.	.35	
	2 COMBINED AT							
+	49.1	713.	6.08	68.	21.	20.	8.23	
	HYDROGRAPH AT							
+	SUB51	1120.	6.25	232.	74.	72.	9.30	
	HYDROGRAPH AT							
+	SUB52	1326.	6.58	435.	143.	138.	10.65	125
	HYDROGRAPH AT							
+	SUB53	1812.	6.58	825.	273.	263.	12.28	148
	HYDROGRAPH AT							
+	53.1	2698.	6.25	1255.	417.	402.	13.75	
	2 COMBINED AT							338
+	3IN	6170.	6.17	2410.	778.	749.	18.24	
	ROUTED TO							
+	DIKE3	0.	.08	0.	0.	0.	18.24	
+							1527.81	24.92

SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION DIKE1

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1518.00	1550.20	1552.00
STORAGE	0.	15900.	18145.
OUTFLOW	0.	0.	700.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1535.77	.00	3377.	0.	.00	.00	.00

SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION DIKE2

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1514.00	1550.00	1550.20
STORAGE	0.	11834.	12000.
OUTFLOW	0.	0.	26.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1539.58	.00	4576.	0.	.00	.00	.00

1 SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION DIKE3

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1504.00	1541.00	1542.00
STORAGE	0.	6032.	6484.
OUTFLOW	0.	0.	290.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1527.81	.00	1542.	0.	.00	.00	.00

*** NORMAL END OF HEC-1 ***
^Z

FILE: CAP4.24I

(100-Year, 24-Hour, SCS Type IIA Storm)

Existing watershed drainage pattern with future land-use impervious cover. Includes drainage area contributing to CAP Dike 4. All flows from Reata Pass are assumed to be diverted to CAP Dike 4.

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

  1       ID      GENERAL DRAINAGE PLAN FOR NORTH SCOTTSDALE
  2       ID      FUTURE LAND USE CONDITIONS WITH EXISTING DRAINAGE PATTERN
  3       ID      MODEL GN40.24I + GN50.24I -- SUB-BASIN SERIES 2000 TO 2230 & 39 TO 53
  4       ID                      SUB-BASIN SERIES 2240 TO 2340
  5       ID
  6       ID      THIS IS MODEL CAP4.24I THAT IS USED TO DETERMINE THE MAXIMUM WATER
  7       ID      SURFACE ELEVATION BEHIND CAP DIKE NO. 4, WITH NO UPSTREAM DRAIANGE
  8       ID      IMPROVEMENTS IN-PLACE.
  9       ID      SUB 2125 HAS BEEN ADDED
 10       ID
 11       ID      100-YEAR, 24-HOUR STORM, USING SCS TYPE IIA RAINFALL DISTRIBUTION
 12       ID      RAINFALL FROM NOAA ATLAS, USING 25 SQ MI AREAL REDUCTION FACTOR
 13       ID
 14       ID      LAND USE DENSITIES FROM GENERAL PLAN & TONTO FOOTHILLS PLAN.
 15       ID      PERCENT OF IMPERVIOUS COVER HAS BEEN MODIFIED (5/90) TO REFLECT CITY OF
 16       ID      SCOTTSDALE NAOS REQUIREMENTS.
 17       ID
 18       ID      100% OF THE REATA PASS FAN FLOW IS ROUTED TO CAP DIKE NO.4
 19       ID
 20       ID
 21       ID      STAGE/STORAGE DATA IS TAKEN FROM BUREC MEMO DATED SEPT 29, 1987
 22       ID
 23       ID      ----------------------------------------------------------------
 24       IT      5 27FEB88      0    300
 25       IO      5      0
 26       IN     30 27FEB88      0
         *DIAGRAM

 27       KK  SUB39
 28       KM      RUNOFF FROM SUB-BASIN 39
 29       BA  1.9422
 30       PB   4.25
 31       PC     0   .005   .009   .010   .013   .019   .021   .028   .032   .044
 32       PC  .057   .100   .660   .745   .776   .800   .816   .830   .840   .850
 33       PC  .861   .868   .878   .884   .891   .900   .905   .912   .919   .923
 34       PC  .930   .934   .939   .944   .950   .958   .961   .963   .969   .971
 35       PC  .974   .979   .981   .985   .989   .991   .993   .996  1.000
 36       LS          85   23.40
 37       UK   330  .0433    .20    100
 38       RK  11240  .0253   .045          TRAP     30      3

 39       KK  SUB40
 40       KM      RUNOFF FROM SUB-BASIN 40
 41       BA  .5844
 42       LS          83     9.9
 43       UK   160  .0627    .20    100
 44       RK  7000  .0350   .045          TRAP     20      3

 45       KK  CP41
 46       KM      COMBINE HYDROGRAPHS SUB39 & SUB40
 47       HC      2
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  48      KK  SUB41
  49      KM      RUNOFF FROM SUB-BASIN 41 & ROUTE CP 41
  50      BA  .7911
  51      LS          74   10.1
  52      UK   280  .2386   .20   100
  53      RK  9400  .0282  .045        TRAP    50     3    YES

  54      KK  SUB42
  55      KM      RUNOFF FROM SUB-BASIN 42
  56      BA  .5844
  57      LS          78   23.3
  58      UK   280  .2386   .20   100
  59      RK  8750  .0573  .045        TRAP    20     3

  60      KK  SUB43
  61      KM      RUNOFF FROM SUB-BASIN 43
  62      BA 1.0708
  63      LS          85   10.5
  64      UK   260  .0515   .20   100
  65      RK  7400  .0255  .045        TRAP    25     3

  66      KK  SUB44
  67      KM      RUNOFF FROM SUB-BASIN 44
  68      BA  .8537
  69      LS          85    8.1
  70      UK   260  .0515   .20   100
  71      RK  9840  .0622  .045        TRAP    25     3

  72      KK  CP45
  73      KM      COMBINE HYDROGRAPHS SUB43 & SUB44
  74      HC    2

  75      KK  SUB45
  76      KM      RUNOFF FROM SUB-BASIN 45 & ROUTE CP 45
  77      BA  .2037
  78      LS          81   14.5
  79      UK   125  .1166   .20   100
  80      RK  3600  .0366  .045        TRAP    30     3    YES

  81      KK  SUB45A
  82      KM      RUNOFF FROM SUB 45A
  83      BA  .1720
  84      LS          86    6.9
  85      UK   275  .2200   .20   100
  86      RK  5400  .0411  .045        TRAP    15     3

  87      KK  SUB46
  88      KM      RUNOFF FROM SUB-BASIN 46
  89      BA  .9268
  90      LS          86    3.7
  91      UK   265  .4958   .20   100
  92      RK  3300  .2271  .045  .111  TRAP    10     3
  93      RK  7100  .0535  .045        TRAP    25     3
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  94      KK   CP47
  95      KM       COMBINE HYDROGRAPHS SUB45, SUB45A, & SUB46
  96      HC     3

  97      KK   SUB47
  98      KM       RUNOFF FROM SUB-BASIN 47 & ROUTE CP 47
  99      BA   .3757
 100      LS           77     8.6
 101      UK    375  .1000    .20     100
 102      RK   9600  .0217    .045          TRAP     50      3     YES

 103      KK   CP48
 104      KM       COMBINE HYDROGRAPHS SUB41, SUB42, & SUB47
 105      HC     3

 106      KK   SUB48
 107      KM       RUNOFF FROM SUB-BASIN 48 & ROUTE CP 48
 108      BA   .0438
 109      LS           73     6.9
 110      UK    150  .0733    .20     100
 111      RK   1300  .0338    .045          TRAP     75      3     YES

 112      KK   SUB50
 113      KM       RUNOFF FROM SUB-BASIN 50
 114      BA   .3580
 115      LS           84     2.8
 116      UK    300  .3555    .20     100
 117      RK    730  .1506    .045    .036  TRAP     10      3
 118      RK   6400  .0453    .045          TRAP     25      3

 119      KK   CP51
 120      KM       COMBINE HYDROGRAPHS SUB48 & SUB50
 121      HC     2

 122      KK   2004     DIV
 123      KM       DIVERT FLOW TO SUB 2005
 124      KM       THIS DIVERT OCCURS AT A BRAIDED CHANNEL BIFURCATION LOCATED 1000 FEET
 125      KM       SOUTH OF THE EAST END OF PINNACLE PEAK ROAD.
 126      KM       THIS IS AN ACTIVE ALLUVIAL FAN APEX.
 127      DT   2003
 128      DI     0  15000
 129      DQ     0  15000

 130      KK   SUB49
 131      KM       RUNOFF FROM SUB-BASIN 49
 132      BA   .3528
 133      LS           79     6.9
 134      UK    135  .0758    .20     100
 135      RK   5400  .0370    .045          TRAP     30      3
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  136     KK   49.1     CP
  137     KM       COMBINE SUB 49 WITH NON-DIVERTED FLOW FROM DIV 2004
  138     HC     2

  139     KK   SUB51
  140     KM       RUNOFF FROM SUB-BASIN 51 & ROUTE CP 49.1
  141     BA  1.0675
  142     LS           72   12.90
  143     UK     94  .0213    .10    100
  144     RK   6400  .0329   .045          TRAP   1500      2    YES

  145     KK   SUB52
  146     KM       RUNOFF FROM SUB-BASIN 52 & ROUTE SUB 51
  147     BA  1.3557
  148     LS           71    17.2
  149     UK     76  .0213    .10    100
  150     RK   6633  .0300   .045          TRAP   2500      2    YES

  151     KK   SUB53
  152     KM       RUNOFF FROM SUB-BASIN 53 & ROUTE SUB 52
  153     BA  1.7471
  154     LS           74    58.5
  155     UK     67  .0213    .10    100
  156     RK   7767  .0196   .045          TRAP   3500      2    YES

  157     KK   2000     SUB
  158     KM       RUNOFF FROM SUB 2000
  159     KM       RAINFALL AMOUNT IS CHANGED TO REFLECT TRANSITION INTO A DIFFERENT
  160     KM       GEOGRAPHICAL AREA
  161     BA  .7999
  162     PB   4.15
  163     PC     0   .005   .009   .010   .013   .019   .021   .028   .032   .044
  164     PC   .057   .100   .660   .745   .776   .800   .816   .830   .840   .850
  165     PC   .861   .868   .878   .884   .891   .900   .905   .912   .919   .923
  166     PC   .930   .934   .939   .944   .950   .958   .961   .963   .969   .971
  167     PC   .974   .979   .981   .985   .989   .991   .993   .996  1.000
  168     LS           84     2.6
  169     UK    400  .2750    .25    100
  170     RK   2625  .0785   .045   .072   TRAP     10      3
  171     RK   2300  .0217   .045          TRAP     25      3

  172     KK   2010     SUB
  173     KM       RUNOFF FROM SUB 2010 & ROUTE SUB 2000
  174     BA  .0933
  175     LS           83     3.7
  176     UK    800  .6425    .30    100
  177     RK   3000  .0213   .045          TRAP     50      3    YES

  178     KK   2003     RET
  179     KM       RETRIEVE DIVERTED FLOW FROM DIV 2004
  180     DR   2003
```

1

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

  181     KK   2005    SUB
  182     KM       RUNOFF FROM 2005 & ROUTE RET 2003
  183     BA  .1363
  184     LS           72    6.70
  185     UK    175  .1400    .15     100
  186     RK   2600  .0385    .045          TRAP    750     2    YES

  187     KK   2011     CP
  188     KM       ROUTE SUB 2005 TO CP 2011
  189     RK   2200  .0213    .045          TRAP     50     3

  190     KK   2012     CP
  191     KM       COMBINE SUB 2010 & CP 2011
  192     HC      2

  193     KK   2015    SUB
  194     KM       RUNOFF FROM SUB 2015 & ROUTE CP 2012
  195     BA  .4053
  196     LS           78    11.4
  197     UK    500  .2800    .25     100
  198     RK   2400  .1358    .045    .061   TRAP     10     3
  199     RK   4700  .0304    .045          TRAP     60    20    YES

  200     KK   2020    SUB
  201     KM       RUNOFF FROM SUB 2020
  202     BA  .1090
  203     LS           85    4.05
  204     UK    205  .6969    .30     100
  205     RK    900  .3889    .045    .011   TRAP     10     3
  206     RK   2800  .1428    .045          TRAP     20     3

  207     KK   2016     CP
  208     KM       ROUTE SUB 2020 TO CP 2016
  209     RK   1400  .0343    .045          TRAP     20     3

  210     KK   2017     CP
  211     KM       COMBINE SUB 2015 & CP 2016
  212     HC      2

  213     KK   2030    SUB
  214     KM       RUNOFF FROM SUB 2030 & ROUTE CP 2017
  215     BA  .2346
  216     LS           67    29.9
  217     UK    155  .0614    .15     100
  218     RK   3555  .0355    .045    .047   TRAP     10    10
  219     RK   2900  .0262    .045          TRAP     60    20    YES

  220     KK   2040    SUB
  221     KM       RUNOFF FROM SUB 2040
  222     BA  .9290
  223     LS           82    8.3
  224     UK    463  .4072    .25     100
  225     RK   2700  .1878    .045    .056   TRAP     10     3
  226     RK   6800  .0485    .045          TRAP     25     3
1
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  227     KK   2050    SUB
  228     KM       RUNOFF FROM SUB 2050
  229     BA  .8580
  230     LS           81    9.8
  231     UK    530  .5726    .25    100
  232     RK   3400  .2067    .045   .086   TRAP    10     3
  233     RK   6200  .0693    .045          TRAP    25     5

  234     KK   2051     CP
  235     KM       COMBINE SUB 2040 & SUB 2050
  236     HC     2

  237     KK   2060    SUB
  238     KM       RUNOFF FROM SUB 2060 & ROUTE CP 2051
  239     BA  .1542
  240     LS           77   17.80
  241     UK    217  .1667    .20    100
  242     RK   2275  .0929    .045   .031   TRAP    10     5
  243     RK   2400  .0321    .055          TRAP    30    15    YES

  244     KK   2070    SUB
  245     KM       RUNOFF FROM SUB 2070
  246     BA 1.4649
  247     LS           84    4.05
  248     UK    400  .5174    .30    100
  249     RK   1750  .2962    .045   .048   TRAP     5     3
  250     RK   3500  .1236    .045   .483   TRAP    10     3
  251     RK   3400  .0882    .045          TRAP    30    10

  252     KK   2071    DIV
  253     KM       DIVERT FLOW FROM SUB 2070 TO SUB 2130
  254     DT   2072
  255     DI      0   6000
  256     DQ      0   4000

  257     KK   2065    SUB
  258     KM       RUNOFF FROM SUB 2065 & ROUTE NON-DIVERTED FLOW FROM DIV 2071
  259     BA  .1664
  260     LS           73   31.50
  261     UK    200  .0500    .20    100
  262     RK   6800  .0471    .055          TRAP    30    15    YES

  263     KK   2072    RET
  264     KM       RETRIEVE DIVERTED FLOW FROM DIV 2071
  265     DR   2072

  266     KK   2131     CP
  267     KM       ROUTE RET 2072 TO CP 2131
  268     RK   3600  .0555    .045          TRAP   200     1
1
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  269     KK   2130    SUB
  270     KM        RUNOFF FROM SUB 2130
  271     BA  .2992
  272     LS            83     7.1
  273     UK    267  .3126    .20     100
  274     RK   9240  .0941    .045          TRAP     30     20

  275     KK   2132     CP
  276     KM        COMBINE SUB 2130 & CP 2131
  277     HC      2

  278     KK   2133    DIV
  279     KM        DIVERT FLOW TO SUB 2135
  280     DT   2134
  281     DI      0    500    1000    6000
  282     DQ      0    500     850    4350

  283     KK   2066     CP
  284     KM        ROUTE NON-DIVERTED FLOW FROM DIV 2133 TO CP 2066
  285     RK   2850  .0421    .045          TRAP     30     15

  286     KK   2067     CP
  287     KM        COMBINE SUB 2060, SUB 2065, & CP 2066
  288     HC      3

  289     KK   2080    SUB
  290     KM        RUNOFF FROM SUB 2080 & ROUTE CP 2067
  291     BA  .1363
  292     LS            68    32.1
  293     UK    175  .0571    .15     100
  294     RK   4000  .0325    .045          TRAP     30     15     YES

  295     KK   2081     CP
  296     KM        COMBINE SUB 2030 & SUB 2080
  297     HC      2

  298     KK   2090    SUB
  299     KM        RUNOFF FROM SUB 2090 & ROUTE CP 2081
  300     BA  .3659
  301     LS            71   24.94
  302     UK    140  .0285    .15     100
  303     RK   9400  .0212    .045          TRAP    200    150     YES

  304     KK   2100    SUB
  305     KM        RUNOFF FROM SUB 2100
  306     BA  .3795
  307     LS            73   24.00
  308     UK    140  .0285    .15     100
  309     RK  14600  .0260    .045          TRAP    100     25
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1

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

  310     KK   2101     CP
  311     KM       COMBINE SUB 2090 & SUB 2100
  312     HC     2

  313     KK   2110    SUB
  314     KM       RUNOFF FROM SUB 2110 & ROUTE CP 2101
  315     BA  .5180
  316     LS           74   26.2
  317     UK    200  .0286    .15    100
  318     RK   5400  .0129   .045          TRAP    200    200    YES

  319     KK   2120    SUB
  320     KM       RUNOFF FROM SUB 2120
  321     BA 1.4255
  322     LS           74   28.5
  323     UK    115  .0383    .15    100
  324     RK  20800  .0234   .045          TRAP    150     50

  325     KK   2134    RET
  326     KM       RETIEVE DIVERTED FLOW FROM DIV 2133
  327     DR   2134

  328     KK   2135    SUB
  329     KM       RUNOFF FROM SUB 2135 & ROUTE RET 2134
  330     BA  .1169
  331     LS           86   19.3            74   19.3
  332     UK    800  .4000    .30     40
  333     UK    200  .0500    .15     60
  334     RK   2700  .0444   .045          TRAP     20      2    YES

  335     KK   2140    SUB
  336     KM       RUNOFF FROM SUB 2140 & ROUTE SUB 2135
  337     BA  .1923
  338     LS           74   32.1
  339     UK    200  .0500    .15    100
  340     RK   5300  .0415   .045          TRAP     20     10    YES

  341     KK   2150    SUB
  342     KM       RUNOFF FROM SUB 2150
  343     BA  .6873
  344     LS           86   15.00           74   15.00
  345     UK    350  .3428    .30     50
  346     UK    180  .0555    .15     50
  347     RK   1785  .1313   .045   .027   TRAP     10      3
  348     RK   6400  .0312   .045          TRAP     20     10

  349     KK   2151     CP
  350     KM       COMBINE SUB 2140 & SUB 2150
  351     HC     2
1
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

352       KK   2160    SUB
353       KM        RUNOFF FROM SUB 2160 & ROUTE CP 2151
354       BA  .9871
355       LS            74   33.8
356       UK    337  .0324    .15    100
357       RK   3775  .0276    .045   .059   TRAP     5     3
358       RK  10600  .0170    .045          TRAP    20    10    YES

359       KK   2170    SUB
360       KM        RUNOFF FROM SUB 2170
361       BA  .4634
362       LS            74   26.3
363       UK    250  .0266    .15    100
364       RK  12500  .0280    .045          TRAP    15    10

365       KK   2180    SUB
366       KM        RUNOFF FROM SUB 2180
367       BA 1.0044
368       LS            86    2.1
369       UK    468  .4496    .30    100
370       RK   3100  .2558    .045   .121   TRAP    10     3
371       RK   8200  .0731    .045          TRAP    20     5

372       KK   2190    SUB
373       KM        RUNOFF FROM SUB 2190 & ROUTE SUB 2180
374       BA  .1227
375       LS            79   16.7
376       UK    190  .0915    .15    100
377       RK   4100  .0390    .045          TRAP    30    10    YES

378       KK   2200    SUB
379       KM        RUNOFF FROM SUB 2200
380       BA  .2532
381       LS            81    7.7
382       UK    353  .1529    .20    100
383       RK   6150  .0838    .045          TRAP     5    11

384       KK   2210    SUB
385       KM        RUNOFF FROM SUB 2210
386       BA 1.7763
387       LS            82    2.9
388       UK    248  .3717    .30    100
389       RK   4500  .1875    .045   .107   TRAP    10     3
390       RK  10000  .0490    .045          TRAP    20    10

391       KK   2211    CP
392       KM        COMBINE SUB 2190, SUB 2200, & SUB 2210
393       HC      3
1
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

394       KK   2220    SUB
395       KM       RUNOFF FROM SUB 2220 & ROUTE CP 2211
396       BA  .5660
397       LS           74   16.5
398       UK    200  .0500    .15    100
399       RK   3800  .0326   .045   .057   TRAP     5     3
400       RK   7800  .0179   .045          TRAP    30    10    YES

401       KK   2230    SUB
402       KM       RUNOFF FROM SUB 2230
403       BA  .3293
404       LS           74   25.3
405       UK    200  .0500    .15    100
406       RK  10000  .0380   .050          TRAP    10     1

407       KK   2221     CP
408       KM       ROUTE SUB 2230 TO CP 2221
409       RK   1200  .0167   .045          TRAP    30    10

410       KK   2222     CP
411       KM       COMBINE SUB 2220 & CP 2221
412       HC      2

413       KK   2171     CP
414       KM       COMBINE SUB 2120, SUB 2110, SUB2160, SUB2170, & CP 2222
415       KM       THIS WILL BE THE TOTAL INFLOW TO CAP DIKE NO.4 FROM MODEL GN40.24I
416       HC      5
          *    *********** BRING IN MODEL GN40.24I*************************************
          *

417       KK   2240    SUB
418       KM       RUNOFF FROM SUB 2240
419       BA  .6033
420       PB   4.15
421       PC      0   .005   .009   .010   .013   .019   .021   .028   .032   .044
422       PC   .057   .100   .660   .745   .776   .800   .816   .830   .840   .850
423       PC   .861   .868   .878   .884   .891   .900   .905   .912   .919   .923
424       PC   .930   .934   .939   .944   .950   .958   .961   .963   .969   .971
425       PC   .974   .979   .981   .985   .989   .991   .993   .996  1.000
426       LS           74   25.8
427       UK    200  .0500    .15    100
428       RK   9600  .0354   .045          TRAP     8    10

429       KK   2260    SUB
430       KM       RUNOFF FROM SUB 2260
431       BA  .2647
432       LS           76   20.9
433       UK    200  .0500    .15    100
434       RK  11130  .0500   .045          TRAP     8    10
```

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

435         KK   2255    SUB
436         KM       RUNOFF FROM SUB 2255
437         BA  .2955
438         LS           86  14.60            74   14.60
439         UK    465  .6014    .25     40
440         UK    350  .0628    .15     60
441         RK   1360  .1536   .045   .030   TRAP     5     3
442         RK   4400  .0386   .045          TRAP    10     3

443         KK   2270    SUB
444         KM       RUNOFF FROM SUB 2270
445         BA  .9714
446         LS           86   12.5            74    12.5
447         UK    270  .5185    .30     40
448         UK    300  .2000    .15     60
449         RK   3120  .1137   .045   .097   TRAP    10     3
450         RK   4500  .0333   .045          TRAP    15     3

451         KK   2271     CP
452         KM       COMBINE SUB 2255 & SUB 2270
453         HC      2

454         KK   2250    SUB
455         KM       RUNOFF FROM SUB 2250 & ROUTE CP 2271
456         BA  .2239
457         LS           82   18.40
458         UK    130  .1696    .15    100
459         RK   1625  .0867   .045   .027   TRAP     5     3
460         RK   4000  .0200   .045          TRAP    30     5    YES

461         KK   2251     CP
462         KM       COMBINE SUB 2250 & SUB 2260
463         HC      2

464         KK   2280    SUB
465         KM       RUNOFF FROM SUB 2280 & ROUTE CP 2251
466         BA  .1808
467         LS           75    18.1
468         UK    300  .0300    .15    100
469         RK   3200  .0187   .045          TRAP    35     5    YES

470         KK   2290    SUB
471         KM       RUNOFF FROM SUB 2290
472         BA  .6005
473         LS           82   13.90
474         UK    300  .0499    .15    100
475         RK   9000  .0367   .045          TRAP    10     4

476         KK   2300    SUB
477         KM       RUNOFF FROM SUB 2300
478         BA 1.8007
479         LS           84     1.9
480         UK    303  .4881    .30    100
481         RK   1310  .2150   .045   .047   TRAP     5     1
```

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

482       RK   2928  .1451   .045   .306   TRAP    10     3
483       RK   9600  .0577   .045          TRAP    75    10

484       KK   2301    DIV
485       KM       DIVERT FLOW AT FAN APEX TO SUB 2330
486       DT   2302
487       DI      0   6000
488       DQ      0   3000

489       KK   2310    SUB
490       KM       RUNOFF FROM SUB 2310 & ROUTE NON-DIVERTED FLOW FROM DIV 2301
491       BA  .3035
492       LS           81   11.2
493       UK    200  .0550   .15   100
494       RK  10300  .0446   .045          TRAP    30     3    YES

495       KK   2320    SUB
496       KM       RUNOFF FROM SUB 2320
497       BA  .3723
498       LS           79   14.0
499       UK    200  .0500   .15   100
500       RK   7200  .0416   .045          TRAP    15     3

501       KK   2321    CP
502       KM       COMBINE SUB 2240, SUB 2280, SUB 2290, SUB 2310, & SUB 2320
503       HC      5

504       KK   2302    RET
505       KM       RETRIEVE DIVERTED FLOW FROM DIV 2301 (SUB 2300)
506       DR   2302

507       KK   2331    CP
508       KM       ROUTE DIVERTED FLOW FROM SUB 2300 TO CP 2331
509       RK   3600  .0472   .045          TRAP    30     3

510       KK   2330    SUB
511       KM       RUNOFF FROM SUB 2330
512       BA  .4807
513       LS           82    6.0
514       UK    352  .3911   .25   100
515       RK   1920  .2283   .045   .048   TRAP    10     3
516       RK   5760  .0738   .045          TRAP    30     3

517       KK   2332    CP
518       KM       COMBINE SUB 2330 & CP 2331
519       HC      2

520       KK   2335    SUB
521       KM       RUNOFF FROM SUB 2335 & ROUTE CP 2332
522       BA  .3515
523       LS           74   34.80
524       UK    150  .0600   .15   100
525       RK   7400  .0382   .045          TRAP    30    25    YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

526       KK   2340    SUB
527       KM       RUNOFF FROM SUB 2340
528       BA  .2776
529       LS           86   44.4            74   44.4
530       UK    500  .4000    .30     30
531       UK    160  .0625    .15     70
532       RK   7050  .0526   .045          TRAP     10      3

533       KK   2322     CP
534       KM       COMBINE SUB 2335, SUB 2340, & CP 2321
535       KM       THIS IS THE TOTAL INFLOW FROM MODEL GN50.24I TO CAP DIKE NO.4
536       HC      3

537       KK   2125    SUB
538       KM       RUNOFF FROM SUB-BASIN 2125
539       BA  .0739
540       LS           74     72
541       UK    115  .0383    .15    100
542       RK   3400  .0150   .045          TRAP     15      5

543       KK   2126     CP
544       KM       ROUTE SUB 2125 TO CAP DIKE 4
545       RK   3300  .0130   .030          TRAP     10      3

546       KK    4IN     CP
547       KM       COMBINE CP 2171, CP 2322, & CP 2126
548       KM       THIS IS THE TOTAL INFLOW TO CAP DIKE NO. 4
549       HC      3

550       KK  DIKE4    DAM
551       KM       ROUTE CP 4IN THROUGH CAP DIKE NO. 4
552       KO      1      2
553       RS      1   STOR
554       SV      0      2     13     45     98    171    265    404    595    824
555       SV   1098   1420   1800   2253   2782   3381   4069   4854   5728   6686
556       SE   1496   1498   1500   1502   1504   1506   1508   1510   1512   1514
557       SE   1516   1518   1520   1522   1524   1526   1528   1530   1532   1534
558       SS   1533    100    2.9    1.5
559       ST   1534    100    2.9    1.5
560       ZZ
```

1

SCHEMATIC DIAGRAM OF STREAM NETWORK

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

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

  27     SUB39
           .
           .
  39       .      SUB40
           .        .
           .        .
  45     CP41............
           V
           V
  48     SUB41 ***
           .
           .
  54       .      SUB42
           .        .
           .        .
  60       .        .     SUB43
           .        .       .
           .        .       .
  66       .        .       .     SUB44
           .        .       .       .
           .        .       .       .
  72       .        .     CP45............
           .        .       V
           .        .       V
  75       .        .     SUB45 ***
           .        .       .
           .        .       .
  81       .        .       .     SUB45A
           .        .       .       .
           .        .       .       .
  87       .        .       .       .     SUB46
           .        .       .       .       .
           .        .       .       .       .
  94       .        .     CP47........................
           .        .       V
           .        .       V
  97       .        .     SUB47 ***
           .        .       .
           .        .       .
 103     CP48........................
           V
           V
 106     SUB48 ***
           .
           .
 112       .      SUB50
           .        .
           .        .
 119     CP51............
           .
           .
 127       .-------->   2003
 122     2004
           .
           .
 130       .      SUB49
           .        .
           .        .
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136     49.1...........
         V
         V
139     SUB51 ***
         V
         V
145     SUB52 ***
         V
         V
151     SUB53 ***
         .
         .
157      .      2000
         .       V
         .       V
172      .      2010 ***
         .       .
         .       .
180      .       .        .<-------    2003
178      .       .      2003
         .       .       V
         .       .       V
181      .       .      2005 ***
         .       .       V
         .       .       V
187      .       .      2011
         .       .       .
         .       .       .
190      .      2012............
         .       V
         .       V
193      .      2015 ***
         .       .
         .       .
200      .       .      2020
         .       .       V
         .       .       V
207      .       .      2016
         .       .       .
         .       .       .
210      .      2017............
         .       V
         .       V
213      .      2030 ***
         .       .
         .       .
220      .       .      2040
         .       .       .
         .       .       .
227      .       .       .      2050
         .       .       .       .
         .       .       .       .
234      .       .      2051............
         .       .       V
         .       .       V
237      .       .      2060 ***
         .       .       .
         .       .       .
244      .       .       .      2070
         .       .       .       .
         .       .       .       .
254      .       .       .        .------->    2072
252      .       .       .      2071
         .       .       .       V
         .       .       .       V
```

```
257     .     .     .     2065 ***
        .     .     .     .
        .     .     .     .
265     .     .     .     .     .<-------   2072
263     .     .     .     .   2072
        .     .     .     .    V
        .     .     .     .    V
266     .     .     .     .   2131
        .     .     .     .    .
        .     .     .     .    .
269     .     .     .     .    .     2130
        .     .     .     .    .      .
        .     .     .     .    .      .
275     .     .     .     .   2132............
        .     .     .     .    .
        .     .     .     .    .
280     .     .     .     .    .------->   2134
278     .     .     .     .   2133
        .     .     .     .    V
        .     .     .     .    V
283     .     .     .     .   2066
        .     .     .     .    .
        .     .     .     .    .
286     .     .   2067........................
        .     .    V
        .     .    V
289     .     .   2080 ***
        .     .    .
        .     .    .
295     .   2081............
        .    V
        .    V
298     .   2090 ***
        .    .
        .    .
304     .     .   2100
        .     .    .
        .     .    .
310     .   2101............
        .    V
        .    V
313     .   2110 ***
        .    .
        .    .
319     .     .   2120
        .     .    .
        .     .    .
327     .     .     .     .<-------   2134
325     .     .     .     2134
        .     .     .      V
        .     .     .      V
328     .     .     .     2135 ***
        .     .     .      V
        .     .     .      V
335     .     .     .     2140 ***
        .     .     .      .
        .     .     .      .
341     .     .     .     .   2150
        .     .     .     .    .
        .     .     .     .    .
349     .     .     .     2151............
        .     .     .      V
        .     .     .      V
352     .     .     .     2160 ***
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                .         .         .         .
359             .         .         .         .         2170
                .         .         .         .         .
                .         .         .         .         .
365             .         .         .         .         .         2180
                .         .         .         .         .          V
                .         .         .         .         .          V
372             .         .         .         .         .         2190 ***
                .         .         .         .         .         .
                .         .         .         .         .         .
378             .         .         .         .         .         .         2200
                .         .         .         .         .         .         .
                .         .         .         .         .         .         .
384             .         .         .         .         .         .         .         2210
                .         .         .         .         .         .         .         .
                .         .         .         .         .         .         .         .
391             .         .         .         .         .         2211.......................
                .         .         .         .         .          V
                .         .         .         .         .          V
394             .         .         .         .         .         2220 ***
                .         .         .         .         .         .
                .         .         .         .         .         .
401             .         .         .         .         .         .         2230
                .         .         .         .         .         .          V
                .         .         .         .         .         .          V
407             .         .         .         .         .         .         2221
                .         .         .         .         .         .         .
                .         .         .         .         .         .         .
410             .         .         .         .         .         2222............
                .         .         .         .         .         .
                .         .         .         .         .         .
413             .       2171.............................................
                .         .
                .         .
417             .         .       2240
                .         .         .
                .         .         .
429             .         .         .       2260
                .         .         .         .
                .         .         .         .
435             .         .         .         .         2255
                .         .         .         .         .
                .         .         .         .         .
443             .         .         .         .         .         2270
                .         .         .         .         .         .
                .         .         .         .         .         .
451             .         .         .         .         2271............
                .         .         .         .         V
                .         .         .         .         V
454             .         .         .         .         2250 ***
                .         .         .         .         .
                .         .         .         .         .
461             .         .         .       2251............
                .         .         .        V
                .         .         .        V
464             .         .         .       2280 ***
                .         .         .         .
                .         .         .         .
470             .         .         .         .         2290
                .         .         .         .         .
                .         .         .         .         .
476             .         .         .         .         .         2300
                .         .         .         .         .         .
                .         .         .         .         .         .
486             .         .         .         .         .         .-------->  2302
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484     .     .     .     .     .     2301
        .     .     .     .     .      V
        .     .     .     .     .      V
489     .     .     .     .     .     2310 ***
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        .     .     .     .     .      .
495     .     .     .     .     .      .     2320
        .     .     .     .     .      .      .
        .     .     .     .     .      .      .
501     .     .   2321.............................................
        .     .     .
        .     .     .
506     .     .     .     .<-------   2302
504     .     .     .   2302
        .     .     .    V
        .     .     .    V
507     .     .     .   2331
        .     .     .    .
        .     .     .    .
510     .     .     .    .     2330
        .     .     .    .      .
        .     .     .    .      .
517     .     .     .   2332............
        .     .     .    V
        .     .     .    V
520     .     .     .   2335 ***
        .     .     .    .
        .     .     .    .
526     .     .     .    .     2340
        .     .     .    .      .
        .     .     .    .      .
533     .     .   2322........................
        .     .     .
        .     .     .
537     .     .     .   2125
        .     .     .    V
        .     .     .    V
543     .     .     .   2126
        .     .     .    .
        .     .     .    .
546     .   4IN........................
        .    V
        .    V
550     .  DIKE4
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(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

1

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FLOOD HYDROGRAPH PACKAGE HEC-1 (IBM XT 512K VERSION) -FEB 1,1985
U.S. ARMY CORPS OF ENGINEERS, THE HYDROLOGIC ENGINEERING CENTER, 609 SECOND STREET, DAVIS, CA. 95616

****

GENERAL DRAINAGE PLAN FOR NORTH SCOTTSDALE
FUTURE LAND USE CONDITIONS WITH EXISTING DRAINAGE PATTERN
MODEL GN40.24I + GN50.24I -- SUB-BASIN SERIES 2000 TO 2230 & 39 TO 53
SUB-BASIN SERIES 2240 TO 2340

THIS IS MODEL CAP4.24I THAT IS USED TO DETERMINE THE MAXIMUM WATER SURFACE ELEVATION BEHIND CAP DIKE NO. 4, WITH NO UPSTREAM DRAIANGE IMPROVEMENTS IN-PLACE.
SUB 2125 HAS BEEN ADDED

100-YEAR, 24-HOUR STORM, USING SCS TYPE IIA RAINFALL DISTRIBUTION
RAINFALL FROM NOAA ATLAS, USING 25 SQ MI AREAL REDUCTION FACTOR

LAND USE DENSITIES FROM GENERAL PLAN & TONTO FOOTHILLS PLAN.
PERCENT OF IMPERVIOUS COVER HAS BEEN MODIFIED (5/90) TO REFLECT CITY OF SCOTTSDALE NAOS REQUIREMENTS.

100% OF THE REATA PASS FAN FLOW IS ROUTED TO CAP DIKE NO.4

STAGE/STORAGE DATA IS TAKEN FROM BUREC MEMO DATED SEPT 29, 1987

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25 IO OUTPUT CONTROL VARIABLES

IPRNT	5	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE

IT HYDROGRAPH TIME DATA

NMIN	5	MINUTES IN COMPUTATION INTERVAL
IDATE	27FEB88	STARTING DATE
ITIME	0000	STARTING TIME
NQ	300	NUMBER OF HYDROGRAPH ORDINATES
NDDATE	28FEB88	ENDING DATE
NDTIME	0055	ENDING TIME

COMPUTATION INTERVAL .08 HOURS
TOTAL TIME BASE 24.92 HOURS

ENGLISH UNITS

*** ***

1

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

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	AREA	BASIN STAGE	MAXIMUM MAX STAGE	TIME OF
+	HYDROGRAPH AT SUB39	4506.	6.08	492.	149.	144.	1.94				
+	HYDROGRAPH AT SUB40	1343.	6.08	132.	40.	39.	.58				
+	2 COMBINED AT CP41	5849.	6.08	625.	190.	183.	2.53				
+	HYDROGRAPH AT SUB41	6353.	6.17	778.	237.	228.	3.32				
+	HYDROGRAPH AT SUB42	1252.	6.08	126.	39.	37.	.58				
+	HYDROGRAPH AT SUB43	2522.	6.08	256.	78.	75.	1.07				
+	HYDROGRAPH AT SUB44	1986.	6.08	202.	61.	59.	.85				
+	2 COMBINED AT CP45	4508.	6.08	458.	139.	134.	1.92				
+	HYDROGRAPH AT SUB45	4646.	6.08	502.	153.	147.	2.13				
+	HYDROGRAPH AT SUB45A	425.	6.08	43.	13.	12.	.17				
+	HYDROGRAPH AT SUB46	2271.	6.08	230.	69.	66.	.93				
+	3 COMBINED AT CP47	7342.	6.08	775.	234.	225.	3.23			2273	
+	HYDROGRAPH AT SUB47	7192.	6.17	875.	264.	254.	3.60				
+	3 COMBINED AT CP48	14582.	6.17	1777.	539.	520.	7.50				
+	HYDROGRAPH AT SUB48	14342.	6.17	1782.	541.	521.	7.55				
+	HYDROGRAPH AT SUB50	824.	6.08	81.	25.	24.	.36				
+	2 COMBINED AT CP51	15004.	6.17	1863.	566.	545.	7.91			1897	
+	DIVERSION TO 2003	15004.	.08	1863.	566.	545.	7.91				
+	HYDROGRAPH AT 2004	0.	.08	0.	0.	0.	7.91				

	HYDROGRAPH AT							
+	SUB49	713.	6.08	68.	21.	20.	.35	
	2 COMBINED AT							
+	49.1	713.	6.08	68.	21.	20.	8.26	
	HYDROGRAPH AT							
+	SUB51	1120.	6.25	232.	74.	72.	9.33	
	HYDROGRAPH AT							
+	SUB52	1326.	6.58	435.	143.	138.	10.68	
	HYDROGRAPH AT							
+	SUB53	1931.	6.25	857.	283.	272.	12.43	
	HYDROGRAPH AT							
+	2000	1745.	6.08	173.	52.	50.	.80	
	HYDROGRAPH AT							
+	2010	1729.	6.08	196.	59.	57.	.89	
	HYDROGRAPH AT							
+	2003	15004.	6.17	1863.	566.	545.	.00	
	HYDROGRAPH AT							
+	2005	14185.	6.25	1885.	572.	551.	.14	10,321
	ROUTED TO							
+	2011	14144.	6.25	1890.	573.	552.	.14	
	2 COMBINED AT							
+	2012	15403.	6.25	2085.	633.	609.	1.03	14954
	HYDROGRAPH AT							
+	2015	14943.	6.33	2169.	658.	634.	1.43	10450
	HYDROGRAPH AT							
+	2020	256.	6.08	25.	8.	7.	.11	
	ROUTED TO							
+	2016	247.	6.08	26.	8.	7.	.11	
	2 COMBINED AT							
+	2017	15008.	6.33	2192.	666.	642.	1.54	
	HYDROGRAPH AT							
+	2030	14884.	6.33	2225.	678.	653.	1.78	
	HYDROGRAPH AT							
+	2040	1945.	6.08	193.	59.	57.	.93	
	HYDROGRAPH AT							
+	2050	1757.	6.08	174.	53.	51.	.86	
	2 COMBINED AT							
+	2051	3702.	6.08	367.	112.	108.	1.79	2068
	HYDROGRAPH AT							
+	2060	3569.	6.08	398.	121.	117.	1.94	
	HYDROGRAPH AT							
+	2070	3255.	6.08	320.	97.	94.	1.46	2229
	DIVERSION TO							

+		2072	2170.	6.08	214.	65.	62.	1.46
+	HYDROGRAPH AT	2071	1085.	6.08	107.	32.	31.	1.46
+	HYDROGRAPH AT	2065	1309.	6.17	139.	43.	41.	1.63
+	HYDROGRAPH AT	2072	2170.	6.08	214.	65.	62.	.00
+	ROUTED TO	2131	1922.	6.17	220.	66.	64.	.00
+	HYDROGRAPH AT	2130	567.	6.08	64.	19.	19.	.30
+	2 COMBINED AT	2132	2471.	6.08	283.	86.	83.	.30
+	DIVERSION TO	2134	1880.	6.08	247.	77.	74.	.30
+	HYDROGRAPH AT	2133	591.	6.08	36.	9.	9.	.30
+	ROUTED TO	2066	585.	6.17	36.	9.	9.	.30
+	3 COMBINED AT	2067	5424.	6.17	573.	173.	167.	3.87
+	HYDROGRAPH AT	2080	5114.	6.17	599.	181.	175.	4.01
+	2 COMBINED AT	2081	18890.	6.33	2822.	859.	828.	5.79
+	HYDROGRAPH AT	2090	15995.	6.50	2846.	874.	842.	6.15
+	HYDROGRAPH AT	2100	245.	6.42	68.	22.	21.	.38
+	2 COMBINED AT	2101	16238.	6.50	2911.	896.	863.	6.53
+	HYDROGRAPH AT	2110	15758.	6.67	2967.	922.	888.	7.05
+	HYDROGRAPH AT	2120	912.	6.50	278.	88.	84.	1.43
+	HYDROGRAPH AT	2134	1880.	6.08	247.	77.	74.	.00
+	HYDROGRAPH AT	2135	1955.	6.17	270.	84.	81.	.12
+	HYDROGRAPH AT	2140	2049.	6.17	308.	96.	93.	.31
+	HYDROGRAPH AT	2150	1357.	6.08	142.	43.	42.	.69

1401

3263

2487

	2 COMBINED AT							
+	2151	3085.	6.17	449.	140.	135.	1.00	3085
	HYDROGRAPH AT							
+	2160	3984.	6.25	647.	202.	194.	1.98	
	HYDROGRAPH AT							
+	2170	502.	6.17	88.	27.	26.	.46	
	HYDROGRAPH AT							
+	2180	2279.	6.08	231.	70.	67.	1.00	
	HYDROGRAPH AT							
+	2190	2262.	6.17	260.	79.	76.	1.13	
	HYDROGRAPH AT							
+	2200	508.	6.08	50.	15.	15.	.25	
	HYDROGRAPH AT							
+	2210	3417.	6.08	349.	107.	103.	1.78	
	3 COMBINED AT							
+	2211	6118.	6.08	659.	201.	194.	3.16	700
	HYDROGRAPH AT							
+	2220	6719.	6.25	795.	242.	233.	3.72	
	HYDROGRAPH AT							
+	2230	565.	6.08	62.	19.	19.	.33	
	ROUTED TO							
+	2221	543.	6.17	63.	19.	19.	.33	
	2 COMBINED AT							
+	2222	7152.	6.25	857.	261.	252.	4.05	1766
	5 COMBINED AT							
+	2171	20514.	6.67	4823.	1500.	1445.	14.97	
	HYDROGRAPH AT							
+	2240	938.	6.08	115.	36.	34.	.60	
	HYDROGRAPH AT							
+	2260	366.	6.17	50.	16.	15.	.26	
	HYDROGRAPH AT							
+	2255	550.	6.00	59.	18.	18.	.30	
	HYDROGRAPH AT							
+	2270	1868.	6.00	193.	59.	57.	.97	
	2 COMBINED AT							
+	2271	2418.	6.00	252.	77.	74.	1.27	
	HYDROGRAPH AT							
+	2250	2806.	6.08	309.	94.	90.	1.49	
	2 COMBINED AT							
+	2251	3149.	6.08	359.	110.	106.	1.76	
	HYDROGRAPH AT							
+	2280	3172.	6.17	393.	120.	116.	1.94	
	HYDROGRAPH AT							
+	2290	1192.	6.08	128.	39.	38.	.60	

	HYDROGRAPH AT							
+	2300	3893.	6.08	380.	116.	112.	1.80	
	DIVERSION TO							
+	2302	1947.	6.08	190.	58.	56.	1.80	
	HYDROGRAPH AT							
+	2301	1947.	6.08	190.	58.	56.	1.80	
	HYDROGRAPH AT							
+	2310	2215.	6.08	264.	81.	78.	2.10	
	HYDROGRAPH AT							
+	2320	746.	6.08	73.	23.	22.	.37	
	5 COMBINED AT							
+	2321	8191.	6.08	972.	298.	287.	5.62	
	HYDROGRAPH AT							
+	2302	1947.	6.08	190.	58.	56.	.00	
	ROUTED TO							
+	2331	1874.	6.17	192.	59.	57.	.00	
	HYDROGRAPH AT							
+	2330	1015.	6.08	100.	30.	29.	.48	
	2 COMBINED AT							
+	2332	2721.	6.17	292.	89.	86.	.48	
	HYDROGRAPH AT							
+	2335	3275.	6.17	375.	115.	111.	.83	
	HYDROGRAPH AT							
+	2340	628.	6.00	70.	21.	20.	.28	
	3 COMBINED AT							
+	2322	11570.	6.17	1415.	435.	419.	6.73	
	HYDROGRAPH AT							
+	2125	191.	6.08	22.	7.	6.	.07	
	ROUTED TO							
+	2126	182.	6.17	23.	7.	7.	.07	
	3 COMBINED AT							
+	4IN	23608.	6.17	6249.	1942.	1870.	21.77	1084
	ROUTED TO							
+	DIKE4	0.	.08	0.	0.	0.	21.77	
+							1527.36	24.92

SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION DIKE4

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1496.00	1533.00	1534.00
STORAGE	0.	6207.	6686.
OUTFLOW	0.	0.	290.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1527.36	.00	3848.	0.	.00	.00	.00

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

FILE: CP4R.24I

(100-Year, 24-Hour, SCS Type IIA Storm)

Existing watershed drainage pattern with future land-use impervious cover. Includes drainage area contributing to CAP dike 4. All flows from Reata pass are assumed to be diverted to CAP Dike 3.

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

  1       ID      GENERAL DRAINAGE PLAN FOR NORTH SCOTTSDALE
  2       ID      FUTURE LAND USE CONDITIONS WITH EXISTING DRAINAGE PATTERN
  3       ID      MODEL GN40.24I + GN50.24I -- SUB-BASIN SERIES 2000 TO 2230 & 39 TO 53
  4       ID                      SUB-BASIN SERIES 2240 TO 2340
  5       ID      100-YEAR, 24-HOUR STORM, USING SCS TYPE IIA RAINFALL DISTRIBUTION
  6       ID      RAINFALL FROM NOAA ATLAS, USING 25 SQ MI AREAL REDUCTION FACTOR
  7       ID      LAND USE DENSITIES FROM GENERAL PLAN & TONTO FOOTHILLS PLAN
  8       ID
  9       ID      100% OF THE REATA PASS FAN FLOW IS ROUTED TO CAP DIKE NO.3
 10       ID
 11       ID      THIS IS MODEL CP4R.24I THAT IS USED TO DETERMINE THE MAXIMUM WATER
 12       ID      SURFACE ELEVATION BEHIND CAP DIKE NO. 4
 13       ID      SUB 2125 HAS BEEN ADDED
 14       ID
 15       ID      STAGE/STORAGE DATA IS TAKEN FROM BUREC MEMO DATED SEPT 29, 1987
 16       ID
 17       ID      ---------------------------------------------------------------------
 18       IT      5 27FEB88      0    300
 19       IO      5      0
 20       IN     30 27FEB88      0
         *DIAGRAM

 21       KK  SUB39
 22       KM      RUNOFF FROM SUB-BASIN 39
 23       BA  1.9422
 24       PB   4.25
 25       PC     0   .005   .009   .010   .013   .019   .021   .028   .032   .044
 26       PC   .057   .100   .660   .745   .776   .800   .816   .830   .840   .850
 27       PC   .861   .868   .878   .884   .891   .900   .905   .912   .919   .923
 28       PC   .930   .934   .939   .944   .950   .958   .961   .963   .969   .971
 29       PC   .974   .979   .981   .985   .989   .991   .993   .996  1.000
 30       LS           85   20.57
 31       UK    330  .0433    .20    100
 32       RK  11240  .0253    .045          TRAP     30      3

 33       KK  SUB40
 34       KM      RUNOFF FROM SUB-BASIN 40
 35       BA  .5844
 36       LS           83   10.55
 37       UK    160  .0627    .20    100
 38       RK   7000  .0350    .045          TRAP     20      3

 39       KK   CP41
 40       KM      COMBINE HYDROGRAPHS SUB39 & SUB40
 41       HC      2

 42       KK  SUB41
 43       KM      RUNOFF FROM SUB-BASIN 41 & ROUTE CP 41
 44       BA  .7911
 45       LS           74   11.66
 46       UK    280  .2386    .20    100
 47       RK   9400  .0282    .045          TRAP     50      3    YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  48      KK  SUB42
  49      KM      RUNOFF FROM SUB-BASIN 42
  50      BA  .5844
  51      LS          78  22.21
  52      UK   280  .2386   .20   100
  53      RK  8750  .0573  .045        TRAP   20    3

  54      KK  SUB43
  55      KM      RUNOFF FROM SUB-BASIN 43
  56      BA 1.0708
  57      LS          85  14.67
  58      UK   260  .0515   .20   100
  59      RK  7400  .0255  .045        TRAP   25    3

  60      KK  SUB44
  61      KM      RUNOFF FROM SUB-BASIN 44
  62      BA  .8537
  63      LS          85  10.65
  64      UK   260  .0515   .20   100
  65      RK  9840  .0622  .045        TRAP   25    3

  66      KK  CP45
  67      KM      COMBINE HYDROGRAPHS SUB43 & SUB44
  68      HC    2

  69      KK  SUB45
  70      KM      RUNOFF FROM SUB-BASIN 45 & ROUTE CP 45
  71      BA  .2037
  72      LS          81  17.28
  73      UK   125  .1166   .20   100
  74      RK  3600  .0366  .045        TRAP   30    3   YES

  75      KK  SUB45A
  76      KM      RUNOFF FROM SUB 45A
  77      BA  .1720
  78      LS          86  10.16
  79      UK   275  .2200   .20   100
  80      RK  5400  .0411  .045        TRAP   15    3

  81      KK  SUB46
  82      KM      RUNOFF FROM SUB-BASIN 46
  83      BA  .9268
  84      LS          86   3.34
  85      UK   265  .4958   .20   100
  86      RK  3300  .2271  .045  .111  TRAP   10    3
  87      RK  7100  .0535  .045        TRAP   25    3

  88      KK  CP47
  89      KM      COMBINE HYDROGRAPHS SUB45, SUB45A, & SUB46
  90      HC    3
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  91      KK  SUB47
  92      KM      RUNOFF FROM SUB-BASIN 47 & ROUTE CP 47
  93      BA  .3757
  94      LS          77  10.72
  95      UK   375  .1000   .20   100
  96      RK  9600  .0217  .045        TRAP    50     3   YES

  97      KK  CP48
  98      KM      COMBINE HYDROGRAPHS SUB41, SUB42, & SUB47
  99      HC     3

 100      KK  SUB48
 101      KM      RUNOFF FROM SUB-BASIN 48 & ROUTE CP 48
 102      BA  .0438
 103      LS          73   6.28
 104      UK   150  .0733   .20   100
 105      RK  1300  .0338  .045        TRAP    75     3   YES

 106      KK  SUB50
 107      KM      RUNOFF FROM SUB-BASIN 50
 108      BA  .3580
 109      LS          84   3.69
 110      UK   300  .3555   .20   100
 111      RK   730  .1506  .045  .036  TRAP    10     3
 112      RK  6400  .0453  .045        TRAP    25     3

 113      KK  CP51
 114      KM      COMBINE HYDROGRAPHS SUB48 & SUB50
 115      HC     2

 116      KK  2004    DIV
 117      KM      DIVERT FLOW TO SUB 2005
 118      KM      THIS DIVERT OCCURS AT A BRAIDED CHANNEL BIFURCATION LOCATED 1000 FEET
 119      KM      SOUTH OF THE EAST END OF PINNACLE PEAK ROAD.
 120      KM      THIS IS AN ACTIVE ALLUVIAL FAN APEX.
 121      DT  2003
 122      DI     0  15000
 123      DQ     0      0

 124      KK  SUB49
 125      KM      RUNOFF FROM SUB-BASIN 49
 126      BA  .3528
 127      LS          79   6.79
 128      UK   135  .0758   .20   100
 129      RK  5400  .0370  .045        TRAP    30     3

 130      KK  49.1    CP
 131      KM      COMBINE SUB 49 WITH NON-DIVERTED FLOW FROM DIV 2004
 132      HC     2
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  133     KK  SUB51
  134     KM       RUNOFF FROM SUB-BASIN 51 & ROUTE CP 49.1
  135     BA  1.0675
  136     LS           72   12.93
  137     UK     94  .0213    .10    100
  138     RK   6400  .0329   .045          TRAP   1500     2    YES

  139     KK  SUB52
  140     KM       RUNOFF FROM SUB-BASIN 52 & ROUTE SUB 51
  141     BA  1.3557
  142     LS           71   15.99
  143     UK     76  .0213    .10    100
  144     RK   6633  .0300   .045          TRAP   2500     2    YES

  145     KK  SUB53
  146     KM       RUNOFF FROM SUB-BASIN 53 & ROUTE SUB 52
  147     BA  1.7471
  148     LS           74    9.46
  149     UK     67  .0213    .10    100
  150     RK   7767  .0196   .045          TRAP   3500     2    YES

  151     KK   2000    SUB
  152     KM       RUNOFF FROM SUB 2000
  153     KM       RAINFALL AMOUNT IS CHANGED TO REFLECT TRANSITION INTO A DIFFERENT
  154     KM       GEOGRAPHICAL AREA
  155     BA  .7999
  156     PB   4.15
  157     PC      0   .005   .009   .010   .013   .019   .021   .028   .032   .044
  158     PC   .057   .100   .660   .745   .776   .800   .816   .830   .840   .850
  159     PC   .861   .868   .878   .884   .891   .900   .905   .912   .919   .923
  160     PC   .930   .934   .939   .944   .950   .958   .961   .963   .969   .971
  161     PC   .974   .979   .981   .985   .989   .991   .993   .996  1.000
  162     LS           84    2.23
  163     UK    400  .2750    .25    100
  164     RK   2625  .0785   .045   .072   TRAP     10     3
  165     RK   2300  .0217   .045          TRAP     25     3

  166     KK   2010    SUB
  167     KM       RUNOFF FROM SUB 2010 & ROUTE SUB 2000
  168     BA  .0933
  169     LS           83    4.05
  170     UK    800  .6425    .30    100
  171     RK   3000  .0213   .045          TRAP     50     3    YES

  172     KK   2003    RET
  173     KM       RETRIEVE DIVERTED FLOW FROM DIV 2004
  174     DR   2003

  175     KK   2005    SUB
  176     KM       RUNOFF FROM 2005 & ROUTE RET 2003
  177     BA  .1363
  178     LS           72    6.70
  179     UK    175  .1400    .15    100
  180     RK   2600  .0385   .045          TRAP    750     2    YES
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

181         KK   2011     CP
182         KM       ROUTE SUB 2005 TO CP 2011
183         RK   2200  .0213   .045          TRAP    50     3

184         KK   2012     CP
185         KM       COMBINE SUB 2010 & CP 2011
186         HC     2

187         KK   2015     SUB
188         KM       RUNOFF FROM SUB 2015 & ROUTE CP 2012
189         BA  .4053
190         LS           78   8.40
191         UK    500  .2800   .25    100
192         RK   2400  .1358   .045   .061   TRAP    10     3
193         RK   4700  .0304   .045          TRAP    60    20    YES

194         KK   2020     SUB
195         KM       RUNOFF FROM SUB 2020
196         BA  .1090
197         LS           85   1.92
198         UK    205  .6969   .30    100
199         RK    900  .3889   .045   .011   TRAP    10     3
200         RK   2800  .1428   .045          TRAP    20     3

201         KK   2016     CP
202         KM       ROUTE SUB 2020 TO CP 2016
203         RK   1400  .0343   .045          TRAP    20     3

204         KK   2017     CP
205         KM       COMBINE SUB 2015 & CP 2016
206         HC     2

207         KK   2030     SUB
208         KM       RUNOFF FROM SUB 2030 & ROUTE CP 2017
209         BA  .2346
210         LS           67   21.42
211         UK    155  .0614   .15    100
212         RK   3555  .0355   .045   .047   TRAP    10    10
213         RK   2900  .0262   .045          TRAP    60    20    YES

214         KK   2040     SUB
215         KM       RUNOFF FROM SUB 2040
216         BA  .9290
217         LS           82   6.59
218         UK    463  .4072   .25    100
219         RK   2700  .1878   .045   .056   TRAP    10     3
220         RK   6800  .0485   .045          TRAP    25     3

221         KK   2050     SUB
222         KM       RUNOFF FROM SUB 2050
223         BA  .8580
224         LS           81   7.54
225         UK    530  .5726   .25    100
226         RK   3400  .2067   .045   .086   TRAP    10     3
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 227      RK   6200  .0693   .045          TRAP    25     5

 228      KK   2051     CP
 229      KM       COMBINE SUB 2040 & SUB 2050
 230      HC     2

 231      KK   2060    SUB
 232      KM       RUNOFF FROM SUB 2060 & ROUTE CP 2051
 233      BA  .1542
 234      LS           77  17.81
 235      UK    217  .1667    .20    100
 236      RK   2275  .0929   .045   .031   TRAP    10     5
 237      RK   2400  .0321   .055          TRAP    30    15    YES

 238      KK   2070    SUB
 239      KM       RUNOFF FROM SUB 2070
 240      BA 1.4649
 241      LS           84   2.08
 242      UK    400  .5174    .30    100
 243      RK   1750  .2962   .045   .048   TRAP     5     3
 244      RK   3500  .1236   .045   .483   TRAP    10     3
 245      RK   3400  .0882   .045          TRAP    30    10

 246      KK   2071    DIV
 247      KM       DIVERT FLOW FROM SUB 2070 TO SUB 2130
 248      DT   2072
 249      DI      0   6000
 250      DQ      0   4000

 251      KK   2065    SUB
 252      KM       RUNOFF FROM SUB 2065 & ROUTE NON-DIVERTED FLOW FROM DIV 2071
 253      BA  .1664
 254      LS           73  30.12
 255      UK    200  .0500    .20    100
 256      RK   6800  .0471   .055          TRAP    30    15    YES

 257      KK   2072    RET
 258      KM       RETRIEVE DIVERTED FLOW FROM DIV 2071
 259      DR   2072

 260      KK   2131     CP
 261      KM       ROUTE RET 2072 TO CP 2131
 262      RK   3600  .0555   .045          TRAP   200     1

 263      KK   2130    SUB
 264      KM       RUNOFF FROM SUB 2130
 265      BA  .2992
 266      LS           83  14.51
 267      UK    267  .3126    .20    100
 268      RK   9240  .0941   .045          TRAP    30    20
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 269      KK   2132     CP
 270      KM      COMBINE SUB 2130 & CP 2131
 271      HC     2

 272      KK   2133    DIV
 273      KM      DIVERT FLOW TO SUB 2135
 274      DT   2134
 275      DI     0    500   1000   6000
 276      DQ     0    500    850   4350

 277      KK   2066     CP
 278      KM      ROUTE NON-DIVERTED FLOW FROM DIV 2133 TO CP 2066
 279      RK   2850  .0421   .045          TRAP     30     15

 280      KK   2067     CP
 281      KM      COMBINE SUB 2060, SUB 2065, & CP 2066
 282      HC     3

 283      KK   2080    SUB
 284      KM      RUNOFF FROM SUB 2080 & ROUTE CP 2067
 285      BA  .1363
 286      LS          68  34.90
 287      UK    175  .0571    .15    100
 288      RK   4000  .0325   .045          TRAP     30     15    YES

 289      KK   2081     CP
 290      KM      COMBINE SUB 2030 & SUB 2080
 291      HC     2

 292      KK   2090    SUB
 293      KM      RUNOFF FROM SUB 2090 & ROUTE CP 2081
 294      BA  .3659
 295      LS          71  24.94
 296      UK    140  .0285    .15    100
 297      RK   9400  .0212   .045          TRAP    200    150    YES

 298      KK   2100    SUB
 299      KM      RUNOFF FROM SUB 2100
 300      BA  .3795
 301      LS          73  21.07
 302      UK    140  .0285    .15    100
 303      RK  14600  .0260   .045          TRAP    100     25

 304      KK   2101     CP
 305      KM      COMBINE SUB 2090 & SUB 2100
 306      HC     2

 307      KK   2110    SUB
 308      KM      RUNOFF FROM SUB 2110 & ROUTE CP 2101
 309      BA  .5180
 310      LS          74  35.26
 311      UK    200  .0286    .15    100
 312      RK   5400  .0129   .045          TRAP    200    200    YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  313     KK   2120    SUB
  314     KM        RUNOFF FROM SUB 2120
  315     BA  1.4255
  316     LS            74   20.90
  317     UK    115  .0383    .15    100
  318     RK  20800  .0234    .045          TRAP    150     50

  319     KK   2134    RET
  320     KM        RETIEVE DIVERTED FLOW FROM DIV 2133
  321     DR   2134

  322     KK   2135    SUB
  323     KM        RUNOFF FROM SUB 2135 & ROUTE RET 2134
  324     BA  .1169
  325     LS            86   23.14            74   23.14
  326     UK    800  .4000    .30     40
  327     UK    200  .0500    .15     60
  328     RK   2700  .0444    .045          TRAP     20      2    YES

  329     KK   2140    SUB
  330     KM        RUNOFF FROM SUB 2140 & ROUTE SUB 2135
  331     BA  .1923
  332     LS            74   34.90
  333     UK    200  .0500    .15    100
  334     RK   5300  .0415    .045          TRAP     20     10    YES

  335     KK   2150    SUB
  336     KM        RUNOFF FROM SUB 2150
  337     BA  .6873
  338     LS            86   15.84            74   15.84
  339     UK    350  .3428    .30     50
  340     UK    180  .0555    .15     50
  341     RK   1785  .1313    .045   .027   TRAP     10      3
  342     RK   6400  .0312    .045          TRAP     20     10

  343     KK   2151     CP
  344     KM        COMBINE SUB 2140 & SUB 2150
  345     HC      2

  346     KK   2160    SUB
  347     KM        RUNOFF FROM SUB 2160 & ROUTE CP 2151
  348     BA  .9871
  349     LS            74   29.84
  350     UK    337  .0324    .15    100
  351     RK   3775  .0276    .045   .059   TRAP      5      3
  352     RK  10600  .0170    .045          TRAP     20     10    YES

  353     KK   2170    SUB
  354     KM        RUNOFF FROM SUB 2170
  355     BA  .4634
  356     LS            74   19.23
  357     UK    250  .0266    .15    100
  358     RK  12500  .0280    .045          TRAP     15     10
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  359     KK   2180    SUB
  360     KM       RUNOFF FROM SUB 2180
  361     BA  1.0044
  362     LS           86    1.37
  363     UK    468  .4496    .30    100
  364     RK   3100  .2558    .045   .121   TRAP    10     3
  365     RK   8200  .0731    .045          TRAP    20     5

  366     KK   2190    SUB
  367     KM       RUNOFF FROM SUB 2190 & ROUTE SUB 2180
  368     BA   .1227
  369     LS           79   18.03
  370     UK    190  .0915    .15    100
  371     RK   4100  .0390    .045          TRAP    30    10    YES

  372     KK   2200    SUB
  373     KM       RUNOFF FROM SUB 2200
  374     BA   .2532
  375     LS           81    6.29
  376     UK    353  .1529    .20    100
  377     RK   6150  .0838    .045          TRAP     5    11

  378     KK   2210    SUB
  379     KM       RUNOFF FROM SUB 2210
  380     BA  1.7763
  381     LS           82    3.31
  382     UK    248  .3717    .30    100
  383     RK   4500  .1875    .045   .107   TRAP    10     3
  384     RK  10000  .0490    .045          TRAP    20    10

  385     KK   2211     CP
  386     KM       COMBINE SUB 2190, SUB 2200, & SUB 2210
  387     HC      3

  388     KK   2220    SUB
  389     KM       RUNOFF FROM SUB 2220 & ROUTE CP 2211
  390     BA   .5660
  391     LS           74   17.73
  392     UK    200  .0500    .15    100
  393     RK   3800  .0326    .045   .057   TRAP     5     3
  394     RK   7800  .0179    .045          TRAP    30    10    YES

  395     KK   2230    SUB
  396     KM       RUNOFF FROM SUB 2230
  397     BA   .3293
  398     LS           74   11.26
  399     UK    200  .0500    .15    100
  400     RK  10000  .0380    .050          TRAP    10     1
1
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

401       KK   2221     CP
402       KM       ROUTE SUB 2230 TO CP 2221
403       RK   1200  .0167   .045          TRAP     30     10

404       KK   2222     CP
405       KM       COMBINE SUB 2220 & CP 2221
406       HC     2

407       KK   2171     CP
408       KM       COMBINE SUB 2120, SUB 2110, SUB2160, SUB2170, & CP 2222
409       KM       THIS WILL BE THE TOTAL INFLOW TO CAP DIKE NO.4 FROM MODEL GN40.24I
410       HC     5
          *    *********** BRING IN MODEL GN40.24I*************************************
          *

411       KK   2240    SUB
412       KM       RUNOFF FROM SUB 2240
413       BA  .6033
414       PB   4.15
415       PC     0   .005   .009   .010   .013   .019   .021   .028   .032   .044
416       PC   .057   .100   .660   .745   .776   .800   .816   .830   .840   .850
417       PC   .861   .868   .878   .884   .891   .900   .905   .912   .919   .923
418       PC   .930   .934   .939   .944   .950   .958   .961   .963   .969   .971
419       PC   .974   .979   .981   .985   .989   .991   .993   .996  1.000
420       LS           74   27.70
421       UK    200  .0500    .15    100
422       RK   9600  .0354   .045          TRAP      8     10

423       KK   2260    SUB
424       KM       RUNOFF FROM SUB 2260
425       BA  .2647
426       LS           76   21.64
427       UK    200  .0500    .15    100
428       RK  11130  .0500   .045          TRAP      8     10

429       KK   2255    SUB
430       KM       RUNOFF FROM SUB 2255
431       BA  .2955
432       LS           86   15.94           74   15.94
433       UK    465  .6014    .25     40
434       UK    350  .0628    .15     60
435       RK   1360  .1536   .045   .030   TRAP      5      3
436       RK   4400  .0386   .045          TRAP     10      3

437       KK   2270    SUB
438       KM       RUNOFF FROM SUB 2270
439       BA  .9714
440       LS           86    7.15           74    7.15
441       UK    270  .5185    .30     40
442       UK    300  .2000    .15     60
443       RK   3120  .1137   .045   .097   TRAP     10      3
444       RK   4500  .0333   .045          TRAP     15      3
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

445       KK   2271     CP
446       KM       COMBINE SUB 2255 & SUB 2270
447       HC     2

448       KK   2250    SUB
449       KM       RUNOFF FROM SUB 2250 & ROUTE CP 2271
450       BA  .2239
451       LS           82   18.16
452       UK    130  .1696    .15    100
453       RK   1625  .0867    .045   .027   TRAP     5     3
454       RK   4000  .0200    .045          TRAP    30     5    YES

455       KK   2251     CP
456       KM       COMBINE SUB 2250 & SUB 2260
457       HC     2

458       KK   2280    SUB
459       KM       RUNOFF FROM SUB 2280 & ROUTE CP 2251
460       BA  .1808
461       LS           75   21.64
462       UK    300  .0300    .15    100
463       RK   3200  .0187    .045          TRAP    35     5    YES

464       KK   2290    SUB
465       KM       RUNOFF FROM SUB 2290
466       BA  .6005
467       LS           82   13.50
468       UK    300  .0499    .15    100
469       RK   9000  .0367    .045          TRAP    10     4

470       KK   2300    SUB
471       KM       RUNOFF FROM SUB 2300
472       BA 1.8007
473       LS           84    2.04
474       UK    303  .4881    .30    100
475       RK   1310  .2150    .045   .047   TRAP     5     1
476       RK   2928  .1451    .045   .306   TRAP    10     3
477       RK   9600  .0577    .045          TRAP    75    10

478       KK   2301    DIV
479       KM       DIVERT FLOW AT FAN APEX TO SUB 2330
480       DT   2302
481       DI     0   6000
482       DQ     0   3000

483       KK   2310    SUB
484       KM       RUNOFF FROM SUB 2310 & ROUTE NON-DIVERTED FLOW FROM DIV 2301
485       BA  .3035
486       LS           81   12.40
487       UK    200  .0550    .15    100
488       RK  10300  .0446    .045          TRAP    30     3    YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

489       KK   2320    SUB
490       KM       RUNOFF FROM SUB 2320
491       BA  .3723
492       LS           79   13.87
493       UK    200  .0500    .15    100
494       RK   7200  .0416   .045          TRAP     15      3

495       KK   2321     CP
496       KM       COMBINE SUB 2240, SUB 2280, SUB 2290, SUB 2310, & SUB 2320
497       HC      5

498       KK   2302    RET
499       KM       RETRIEVE DIVERTED FLOW FROM DIV 2301 (SUB 2300)
500       DR   2302

501       KK   2331     CP
502       KM       ROUTE DIVERTED FLOW FROM SUB 2300 TO CP 2331
503       RK   3600  .0472   .045          TRAP     30      3

504       KK   2330    SUB
505       KM       RUNOFF FROM SUB 2330
506       BA  .4807
507       LS           82    4.88
508       UK    352  .3911    .25    100
509       RK   1920  .2283   .045   .048   TRAP     10      3
510       RK   5760  .0738   .045          TRAP     30      3

511       KK   2332     CP
512       KM       COMBINE SUB 2330 & CP 2331
513       HC      2

514       KK   2335    SUB
515       KM       RUNOFF FROM SUB 2335 & ROUTE CP 2332
516       BA  .3515
517       LS           74   31.28
518       UK    150  .0600    .15    100
519       RK   7400  .0382   .045          TRAP     30     25     YES

520       KK   2340    SUB
521       KM       RUNOFF FROM SUB 2340
522       BA  .2776
523       LS           86   45.99          74   45.99
524       UK    500  .4000    .30     30
525       UK    160  .0625    .15     70
526       RK   7050  .0526   .045          TRAP     10      3

527       KK   2322     CP
528       KM       COMBINE SUB 2335, SUB 2340, & CP 2321
529       KM       THIS IS THE TOTAL INFLOW FROM MODEL GN50.24I TO CAP DIKE NO.4
530       HC      3
1
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

531       KK   2125     SUB
532       KM        RUNOFF FROM SUB-BASIN 2125
533       BA  .0739
534       LS            74      72
535       UK    115  .0383    .15     100
536       RK   3400  .0150   .045          TRAP     15      5

537       KK   2126      CP
538       KM        ROUTE SUB 2125 TO CAP DIKE 4
539       RK   3300  .0130   .030          TRAP     10      3

540       KK    4IN      CP
541       KM        COMBINE CP 2171, CP 2322, & CP 2126
542       KM        THIS IS THE TOTAL INFLOW TO CAP DIKE NO. 4
543       HC      3

544       KK  DIKE4     DAM
545       KM        ROUTE CP 4IN THROUGH CAP DIKE NO. 4
546       KO      1      2
547       RS      1   STOR
548       SV      0      2     13     45     98    171    265    404    595    824
549       SV   1098   1420   1800   2253   2782   3381   4069   4854   5728   6686
550       SE   1496   1498   1500   1502   1504   1506   1508   1510   1512   1514
551       SE   1516   1518   1520   1522   1524   1526   1528   1530   1532   1534
552       SS   1533    100    2.9    1.5
553       ST   1534    100    2.9    1.5
554       ZZ
```

SCHEMATIC DIAGRAM OF STREAM NETWORK

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

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

  21     SUB39
           .
           .
  33       .     SUB40
           .       .
           .       .
  39     CP41............
           V
           V
  42     SUB41 ***
           .
           .
  48       .     SUB42
           .       .
           .       .
  54       .       .     SUB43
           .       .       .
           .       .       .
  60       .       .       .     SUB44
           .       .       .       .
           .       .       .       .
  66       .       .     CP45............
           .       .       V
           .       .       V
  69       .       .     SUB45 ***
           .       .       .
           .       .       .
  75       .       .       .     SUB45A
           .       .       .       .
           .       .       .       .
  81       .       .       .       .     SUB46
           .       .       .       .       .
           .       .       .       .       .
  88       .       .     CP47........................
           .       .       V
           .       .       V
  91       .       .     SUB47 ***
           .       .       .
           .       .       .
  97     CP48........................
           V
           V
 100     SUB48 ***
           .
           .
 106       .     SUB50
           .       .
           .       .
 113     CP51............
           .
           .
 121       .-------->   2003
 116     2004
           .
           .
 124       .     SUB49
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130     49.1............
         V
         V
133     SUB51 ***
         V
         V
139     SUB52 ***
         V
         V
145     SUB53 ***
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151      .      2000
         .       V
         .       V
166      .      2010 ***
         .       .
         .       .
174      .       .        .<-------   2003
172      .       .      2003
         .       .       V
         .       .       V
175      .       .      2005 ***
         .       .       V
         .       .       V
181      .       .      2011
         .       .       .
         .       .       .
184      .      2012............
         .       V
         .       V
187      .      2015 ***
         .       .
         .       .
194      .       .      2020
         .       .       V
         .       .       V
201      .       .      2016
         .       .       .
         .       .       .
204      .      2017............
         .       V
         .       V
207      .      2030 ***
         .       .
         .       .
214      .       .      2040
         .       .       .
         .       .       .
221      .       .       .      2050
         .       .       .       .
         .       .       .       .
228      .       .      2051............
         .       .       V
         .       .       V
231      .       .      2060 ***
         .       .       .
         .       .       .
238      .       .       .      2070
         .       .       .       .
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248      .       .       .        .-------->   2072
246      .       .       .      2071
         .       .       .       V
         .       .       .       V
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251     .     .     .     2065 ***
        .     .     .     .
        .     .     .     .
259     .     .     .     .     .<-------   2072
257     .     .     .     .   2072
        .     .     .     .    V
        .     .     .     .    V
260     .     .     .     .   2131
        .     .     .     .    .
        .     .     .     .    .
263     .     .     .     .    .     2130
        .     .     .     .    .      .
        .     .     .     .    .      .
269     .     .     .     .   2132............
        .     .     .     .    .
        .     .     .     .    .
274     .     .     .     .    .------->   2134
272     .     .     .     .   2133
        .     .     .     .    V
        .     .     .     .    V
277     .     .     .     .   2066
        .     .     .     .    .
        .     .     .     .    .
280     .     .   2067........................
        .     .    V
        .     .    V
283     .     .   2080 ***
        .     .    .
        .     .    .
289     .   2081............
        .    V
        .    V
292     .   2090 ***
        .    .
        .    .
298     .     .   2100
        .     .    .
        .     .    .
304     .   2101............
        .    V
        .    V
307     .   2110 ***
        .    .
        .    .
313     .     .   2120
        .     .    .
        .     .    .
321     .     .     .     .<-------   2134
319     .     .     .     2134
        .     .     .      V
        .     .     .      V
322     .     .     .     2135 ***
        .     .     .      V
        .     .     .      V
329     .     .     .     2140 ***
        .     .     .      .
        .     .     .      .
335     .     .     .     .     2150
        .     .     .     .      .
        .     .     .     .      .
343     .     .     .     2151............
        .     .     .      V
        .     .     .      V
346     .     .     .     2160 ***
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353   .   .   .   .   2170
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359   .   .   .   .   .   2180
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      .   .   .   .   .    V
366   .   .   .   .   .   2190 ***
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      .   .   .   .   .    .
372   .   .   .   .   .    .   2200
      .   .   .   .   .    .    .
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378   .   .   .   .   .    .    .   2210
      .   .   .   .   .    .    .    .
      .   .   .   .   .    .    .    .
385   .   .   .   .   .   2211.......................
      .   .   .   .   .    V
      .   .   .   .   .    V
388   .   .   .   .   .   2220 ***
      .   .   .   .   .    .
      .   .   .   .   .    .
395   .   .   .   .   .    .   2230
      .   .   .   .   .    .    V
      .   .   .   .   .    .    V
401   .   .   .   .   .    .   2221
      .   .   .   .   .    .    .
      .   .   .   .   .    .    .
404   .   .   .   .   .   2222............
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      .   .   .   .   .    .
407   .   2171.............................................
      .   .
      .   .
411   .   .   2240
      .   .   .
      .   .   .
423   .   .   .   2260
      .   .   .   .
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429   .   .   .   .   2255
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437   .   .   .   .   .   2270
      .   .   .   .   .    .
      .   .   .   .   .    .
445   .   .   .   .   2271............
      .   .   .   .    V
      .   .   .   .    V
448   .   .   .   .   2250 ***
      .   .   .   .    .
      .   .   .   .    .
455   .   .   .   2251............
      .   .   .    V
      .   .   .    V
458   .   .   .   2280 ***
      .   .   .    .
      .   .   .    .
464   .   .   .   .   2290
      .   .   .   .   .
      .   .   .   .   .
470   .   .   .   .   .   2300
      .   .   .   .   .    .
      .   .   .   .   .    .
480   .   .   .   .   .    .-------> 2302
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478     .     .     .     .     .     2301
        .     .     .     .     .      V
        .     .     .     .     .      V
483     .     .     .     .     .     2310 ***
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        .     .     .     .     .      .
489     .     .     .     .     .      .     2320
        .     .     .     .     .      .      .
        .     .     .     .     .      .      .
495     .     .   2321.............................................
        .     .     .
        .     .     .
500     .     .     .      .<-------   2302
498     .     .     .   2302
        .     .     .    V
        .     .     .    V
501     .     .     .   2331
        .     .     .    .
        .     .     .    .
504     .     .     .     .     2330
        .     .     .    .      .
        .     .     .    .      .
511     .     .     .   2332............
        .     .     .    V
        .     .     .    V
514     .     .     .   2335 ***
        .     .     .    .
        .     .     .    .
520     .     .     .     .     2340
        .     .     .    .      .
        .     .     .    .      .
527     .     .   2322........................
        .     .     .
        .     .     .
531     .     .     .   2125
        .     .     .    V
        .     .     .    V
537     .     .     .   2126
        .     .     .    .
        .     .     .    .
540     .   4IN........................
        .    V
        .    V
544     .   DIKE4
```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

1

****

FLOOD HYDROGRAPH PACKAGE HEC-1 (IBM XT 512K VERSION) -FEB 1,1985
U.S. ARMY CORPS OF ENGINEERS, THE HYDROLOGIC ENGINEERING CENTER, 609 SECOND STREET, DAVIS, CA. 95616

****

GENERAL DRAINAGE PLAN FOR NORTH SCOTTSDALE
FUTURE LAND USE CONDITIONS WITH EXISTING DRAINAGE PATTERN
MODEL GN40.24I + GN50.24I -- SUB-BASIN SERIES 2000 TO 2230 & 39 TO 53
SUB-BASIN SERIES 2240 TO 2340
100-YEAR, 24-HOUR STORM, USING SCS TYPE IIA RAINFALL DISTRIBUTION
RAINFALL FROM NOAA ATLAS, USING 25 SQ MI AREAL REDUCTION FACTOR
LAND USE DENSITIES FROM GENERAL PLAN & TONTO FOOTHILLS PLAN

100% OF THE REATA PASS FAN FLOW IS ROUTED TO CAP DIKE NO.3

THIS IS MODEL CP4R.24I THAT IS USED TO DETERMINE THE MAXIMUM WATER
SURFACE ELEVATION BEHIND CAP DIKE NO. 4
SUB 2125 HAS BEEN ADDED

STAGE/STORAGE DATA IS TAKEN FROM BUREC MEMO DATED SEPT 29, 1987

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

  IT       HYDROGRAPH TIME DATA
             NMIN         5  MINUTES IN COMPUTATION INTERVAL
            IDATE    27FEB88  STARTING DATE
            ITIME      0000  STARTING TIME
               NQ       300  NUMBER OF HYDROGRAPH ORDINATES
           NDDATE    28FEB88  ENDING DATE
           NDTIME      0055  ENDING TIME

          COMPUTATION INTERVAL     .08 HOURS
             TOTAL TIME BASE   24.92 HOURS

     ENGLISH UNITS
```

*** ***

1

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

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	AREA	BASIN STAGE	MAXIMUM MAX STAGE	TIME OF
+	HYDROGRAPH AT SUB39	4235.	6.08	484.	147.	142.	1.94				
+	HYDROGRAPH AT SUB40	1347.	6.08	134.	41.	39.	.58				
+	2 COMBINED AT CP41	5582.	6.08	617.	188.	181.	2.53				
+	HYDROGRAPH AT SUB41	6245.	6.17	773.	235.	227.	3.32				
+	HYDROGRAPH AT SUB42	1244.	6.08	125.	38.	37.	.58				
+	HYDROGRAPH AT SUB43	2560.	6.08	263.	80.	77.	1.07				
+	HYDROGRAPH AT SUB44	2005.	6.08	205.	62.	60.	.85				
+	2 COMBINED AT CP45	4565.	6.08	467.	142.	136.	1.92				
+	HYDROGRAPH AT SUB45	4734.	6.08	513.	156.	150.	2.13				
+	HYDROGRAPH AT SUB45A	428.	6.08	43.	13.	13.	.17				
+	HYDROGRAPH AT SUB46	2269.	6.08	230.	68.	66.	.93				
+	3 COMBINED AT CP47	7431.	6.08	786.	237.	228.	3.23		2301		
+	HYDROGRAPH AT SUB47	7321.	6.17	890.	268.	258.	3.60				
+	3 COMBINED AT CP48	14599.	6.17	1785.	542.	522.	7.50				
+	HYDROGRAPH AT SUB48	14380.	6.17	1790.	543.	523.	7.55				
+	HYDROGRAPH AT SUB50	827.	6.08	82.	25.	24.	.36				
+	2 COMBINED AT CP51	15044.	6.17	1871.	568.	547.	7.91		1902		
+	DIVERSION TO 2003	0.	6.17	0.	0.	0.	7.91				
+	HYDROGRAPH AT 2004	15044.	6.17	1871.	568.	547.	7.91				

	HYDROGRAPH AT							
+	SUB49	713.	6.08	68.	21.	20.	.35	
	2 COMBINED AT							
+	49.1	15614.	6.17	1939.	589.	567.	8.26	
	HYDROGRAPH AT							
+	SUB51	15612.	6.17	2201.	669.	644.	9.33	
	HYDROGRAPH AT							
+	SUB52	15400.	6.42	2356.	731.	704.	10.68	
	HYDROGRAPH AT							
+	SUB53	11370.	6.75	2516.	805.	775.	12.43	
	HYDROGRAPH AT							
+	2000	1742.	6.08	172.	52.	50.	.80	
	HYDROGRAPH AT							
+	2010	1724.	6.08	195.	59.	57.	.89	
	HYDROGRAPH AT							
+	2003	0.	.08	0.	0.	0.	.00	
	HYDROGRAPH AT							
+	2005	136.	6.17	19.	6.	6.	.14	
	ROUTED TO							
+	2011	130.	6.17	20.	6.	6.	.14	
	2 COMBINED AT							
+	2012	1795.	6.17	215.	65.	63.	1.03	1743
	HYDROGRAPH AT							
+	2015	2155.	6.25	295.	90.	87.	1.43	1507
	HYDROGRAPH AT							
+	2020	254.	6.08	25.	8.	7.	.11	18,364
	ROUTED TO							
+	2016	246.	6.08	25.	8.	7.	.11	
	2 COMBINED AT							
+	2017	2302.	6.17	319.	98.	94.	1.54	
	HYDROGRAPH AT							
+	2030	2416.	6.25	353.	108.	104.	1.78	
	HYDROGRAPH AT							
+	2040	1928.	6.08	191.	58.	56.	.93	
	HYDROGRAPH AT							
+	2050	1735.	6.08	171.	52.	50.	.86	
	2 COMBINED AT							
+	2051	3663.	6.08	362.	110.	106.	1.79	1146
	HYDROGRAPH AT							
+	2060	3509.	6.08	392.	120.	115.	1.94	
	HYDROGRAPH AT							
+	2070	3231.	6.08	316.	96.	93.	1.46	1418
	DIVERSION TO							

+	2072	2154.	6.08	211.	64.	62.	1.46	
	HYDROGRAPH AT							
+	2071	1077.	6.08	105.	32.	31.	1.46	
	HYDROGRAPH AT							
+	2065	1293.	6.17	137.	42.	41.	1.63	
	HYDROGRAPH AT							
+	2072	2154.	6.08	211.	64.	62.	.00	
	ROUTED TO							
+	2131	1907.	6.17	216.	66.	63.	.00	
	HYDROGRAPH AT							
+	2130	596.	6.08	67.	20.	20.	.30	
	2 COMBINED AT							
+	2132	2471.	6.08	282.	86.	83.	.30	
	DIVERSION TO							
+	2134	1880.	6.08	246.	77.	74.	.30	
	HYDROGRAPH AT							
+	2133	591.	6.08	36.	9.	9.	.30	
	ROUTED TO							
+	2066	586.	6.17	36.	9.	9.	.30	
	3 COMBINED AT							
+	2067	5376.	6.17	565.	171.	164.	3.87	1389
	HYDROGRAPH AT							
+	2080	5019.	6.17	590.	179.	173.	4.01	
	2 COMBINED AT							
+	2081	7379.	6.25	943.	288.	277.	5.79	1274
	HYDROGRAPH AT							
+	2090	5158.	6.50	988.	305.	294.	6.15	
	HYDROGRAPH AT							
+	2100	230.	6.42	66.	21.	20.	.38	
	2 COMBINED AT							
+	2101	5388.	6.50	1052.	326.	314.	6.53	825
	HYDROGRAPH AT							
+	2110	4934.	6.75	1139.	358.	345.	7.05	
	HYDROGRAPH AT							
+	2120	798.	6.58	254.	81.	78.	1.43	
	HYDROGRAPH AT							
+	2134	1880.	6.08	246.	77.	74.	.00	
	HYDROGRAPH AT							
+	2135	1956.	6.17	271.	85.	82.	.12	
	HYDROGRAPH AT							
+	2140	2049.	6.17	310.	97.	94.	.31	
	HYDROGRAPH AT							
+	2150	1363.	6.08	143.	44.	42.	.69	

	2 COMBINED AT							
+	2151	3087.	6.17	453.	141.	136.	1.00	3087
	HYDROGRAPH AT							
+	2160	3944.	6.25	642.	200.	193.	1.98	
	HYDROGRAPH AT							
+	2170	440.	6.25	81.	25.	24.	.46	
	HYDROGRAPH AT							
+	2180	2273.	6.08	230.	70.	67.	1.00	
	HYDROGRAPH AT							
+	2190	2257.	6.17	259.	79.	76.	1.13	
	HYDROGRAPH AT							
+	2200	504.	6.08	50.	15.	15.	.25	
	HYDROGRAPH AT							
+	2210	3426.	6.08	350.	107.	103.	1.78	
	3 COMBINED AT							
+	2211	6113.	6.08	659.	201.	194.	3.16	1934
	HYDROGRAPH AT							
+	2220	6718.	6.25	796.	242.	233.	3.72	
	HYDROGRAPH AT							
+	2230	457.	6.17	52.	16.	16.	.33	
	ROUTED TO							
+	2221	453.	6.17	52.	17.	16.	.33	
	2 COMBINED AT							
+	2222	7111.	6.25	849.	259.	249.	4.05	1756
	5 COMBINED AT							
+	2171	13084.	6.25	2963.	923.	889.	14.97	
	HYDROGRAPH AT							
+	2240	962.	6.08	117.	36.	35.	.60	
	HYDROGRAPH AT							
+	2260	369.	6.17	51.	16.	15.	.26	
	HYDROGRAPH AT							
+	2255	556.	6.00	60.	18.	18.	.30	
	HYDROGRAPH AT							
+	2270	1801.	6.00	184.	56.	54.	.97	
	2 COMBINED AT							
+	2271	2357.	6.00	244.	75.	72.	1.27	
	HYDROGRAPH AT							
+	2250	2747.	6.08	299.	91.	88.	1.49	
	2 COMBINED AT							
+	2251	3094.	6.08	349.	107.	103.	1.76	
	HYDROGRAPH AT							
+	2280	3129.	6.17	384.	118.	113.	1.94	
	HYDROGRAPH AT							
+	2290	1189.	6.08	127.	39.	38.	.60	

	HYDROGRAPH AT							
+	2300	3895.	6.08	381.	116.	112.	1.80	
	DIVERSION TO							
+	2302	1948.	6.08	190.	58.	56.	1.80	
	HYDROGRAPH AT							
+	2301	1948.	6.08	190.	58.	56.	1.80	
	HYDROGRAPH AT							
+	2310	2223.	6.08	265.	81.	78.	2.10	
	HYDROGRAPH AT							
+	2320	745.	6.08	73.	23.	22.	.37	
	5 COMBINED AT							
+	2321	8144.	6.08	966.	297.	286.	5.62	
	HYDROGRAPH AT							
+	2302	1948.	6.08	190.	58.	56.	.00	
	ROUTED TO							
+	2331	1875.	6.17	193.	59.	57.	.00	
	HYDROGRAPH AT							
+	2330	1010.	6.08	99.	30.	29.	.48	
	2 COMBINED AT							
+	2332	2719.	6.17	291.	89.	86.	.48	
	HYDROGRAPH AT							
+	2335	3259.	6.17	372.	114.	110.	.83	
	HYDROGRAPH AT							
+	2340	634.	6.00	71.	22.	21.	.28	
	3 COMBINED AT							
+	2322	11532.	6.17	1406.	432.	416.	6.73	
	HYDROGRAPH AT							
+	2125	191.	6.08	22.	7.	6.	.07	
	ROUTED TO							
+	2126	182.	6.17	23.	7.	7.	.07	
	3 COMBINED AT							
+	4IN	23290.	6.17	4384.	1362.	1312.	21.77	1070
	ROUTED TO							
+	DIKE4	0.	.08	0.	0.	0.	21.77	
+							1523.70	24.92

SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION DIKE4

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1496.00	1533.00	1534.00
STORAGE	0.	6207.	6686.
OUTFLOW	0.	0.	290.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1523.70	.00	2701.	0.	.00	.00	.00

*** NORMAL END OF HEC-1 ***
^Z

FILE: MP3.24I

(100-Year, 24-Hour, SCS Type IIA Storm)

This model includes the Pima Road channel, the Rawhide Wash channel, the Scottsdale Road channel, the Deer Valley Road channels, the Core North system, the Core South system, and reservoir routing operations for CAP Dikes 2 and 3. Low-flow culvert diverts are de-activated. All of the Reata Pass flows are diverted to CAP Dike 3.

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

  1       ID     UPPER INDIAN BEND WASH REGIONAL FLOOD CONTROL & DRAINAGE PLAN
  2       ID
  3       ID
  4       ID     MODEL MP3.24I -- SUB-BASIN SERIES 7B TO 53.1
  5       ID
  6       ID     THIS IS AN INTEGRATED MASTER PLAN MODEL WITH A NORTH-SOUTH INTERCEPTOR
  7       ID     CHANNEL IN-PLACE ALONG PIMA ROAD FROM POINT 3A TO 3K TO 3L.
  8       ID     ALL CORE NORTH-CORE SOUTH CHANNELS & DETENTION BASINS ARE IN-PLACE.
  9       ID     THE RAWHIDE WASH CHANNEL IS IN-PLACE ALONG ALIGNMENT 4A-4B-4D.
 10       ID     A NORTH-SOUTH INTERCEPTOR CHANNEL IS IN-PLACE ALONG SCOTTSDALE ROAD FROM
 11       ID     POINT 4C TO 4B.
 12       ID
 13       ID     DETENTION BASIN 53R HAS BEEN RECONFIGURED TO REFLECT NEW VOLUMES
 14       ID     & OUTLET DESIGN FROM STANLEY CONSULTANTS (8/10/90)
 15       ID     OUTLET DESIGN WAS SUBSEQUENTLY MODIFIED BY RLW
 16       ID
 17       ID     SUB 33A & CN5 MODIFIED TO REFLECT DRAINAGE SPLIT ON CORRIGAN-MARLEY
 18       ID
 19       ID     FUTURE CONDITION LAND-USE
 20       ID
 21       ID     LOW-FLOW CULVERT DIVERTS ARE SET AT ZERO
 22       ID
 23       ID     100% OF REATA PASS FAN IS DIVERTED WEST TO PIMA ROAD.
 24       ID
 25       ID     RESERVOIR ROUTING OPERATIONS ARE IN-PLACE FOR CAP DIKES 2 & 3.
 26       ID
 27       ID     THIS MODEL REFLECTS ALL D.A. ADJUSTMENTS MADE TO MODEL F3.24I AND FLOW
 28       ID     DIVERSIONS NEAR RAWHIDE WASH APEX & PINNACLE PEAK.
 29       ID     THE TPC GOLF COURSE AND ADJACENT RESIDENTIAL AREAS HAVE BEEN ADDED TO
 30       ID     THE CORE SOUTH AREA.
 31       ID
 32       ID     100-YR, 24-HR STORM, USING SCS TYPE IIA RAINFALL DISTRIBUTION
 33       ID     RAINFALL FROM NOAA ATLAS, USING 25 SQ MI AREAL REDUCTION FACTOR (.968)
 34       ID
 35       ID     FUTURE LAND-USE DENSITIES FROM OCT 1987 GENERAL PLAN, BRW PLANS, AND
 36       ID     THE TOMTO FOOTHILLS PLAN,   ALL SCOTTSDALE RESIDENTIAL AREAS HAVE THE
 37       ID     PERCENT OF IMPERVIOUS COVER ADJUSTED FOR NAOS REQUIREMENTS.
        *DIAGRAM
 38       IT     5 28APR90     0    300
 39       IO     5     0
 40       IN    30 28APR90     0

 41       KK    30R    SUB
 42       KM       RUNOFF FROM SUB-BASIN 30R
 43       BA  1.3105
 44       PB   4.25
 45       PC     0   .005   .009   .010   .013   .019   .021   .028   .032   .044
 46       PC  .057   .100   .660   .745   .776   .800   .816   .830   .840   .850
 47       PC  .861   .868   .878   .884   .891   .900   .905   .912   .919   .923
 48       PC  .930   .934   .939   .944   .950   .958   .961   .963   .969   .971
 49       PC  .974   .979   .981   .985   .989   .991   .993   .996  1.000
 50       LS          82    6.6
 51       UK   110  .0408    .20    100
 52       RK  10640  .0371   .045         TRAP     50    100
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  53      KK   30R1     DIV                                    WASHES
  54      KM        DIVERT LOW-FLOWS TO EXISTING WASHS WEST OF PIMA ROAD ( SUB 31B)
  55      DT   30R2
  56      DI     0    145    500   1000   5000
  57      DQ     0      0      0      0      0

  58      KK   31.1     CP
  59      KM        ROUTE NON-DIVERTED FLOW DOWN PIMA ROAD CHANNEL TO THE BOTTOM OF SUB 31A
  60      RS     1   FLOW     -1
  61      RC  .035   .035   .035   5600  .0194
  62      RX     0      8      9     21     61     73     74     82
  63      RY    10      6      6      0      0      6      6     10

  64      KK   31A     SUB
  65      KM        RUNOFF FROM SUB 31A
  66      BA  .4132
  67      LS            70   15.0
  68      UK   102  .0213    .10    100
  69      RK  2500  .0213   .045   .042   TRAP      8      2
  70      RK  5600  .0194   .035          TRAP     40      2

  71      KK   34R     SUB
  72      KM        RUNOFF FROM SUB 34R
  73      BA  .6421
  74      LS            77    9.9
  75      UK   110  .0408    .20    100
  76      RK  6800  .0644   .045          TRAP     50    100

  77      KK   31.3     CP
  78      KM        ROUTE SUB 34R TO CP 31.3
  79      RK  4500  .0243   .045          TRAP     15     30

  80      KK   31.2     CP
  81      KM        COMBINE SUB 31A, CP 31.1, & CP 31.3
  82      HC     3

  83      KK   31A1     DIV
  84      KM        DIVERT LOW-FLOWS TO EXISTING WASHS WEST OF PIMA ROAD (SUB 31B)
  85      DT   31A2
  86      DI     0    145    500   1000   5000
  87      DQ     0      0      0      0      0

  88      KK   36.2     CP
  89      KM        ROUTE NON-DIVERTED FLOW DOWN PIMA ROAD CHANNEL TO THE BOTTOM OF SUB 36L1
  90      RS     1   FLOW     -1
  91      RC  .035   .035   .035   3600  .0194
  92      RX     0      8      9     21     71     83     84     92
  93      RY    10      6      6      0      0      6      6     10
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  94      KK   35N    SUB
  95      KM      RUNOFF FROM SUB-BASIN 35N
  96      KM      THIS BASIN DRAINS TO A CBC AT THE EAST SIDE OF DESERT HIGHLANDS
  97      BA  .4068
  98      LS          82   31.8
  99      UK   265  .0381    .20    100
 100      RK  5200  .0269   .045          TRAP     25      4

 101      KK   35N2    DIV
 102      KM      DIVERT FLOW THROUGH BLOCK WALL OPENINGS AT EAST SIDE OF DESERT HIGHLANDS
 103      DT   35N1
 104      DI     0    100   1000
 105      DQ     0     40    400

 106      KK   35L1     CP
 107      KM      ROUTE DIV 35N2 TO CP 35L1
 108      RK  7500  .0367   .045          TRAP     50      5

 109      KK    35L    SUB
 110      KM      RUNOFF FROM SUB 35L
 111      BA  .6521
 112      LS          78   12.7
 113      UK   265  .0381    .20    100
 114      RK  9400  .0463   .045          TRAP     50    100

 115      KK   35L2     CP
 116      KM      COMBINE SUB 35L & CP 35L1
 117      HC     2

 118      KK   36L1    SUB
 119      KM      RUNOFF FROM SUB 36L1 & ROUTE CP 35L2
 120      BA  .4125
 121      LS          73    7.2
 122      UK   116  .0213    .10    100
 123      RK  4350  .0269   .045          TRAP     50    130  YES

 124      KK   36.3     CP
 125      KM      ROUTE SUB 36L1 TO CP 36.3
 126      RS     1   FLOW     -1
 127      RC  .035   .035   .035   2000  .0194
 128      RX     0      8      9     21     71     83     84     92
 129      RY    10      6      6      0      0      6      6     10

 130      KK   36.4     CP
 131      KM      COMBINE CP 36.2 & CP 36.3
 132      HC     2

 133      KK   36.5    DIV
 134      KM      DIVERT LOW-FLOWS TO EXISTING WASHS WEST OF PIMA ROAD (SUB 36L2)
 135      DT   36.6
 136      DI     0    165    500   1000   5000
 137      DQ     0      0      0      0      0
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  138     KK   36.7     CP
  139     KM       ROUTE NON-DIVERTED FLOW DOWN PIMA ROAD CHANNEL TO BOUNDARY OF SUB 36R1
  140     RS     1   FLOW     -1
  141     RC  .035   .035   .035   1850  .0194
  142     RX     0     8     9     21    71    83    84    92
  143     RY    10     6     6      0     0     6     6    10

  144     KK   35N1    RET
  145     KM       RETRIEVE DIVERTED FLOW FROM SUB 35N
  146     DR   35N1

  147     KK    35R    SUB
  148     KM       RUNOFF FROM SUB 35R & ROUTE RET 35N1
  149     BA  .4455
  150     LS          77   10.4
  151     UK   265  .0381   .20   100
  152     RK  7700  .0357   .045        TRAP    50   100   YES

  153     KK   36R1    SUB
  154     KM       RUNOFF FROM SUB 36R1 & ROUTE SUB 35R
  155     BA  .6736
  156     LS          72   19.5
  157     UK   116  .0213   .10   100
  158     RK  6500  .0331   .045        TRAP    50   130   YES

  159     KK   36.8     CP
  160     KM       COMBINE SUB 36R1 & CP 36.7
  161     KM       D.A. FOR SUB 36R1 HAS BEEN REDUCED TO REFLECT THE PIMA ROAD CHANNEL
  162     HC     2

  163     KK   36.9    DIV
  164     KM       DIVERT LOW-FLOWS TO EXISTING WASHS WEST OF PIMA ROAD (SUB 37A)
  165     DT  36.10
  166     DI     0   165   500   1000   5000
  167     DQ     0     0     0      0      0

  168     KK   37.1     CP
  169     KM       ROUTE NON-DIVERTED FLOW DOWN PIMA ROAD CHANNEL TO PINNACLE PEAK ROAD   NOT!
  170     KM       THIS LOCATION TIES INTO THE CORE NORTH, PIMA ROAD CHANNEL.
  171     RS     1   FLOW     -1
  172     RC  .035   .035   .035   3950  .0194
  173     RX     0     8     9     21    71    83    84    92
  174     RY    10     6     6      0     0     6     6    10

  175     KK    37B    SUB
  176     KM       RUNOFF FROM SUB 37B
  177     BA  .1148
  178     LS          73   15.4
  179     UK    61  .0213   .10   100
  180     RK  1300  .0237   .045        TRAP    25     3
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

                                                                          Deer Valley Rd ?
  181     KK   37.2     CP
  182     KM       ROUTE SUB 37B DOWN PIMA ROAD CHANNEL TO PINNACLE PEAK ROAD
  183     RS     1   FLOW     -1
  184     RC  .035   .035   .035   1900  .0194
  185     RX     0     8     9     21    71    83    84    92
  186     RY    10     6     6      0     0     6     6    10

  187     KK   37.3     CP
  188     KM       COMBINE CP 37.1 & CP 37.2
  189     HC     2

  190     KK   37.4    DIV
  191     KM       DIVERT LOW-FLOWS TO EXISTING WASHS WEST OF PIMA ROAD (SUB37A)
  192     DT   37.5
  193     DI     0   165   500   1000  5000
  194     DQ     0     0     0      0     0

  195     KK   52.1     CP
  196     KM       ROUTE NON-DIVERTED FLOW DOWN CORE NORTH, PIMA ROAD CHANNEL
  197     RS     1   FLOW     -1
  198     RC  .035   .035   .035   4100  .0223
  199     RX     0     8     9     21    91   103   104   112
  200     RY    10     6     6      0     0     6     6    10
        *   ***********************************************************************
        *
        *            INSERT SUB-BASINS 39 TO 53
        *
        *   ***********************************************************************

  201     KK  SUB39
  202     KM       RUNOFF FROM SUB-BASIN 39
  203     BA  1.9302
  204     LS           85   23.4
  205     UK    330  .0433   .20   100
  206     RK  11240  .0253   .045        TRAP    30     3

  207     KK  SUB40
  208     KM       RUNOFF FROM SUB-BASIN 40
  209     BA  .5844
  210     LS           83    9.9
  211     UK    160  .0627   .20   100
  212     RK   7000  .0350   .045        TRAP    20     3

  213     KK   CP41
  214     KM       COMBINE HYDROGRAPHS SUB39 & SUB40
  215     HC     2

  216     KK  SUB41
  217     KM       RUNOFF FROM SUB-BASIN 41 & ROUTE CP 41
  218     BA  .7911
  219     LS           74   10.1
  220     UK    280  .2386   .20   100
  221     RK   9400  .0282   .045        TRAP    50     3   YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  222     KK  SUB42
  223     KM      RUNOFF FROM SUB-BASIN 42
  224     BA  .5844
  225     LS          78   23.3
  226     UK   280  .2386   .20    100
  227     RK  8750  .0573   .045         TRAP    20     3

  228     KK  SUB43
  229     KM      RUNOFF FROM SUB-BASIN 43
  230     BA 1.0665
  231     LS          85   10.5
  232     UK   260  .0515   .20    100
  233     RK  7400  .0255   .045         TRAP    25     3

  234     KK  SUB44
  235     KM      RUNOFF FROM SUB-BASIN 44
  236     BA  .8389
  237     LS          85    8.1
  238     UK   260  .0515   .20    100
  239     RK  9840  .0622   .045         TRAP    25     3

  240     KK   CP45
  241     KM      COMBINE HYDROGRAPHS SUB43 & SUB44
  242     HC     2

  243     KK  SUB45
  244     KM      RUNOFF FROM SUB-BASIN 45 & ROUTE CP 45
  245     BA  .2037
  246     LS          81   14.5
  247     UK   125  .1166   .20    100
  248     RK  3600  .0366   .045         TRAP    30     3    YES

  249     KK SUB45A
  250     KM      RUNOFF FROM SUB 45A
  251     BA  .1720
  252     LS          86    6.9
  253     UK   275  .2200   .20    100
  254     RK  5400  .0411   .045         TRAP    15     3

  255     KK  SUB46
  256     KM      RUNOFF FROM SUB-BASIN 46
  257     BA  .9268
  258     LS          86    3.7
  259     UK   265  .4958   .20    100
  260     RK  3300  .2271   .045   .111   TRAP    10     3
  261     RK  7100  .0535   .045         TRAP    25     3

  262     KK   CP47
  263     KM      COMBINE HYDROGRAPHS SUB45, SUB45A, & SUB46
  264     HC     3
1
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  265     KK  SUB47
  266     KM      RUNOFF FROM SUB-BASIN 47 & ROUTE CP 47
  267     BA  .3757
  268     LS          77    8.6
  269     UK   375  .1000    .20    100
  270     RK  9600  .0217   .045          TRAP     50      3    YES

  271     KK  CP48
  272     KM      COMBINE HYDROGRAPHS SUB41, SUB42, & SUB47
  273     HC     3

  274     KK  SUB48
  275     KM      RUNOFF FROM SUB-BASIN 48 & ROUTE CP 48
  276     BA  .0438
  277     LS          73    6.9
  278     UK   150  .0733    .20    100
  279     RK  1300  .0338   .045          TRAP     75      3    YES

  280     KK  SUB50
  281     KM      RUNOFF FROM SUB-BASIN 50
  282     BA  .3580
  283     LS          84    2.8
  284     UK   300  .3555    .20    100
  285     RK   730  .1506   .045   .036   TRAP     10      3
  286     RK  6400  .0453   .045          TRAP     25      3

  287     KK  CP51
  288     KM      COMBINE HYDROGRAPHS SUB 48 & SUB 50
  289     HC     2

  290     KK  2004    DIV
  291     KM      DIVERT FLOW TO SUB 2005
  292     KM      THIS DIVERT OCCURS AT A BRAIDED CHANNEL BIFURCATION LOCATED 1000 FEET
  293     KM      SOUTH OF THE EAST END OF PINNACLE PEAK ROAD.
  294     KM      THIS IS AN ACTIVE ALLUVIAL FAN APEX.
  295     DT  2003
  296     DI     0  15000
  297     DQ     0      0

  298     KK  SUB49
  299     KM      RUNOFF FROM SUB-BASIN 49
  300     BA  .3528
  301     LS          79    6.9
  302     UK   135  .0758    .20    100
  303     RK  5400  .0370   .045          TRAP     30      3

  304     KK  49.1    CP
  305     KM      COMBINE SUB 49 & NON-DIVERTED FLOW FROM DIV 2004
  306     HC     2
1
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

307       KK  SUB51
308       KM       RUNOFF FROM SUB-BASIN 51 & ROUTE CP 49.1
309       BA  1.0201
310       LS           72    12.8
311       UK     94  .0213    .10     100
312       RK   6400  .0329   .045          TRAP   1500      2    YES

313       KK    52A     SUB
314       KM       RUNOFF FROM SUB-BASIN 52A & ROUTE SUB 51
315       BA  1.0474
316       LS           71    17.7
317       UK     76  .0213    .10     100
318       RK   5800  .0300   .045          TRAP   2500      2    YES

319       KK   52.2      CP
320       KM       COMBINE SUB 52A & CP 52.1
321       HC      2

322       KK   52A1      CP
323       KM       ROUTE RUNOFF FROM CP 52.2 DOWN PIMA ROAD CHANNEL TO COMBINE WITH
324       KM       RUNOFF FROM SUB 53A.
325       RS      1   FLOW     -1
326       RC   .035   .035   .035   5300  .0150
327       RX      0      8      9     21     91    103    104    112
328       RY     10      6      6      0      0      6      6     10

329       KK    53A     SUB
330       KM       RUNOFF FROM SUB-BASIN 53A
331       BA   .3329
332       LS           74      18
333       UK     67  .0213    .10     100
334       RK   3900  .0196   .045          TRAP     50     50

335       KK   53A1      CP
336       KM       COMBINE SUB 53A & CP 52A1
337       HC      2

338       KK  DB3.1      CP
339       KM       ROUTE CP 53A1 TO DETENTION BASIN No.3
340       RS      1   FLOW     -1
341       RC   .035   .035   .035   2200  .0150
342       RX      0      8      9     21     91    103    104    112
343       RY     10      6      6      0      0      6      6     10

344       KK     CN6     SUB
345       KM       RUNOFF FROM SUB CN6 (REVISED: 5/1/90)
346       BA  1.3659
347       LS           74    40.3
348       UK    100  .0150    .15     100
349       RK   1400  .0100   .018  .1921   TRAP     30      5
350       RK   9000  .0070   .040          TRAP    100     20
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

351       KK    DB3     CP
352       KM       COMBINE CP DB3.1 & SUB CN6
353       KM       THIS IS THE TOTAL INFLOW TO DETENTION BASIN No.3
354       HC      2

355       KK    53R     DAM
356       KM       PERFORM RESERVOIR ROUTING OPERATION FOR DETENTION BASIN No.3
357       KM       USE SV/SE DATA PROVIDED BY STANLEY & ASSC.  THIS DATA HAS BEEN EXTENDED
358       KM       ABOVE ELEV. 1620 BY R. WARD.  SQ/SE DATA IS BASED ON 2-4x10 & 1-4x5
359       KM       BOX CULVERTS OPERATING UNDER INLET CONTROL.  CULVERT INVERTS ARE AT
360       KM       ELEV. 1600
361       RS      1   STOR
362       SQ      0    210    382    575    775    912   1175   1375   1550   1700
363       SQ   1850   2000   2125   2250   2375   2500
364       SE   1600   1602   1603   1604   1605   1606   1608   1610   1612   1614
365       SE   1616   1618   1620   1622   1624   1626
366       SV      0   1.80   9.80  28.40     59   99.9  148.8  201.5  255.0  309.2
367       SV  364.3  420.2  476.9  534.4  592.6  711.6  833.8  959.2 1219.6 1354.6
368       SE   1600   1601   1602   1603   1604   1605   1606   1607   1608   1609
369       SE   1610   1611   1612   1613   1614   1616   1618   1620   1624   1626
370       SS   1625    100    2.9    1.5
371       ST   1626    100    2.9    1.5
        * ***************************************************************************
        *          ROUTE OUTFLOW FROM DETENTION BASIN No. 3 TO CORE SOUTH CHANNELS
        *
        *          A "CS" SUFFIX HAS BEEN ADDED TO THE ORIGINAL, SLA CORE SOUTH
        *          SUB-BASIN NUMBERS TO DISTINGUISH THEM FROM OTHER, UPSTREAM
        *          SUB-BASINS WITH THE SAME NUMBER.
        * ***************************************************************************

372       KK    200     CP
373       KM       USE DIVERT ROUTINE TO MODEL DUAL OUTLETS FROM DETENTION BASIN #3 IN
374       KM       CORE NORTH. THE WESTERN OUTLET TO THE HAYDEN ROAD CHANNEL IS A WEIR
375       KM       OUTLET. THE EASTERN OUTLET IS A CONCRETE BOX CULVERT. THIS OPERATION
376       KM       DIVERTS FLOW TO THE EASTERN OUTLET, WHICH IS A DESIGNATED AS CP 201.
377       KM       DIVERT RATIOS WERE MODIFIED ON 8/10/90 TO REFLECT SINGLE OUTLET NEAR
378       KM       EAST END OF DETENTION BASIN, PER STANLEY & ASSOCIATES
379       DT    53RD
380       DI      0    669    715   1858   3157
381       DQ      0    669    715   1858   3157

382       KK    202     CP
383       KM       ROUTE CP 200 SOUTH ALONG HAYDEN ROAD TO CP 202.
384       RK   2100 0.0137  0.018          TRAP    100      1

385       KK   14CS    SUB
386       KM       RUNOFF FROM SUB 14
387       BA  0.1090
388       LS            75     90
389       UK   1133 0.0135   0.10     100
390       RK   2400 0.0065  0.018          TRAP      8      1
```

Hydrograph at 200 Q=0 ∴ no flow to route

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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
                                                  Sub14ss

391       KK    203      CP
392       KM        COMBINE CP 202 WITH SUB 14. THIS WILL BE THE TOTAL CHANNEL DISCHARGE
393       KM        LEAVING THE INTERSECTION OF HAYDEN RD AND UNION HILLS RD.
394       HC      2

395       KK    204      CP
396       KM        ROUTE CP 203 T0 CP 204
397       RK   3550 0.0130  0.018          TRAP    100      1

398       KK  15ACS     SUB
399       KM        RUNOFF FROM SUB 15A
400       BA 0.0996
401       LS            75      90
402       UK   2170 0.0133   0.10     100
403       RK   3550 0.0130  0.018          TRAP    100      1

404       KK  15BCS     SUB
405       KM        RUNOFF FROM SUB 15B
406       BA 0.0944
407       LS            75      90
408       UK   2700 0.0130   0.10     100
409       RK   1590 0.0038  0.018          TRAP      8      1

410       KK    205      CP
411       KM        COMBINE SUB 15A WITH 15B. THIS IS THE TOTAL RUNOFF FROM SUB 15.
412       HC      2

413       KK    206      CP
414       KM        COMBINE CP 204 WITH CP 205. THIS IS THE TOTAL RUNOFF AT THE
415       KM        INTERSECTION OF HAYDEN ROAD AND BELL ROAD.
416       HC      2

417       KK    201      CP
418       KM        RETRIEVE DIVERTED OUTFLOW FROM EAST END OF DETENTION BASIN IN SUB 53
419       DR   53RD

420       KK    207      CP
421       KM        ROUTE CP 201 TO CP 207
422       RK   3040 0.0141  0.018          TRAP     40      1

423       KK  21ACS     SUB
424       KM        RUNOFF FROM SUB 21A
425       BA 0.1041
426       LS            75      90
427       UK   1800 0.0164   0.10     100
428       RK   2300 0.0070  0.018          TRAP      8      1

429       KK  21BCS     SUB
430       KM        RUNOFF FROM SUB 21B
431       BA 0.0762
432       LS            75      90
433       UK   1900 0.0184   0.10     100
434       RK   2320 0.0151  0.018          TRAP      8      1
```

Subbasin 14 has nothing to do with Hayden & Union Hills Rd. Where is Sp 201 2nd Subs 15ACS 15BCS 21ACS 21BCS

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

435       KK    208     CP
436       KM        COMBINE SUB 21A WITH 21B. THIS IS THE TOTAL RUNOFF FROM SUB 21.
437       KM        CORE SOUTH
438       HC      2

439       KK    209     CP
440       KM        ROUTE CP 208 TO CP 209
441       RK   1600  0.0119   0.018          TRAP      8      1

442       KK   17BCS    SUB
443       KM        RUNOFF FROM SUB 17B
444       BA  0.0299
445       LS            75      90
446       UK   1400  0.0157    0.10     100
447       RK   1000  0.0100   0.018          TRAP      8      1

448       KK    210     CP
449       KM        COMBINE SUB 17B WITH CP 209. THIS IS THE PEAK DISCHARGE THROUGH THE
450       KM        CHANNEL ALONG THE SOUTH SIDE OF SUB 17.
451       HC      2

452       KK   17ACS    SUB
453       KM        RUNOFF FROM SUB 17A
454       BA  0.0423
455       LS            75      90
456       UK   1400  0.0157    0.10     100
457       RK   2150  0.0116   0.018          TRAP      8      1

458       KK    211     CP
459       KM        COMBINE SUB 17A WITH CP 210
460       HC      2

461       KK    212     CP
462       KM        ROUTE CP 211 TO CP 212
463       RK   1640  0.0052   0.018          TRAP     10      1

464       KK   16BCS    SUB
465       KM        RUNOFF FROM SUB 16B
466       BA  0.0722
467       LS            75      90
468       UK   1760  0.0159    0.10     100
469       RK   1640  0.0052   0.018          TRAP     10      1

470       KK    213     CP
471       KM        COMBINE SUB 16B WITH CP 212. THIS IS THE PEAK DISCHARGE THROUGH THE
472       KM        CHANNEL ALONG THE SOUTH SIDE OF SUB 16.
473       HC      2

474       KK   16ACS    SUB
475       KM        RUNOFF FROM SUB 16A
476       BA  0.0331
477       LS            75      90
478       UK   1300  0.0146    0.10     100
479       RK   2000  0.0110   0.018          TRAP      8      1
```

21ACS 21BCS

17BCS

16BCS

Where are the points 5BRD, 202 14CS on Plate 3 203, 205, 206, S15A S15B, 207, S21ACS 21BCS

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

  480     KK    214     CP          16ACS
  481     KM        COMBINE SUB 16A WITH CP 213, AND CP 207
  482     HC      3

  483     KK    215     CP
  484     KM        ROUTE CP 214 TO CP 215 (BELL ROAD)
  485     RK   1600  0.0131   0.018          TRAP     40      1

  486     KK   19CS     SUB
  487     KM        RUNOFF FROM SUB 19
  488     BA  0.0225
  489     LS            75      90
  490     UK    680  0.0124    0.10     100
  491     RK    920  0.0050   0.018          TRAP      8      1

  492     KK    216     CP
  493     KM        ROUTE SUB 19 TO CP 216
  494     RK    980  0.0122   0.018          TRAP      8      1

  495     KK    217     CP
  496     KM        ROUTE CP 216 TO CP 217
  497     RK    950  0.0042   0.018          TRAP      8      1

  498     KK   18CS     SUB
  499     KM        RUNOFF FROM SUB 18
  500     BA  0.0932
  501     LS            75      90
  502     UK   1350  0.0137    0.10     100
  503     RK   2040  0.0029   0.018          TRAP      8      1

  504     KK    218     CP
  505     KM        COMBINE CP 217 WITH SUB 18. THIS IS THE PEAK DISCHARGE THROUGH THE
  506     KM        CHANNEL ALONG THE SOUTH SIDE OF SUB 18.
  507     HC      2

  508     KK    219     CP
  509     KM        COMBINE CP 215 WITH CP 218. THIS IS THE PEAK DISCHARGE PASSING BELL
  510     KM        ROAD AT THIS LOCATION.
  511     HC      2

  512     KK   20ACS     SUB
  513     KM        RUNOFF FROM SUB 20A. THIS IS THE PEAK DISCHARGE THROUGH THE CHANNEL
  514     KM        ALONG THE WEST SIDE OF SUB 20.
  515     BA  0.0264
  516     LS            75      90
  517     UK   1300  0.0154    0.10     100
  518     RK   1870  0.0112   0.018          TRAP      8      1

  519     KK    220     CP
  520     KM        ROUTE SUB 20A TO CP 220
  521     RK    880  0.0011   0.018          TRAP      8      1
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

522       KK  20BCS    SUB
523       KM      RUNOFF FROM SUB 20B
524       BA  0.0744
525       LS          75     90
526       UK   1650  0.0158   0.10    100
527       RK    880  0.0011   0.018  0.0372   TRAP     8      1

528       KK    221     CP
529       KM      COMBINE SUB 20B WITH CP 220. THIS IS THE PEAK DISCHARGE PASSING BELL
530       KM      ROAD AT THIS LOCATION.
531       HC      2

532       KK   TPC2    SUB
533       KM      RUNOFF FROM THE TPC GOLF COURSE BETWEEN HAYDEN & PIMA ROADS.
534       KM      THE CURVE NUMBER HAS BEEN INCREASED FROM 74 TO 88 TO REFLECT AMC 3 THAT
535       KM      WILL RESULT FROM CONSTANT WATERING OF THE GOLF COURSE.
536       BA  .4138
537       LS          88
538       UK    150  .0100    .15    100
539       RK   1400  .0150    .035         TRAP    100     20

540       KK    222     CP
541       KM      COMBINE CP 206, CP 219, CP 221, & SUB TPC2
542       KM      THIS IS THE TOTAL INFLOW TO CAP DIKE No.3 FROM THE CORE SOUTH SYSTEM
543       KM      LOCATED BETWEEN HAYDEN & PIMA ROADS.
544       HC      4
        *          *************                          ****************
        *          ************* END OF CORE SOUTH CHANNEL SYSTEM  ****************
        *          *************                          ****************

545       KK   30R2    RET
546       KM      RETRIEVE LOW-FLOW DIVERTS FROM SUB 30R
547       DR   30R2

548       KK   31A2    RET
549       KM      RETRIEVE LOW-FLOW DIVERTS FROM SUB 31A
550       DR   31A2

551       KK   31B1     CP
552       KM      COMBINE LOW-FLOW DIVERTS, RET 30R2 & RET 31A2
553       HC      2

554       KK    31B    SUB
555       KM      RUNOFF FROM SUB-BASIN 31B & ROUTE CP 31B1
556       BA  .9898
557       LS          74   13.8
558       UK    102  .0213    .10    100
559       RK   8800  .0228    .045         TRAP     50    130    YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  560     KK   36.6     RET
  561     KM        RETRIEVE LOW-FLOW DIVERT FROM SUB 36L1
  562     DR   36.6

  563     KK   36L2     SUB
  564     KM        RUNOFF FROM SUB 36L2 & ROUTE LOW-FLOW DIVERTS (RET 36.6)
  565     BA   .1736
  566     LS            74    18.4
  567     UK    116   .0213    .10     100
  568     RK   3000   .0269    .045          TRAP     50    130    YES

  569     KK   32.1      CP
  570     KM        COMBINE SUB 31B & SUB 36L2
  571     HC      2

  572     KK    32A     SUB
  573     KM        RUNOFF FROM SUB-BASIN 32A & ROUTE CP 32.1
  574     BA   .8745
  575     LS            74    20.0
  576     UK     67   .0213    .10     100
  577     RK   8000   .0214    .045          TRAP     50    130    YES

  578     KK   32A1     DIV
  579     KM        DIVERT FLOW AT HAYDEN ROAD INTXN WITH DEER VALLEY ROAD
  580     DT   32A2
  581     DI      0    100   10000
  582     DQ      0    100   10000

  583     KK   CNC1      CP
  584     KM        ROUTE DIV 32A1 TO CP CNC1
  585     RS      1   FLOW     -1
  586     RC   .035    .035    .035    1950   .0050
  587     RX      0       8       9      21      71      83      84      92
  588     RY     10       6       6       0       0       6       6      10

  589     KK   36.10     RET
  590     KM        RETRIEVE LOW-FLOW DIVERT FROM SUB 36R1
  591     DR   36.10

  592     KK   37.5      RET
  593     KM        RETRIEVE LOW-FLOW DIVERT FROM SUB 37B
  594     DR   37.5

  595     KK   37A1      CP
  596     KM        COMBINE LOW-FLOW DIVERTS, RET 36.10 & RET 37.5
  597     HC      2

  598     KK    37A     SUB
  599     KM        RUNOFF FROM SUB-BASIN 37A & ROUTE LOW-FLOW DIVERTS (CP 37A1)
  600     BA   .6765
  601     LS            74    24.8
  602     UK     61   .0213    .10     100
  603     RK   4800   .0237    .045          TRAP     50    130    YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  604     KK   CNC2      CP
  605     KM        ROUTE SUB 37A TO CP CNC2
  606     RS      1    FLOW     -1
  607     RC   .035   .035   .035   3000  .0125
  608     RX      0      8      9     21     71     83     84     92
  609     RY     10      6      6      0      0      6      6     10

  610     KK   CNC3      CP
  611     KM        COMBINE CP CNC1 & CP CNC2
  612     HC      2

  613     KK   CNC4      CP
  614     KM        ROUTE CP CNC3 THROUGH GOLF COURSE TO CP CNC4
  615     KM        BW=100',  Z=20:1
  616     RS      1    FLOW     -1
  617     RC   .035   .035   .035   4200  .0070
  618     RX      0     20     21    201    301    481    482    502
  619     RY     10      9      9      0      0      9      9     10

  620     KK    CN1     SUB
  621     KM        RUNOFF FROM SUB CN1
  622     KM        COLLECTOR CHANNEL HAS BEEN ADDED TO SIMULATE STREET FLOW
  623     KM        THIS SAME COLLECTOR CHANNEL IS USED FOR ALL CORE NORTH SUB-BASINS
  624     BA   .7361
  625     LS            74   22.8
  626     UK    100  .0150    .15    100
  627     RK   1400  .0100   .018   .147   TRAP     30      5
  628     RK   6000  .0070   .040          TRAP    100     20

  629     KK   CNC5      CP
  630     KM        COMBINE CP CNC4 & SUB CN1
  631     HC      2

  632     KK  DB1.1      CP
  633     KM        ROUTE CP CNC5 TO DETENTION BASIN No.1 LOCATED AT THE INTXN OF HAYDEN
  634     KM        ROAD & THOMPSON PEAK PARKWAY.
  635     RS      1    FLOW     -1
  636     RC   .035   .035   .035   1200  .0150
  637     RX      0      8      9     21     71     83     84     92
  638     RY     10      6      6      0      0      6      6     10

  639     KK    CN2     SUB
  640     KM        RUNOFF FROM SUB CN2 (REVISED: 5/1/90)
  641     BA   .1507
  642     LS            74   28.1
  643     UK    100  .0150    .15    100
  644     RK   1000  .0100   .018   .111   TRAP     30      5
  645     RK   5000  .0150   .045          TRAP     25      2
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According to the map Thompson Peak Pkwy ends at Pima Rd

KK CN2
RK
RK
KK CN3
RK
RK

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

646       KK    CN3     SUB
647       KM       RUNOFF FROM SUB CN3
648       BA   .3924
649       LS            74    47.7
650       UK    100   .0150    .15     100
651       RK   1400   .0100    .018    .078   TRAP     30      5
652       RK   3500   .0100    .035           TRAP     25      2

653       KK    DB1     CP
654       KM       COMBINE CP DB1.1, SUB CN2, & SUB CN3
655       KM       THIS IS THE TOTAL FLOW INTO DETENTION BASIN No.1
656       HC      3

657       KK   38R-1     DAM
658       KM       PERFORM RESERVOIR ROUTING OPERATION FOR DETENTION BASIN No.1
659       KM       USE RESERVOIR DATA PROVIDED BY CARTER & ASSC.
660       RS      1    STOR
661       SQ      0      23      64     115     156     197     231     262     289     313
662       SQ    337     358     378     398     416     434     450
663       SE   1642    1643    1644    1645    1646    1647    1648    1649    1650    1651
664       SE   1652    1653    1654    1655    1656    1657    1658
665       SV      0     .77     4.3    11.1    23.1    40.1    60.4      81     103     127
666       SV  155.5     184     213     248     280     317     352
667       SE   1642    1643    1644    1645    1646    1647    1648    1649    1650    1651
668       SE   1652    1653    1654    1655    1656    1657    1658
669       SS   1657
670       ST   1658     100     2.9     1.5

671       KK   DB2.1     CP
672       KM       ROUTE OUTFLOW FROM DETENTION BASIN No.1 TO DETENTION BASIN No.2
673       RS      1    FLOW     -1
674       RC    .035    .035    .035    2500   .0150
675       RX      0       8       9      21      71      83      84      92
676       RY     10       6       6       0       0       6       6      10

677       KK    CN5     SUB
678       KM       RUNOFF FROM SUB CN5
679       KM       DRAINAGE AREA REVISED ON 8/10/90 TO REFLECT ADDITION OF 0.1040 SQ MI
680       KM       FROM CORRIGAN-MARLEY PARCEL.  NO OTHER PARAMETERS WERE CHANGED.
681       BA   .6980
682       LS            74    72.8
683       UK    100   .0150    .15     100
684       RK   1400   .0100    .018    .119   TRAP     30      5
685       RK   2500   .0150    .035           TRAP     50      2

686       KK    DB2     CP
687       KM       COMBINE CP DB2.1 & SUB CN5
688       KM       THIS IS THE TOTAL INFLOW TO DETENTION BASIN No.2
689       HC      2
```

CN5 2RK Cards. Where is the data provided from by Carter & Assoc.

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

690       KK  38R-2    DAM
691       KM       PERFORM RESERVOIR ROUTING OPERATION FOR DETENTION BASIN No.2
692       KM       USE RESERVOIR DATA PROVIDED BY CARTER & ASSC.
693       RS     1   STOR
694       SQ     0    30    85   146   220   289   338   395   445   490
695       SQ   530
696       SE  1600  1601  1602  1603  1604  1605  1606  1607  1608  1609
697       SE  1610
698       SV     0   .12   1.0   3.2   6.9  11.8  17.7  24.7  32.6  41.4
699       SV  51.1
700       SE  1600  1601  1602  1603  1604  1605  1606  1607  1608  1609
701       SE  1610
702       SS  1609
703       ST  1610   100   2.9   1.5
          *   ************************************************************************
          *        ROUTE OUTFLOW FROM 38R-2 THROUGH CORE SOUTH CHANNEL SYSTEM.
          *
          *        A "CS" SUFFIX HAS BEEN ADDED TO THE ORIGINAL, SLA CORE SOUTH
          *        SUB-BASIN NUMBERS TO DISTINGUISH THEM FROM OTHER, UPSTREAM
          *        SUB-BASINS WITH THE SAME NUMBER.
          *   ************************************************************************

704       KK   108    CP
705       KM       ROUTE OUTFLOW FROM DETENTION BASIN No.2 TO CP 108
706       RK  1600 0.0144  0.018          TRAP    50     1

707       KK   60CS    SUB
708       KM       RUNOFF FROM SUB 60
709       BA  .0386
710       LS          75    90
711       UK   830 0.0139   0.10   100
712       RK  1300 0.0035  0.018          TRAP     8     1

713       KK   109    CP
714       KM       ROUTE SUB 60CS TO CP 109
715       RK  1640 0.0055  0.018          TRAP     8     1

716       KK  4A-BCS    SUB
717       KM       RUNOFF FROM SUB 4A AND 4B
718       BA  0.0590
719       LS          75    90
720       UK  1053 0.0138   0.10   100
721       RK  1640 0.0055  0.018          TRAP     8     1

722       KK   110    CP
723       KM       COMBINE CP 109 AND SUB 4A-4B.
724       KM       THIS IS THE TOTAL CONTRIBUTION FROM THE CHANNEL ALONG THE SOUTH
725       KM       SIDE OF SUB 4A-4B.
726       HC     2
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Look for Core South Channel System HEC-1 model

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

  727     KK    111     CP
  728     KM       COMBINE CP 108 AND CP 110
  729     HC      2

  730     KK    112     CP
  731     KM       ROUTE CP 111 TO CP 112
  732     RK   1920  0.0115   0.018          TRAP     50      1

  733     KK  12ACS     SUB
  734     KM       RUNOFF FROM SUB 12A
  735     BA  0.0445
  736     LS            75      90
  737     UK    980  0.0143    0.10     100
  738     RK   1250  0.0028   0.018          TRAP      8      1

  739     KK    113     CP
  740     KM       ROUTE SUB 12A TO CP 113
  741     RK    690  0.0029   0.018          TRAP      8      1

  742     KK   11CS     SUB
  743     KM       RUNOFF FROM SUB 11
  744     BA  0.0396
  745     LS            75      90
  746     UK   1450  0.0148    0.10     100
  747     RK    690  0.0029   0.018          TRAP      8      1

  748     KK   113A     CP
  749     KM       COMBINE SUB 11CS WITH CP 113. THIS IS THE PEAK DISCHARGE THAT WILL
  750     KM       FLOW THROUGH THE CHANNEL ALONG THE SOUTH SIDE OF SUB 11 IN CORE SOUTH.
  751     HC      2

  752     KK    114     CP
  753     KM       ROUTE CP 113A TO CP 114
  754     RK    330  0.0029   0.018          TRAP      8      1

  755     KK    115     CP
  756     KM       COMBINE CP 112 WITH CP 114
  757     HC      2

  758     KK    116     CP
  759     KM       ROUTE CP 115 TO CP 116
  760     RK   1080  0.0106   0.018          TRAP     50      1

  761     KK 3A-BCS   SUB
  762     KM       RUNOFF FROM SUB 3A-3B
  763     BA  0.1676
  764     LS            75      90
  765     UK   2800  0.0129    0.10     100
  766     RK   1760  0.0114   0.018          TRAP     50      1
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

767       KK    118      CP
768       KM       COMBINE CP 116, AND SUB 3A-B
769       HC      2

770       KK    119      CP
771       KM       ROUTE CP 118 TO CP 119
772       RK   1150  0.0099   0.018          TRAP      50       1

773       KK   1BCS     SUB
774       KM       RUNOFF FROM SUB 1B
775       BA  0.0427
776       LS            75      90
777       UK    790  0.0149    0.10     100
778       RK    910  0.0099   0.018          TRAP      50       1

779       KK   119B      CP
780       KM       ROUTE SUB 1B TO CP 119B
781       RK    280  0.0099   0.018          TRAP      50       1

782       KK   119A      CP
783       KM       COMBINE CP 119 AND CP 119B
784       KM       THIS IS THE TERMINUS OF THE CHANNEL ALONG THE WEST SIDE OF PARCEL #1.
785       KM       WATER WILL ENTER THE CAP DETENTION BASIN AT THIS POINT.
786       HC      2

787       KK   1ACS     SUB
788       KM       RUNOFF FROM SUB 1A
789       KM       RUNOFF FROM THIS PARCEL WILL FLOW DIRECTLY SOUTH INTO THE CAP
790       KM       DETENTION BASIN.
791       BA  0.0073
792       LS            75      90
793       UK   1123  0.0129    0.10     100
794       RK      1  0.0010   0.018          TRAP       8       1

795       KK    2CS     SUB
796       KM       RUNOFF FROM SUB 2.
797       KM       RUNOFF FROM THIS SUB-BASIN WILL FLOW DIRECTLY TO THE SOUTH, BOTH
798       KM       THROUGH AND ALONG THE EAST SIDE OF SUB 1. NO CHANNEL IS PROVIDED
799       KM       FOR THIS SMALL BASIN SINCE IT WILL FLOW INTO THE CAP DETENTION BASIN.
800       BA  0.0105
801       LS            75      90
802       UK    830  0.0108    0.10     100
803       RK      1  0.0014   0.018          TRAP       8       1

804       KK  10ABCS     SUB
805       KM       RUNOFF FROM SUB 10A AND 10B
806       BA  0.1447
807       LS            75      90
808       UK   1660  0.0142    0.10     100
809       RK   1530  0.0026   0.018  0.0724   TRAP       8       1
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The KM Cards within the Core Soil Program have not been changed in accordance with the new Norms.

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

  810     KK    120     CP
  811     KM       ROUTE SUB 10A-B TO CP 120
  812     RK    860  0.0140   0.018          TRAP     8     1

  813     KK   13CS     SUB
  814     KM       RUNOFF FROM SUB 13
  815     BA  0.0204
  816     LS            75     90
  817     UK    650  0.0129    0.10    100
  818     RK    920  0.0022   0.018          TRAP     8     1

  819     KK    121     CP
  820     KM       ROUTE SUB 13 TO CP 121
  821     RK    850  0.0041   0.018          TRAP     8     1

  822     KK   12BCS     SUB
  823     KM       RUNOFF FROM SUB 12B
  824     BA  0.0157
  825     LS            75     90
  826     UK    645  0.0122    0.10    100
  827     RK    850  0.0041   0.018          TRAP     8     1

  828     KK    122     CP
  829     KM       COMBINE CP 121 AND SUB 12B
  830     KM       THIS IS THE PEAK DISCHARGE THROUGH THE CHANNEL ALONG THE SOUTH
  831     KM       BOUNDARY OF SUB 12B.
  832     HC     2

  833     KK    123     CP
  834     KM       COMBINE CP 120 AND CP 122
  835     HC     2

  836     KK    124     CP
  837     KM       ROUTE CP 123 TO CP 124.
  838     KM       THIS IS THE PEAK DISCHARGE (AT BELL ROAD) INTO THE CAP DETENTION BASIN
  839     KM       FROM THE CHANNEL LOCATED APPROXIMATELY 1/3 MILE WEST OF HAYDEN ROAD.
  840     RK   3000  0.0130   0.018          TRAP    10     1

  841     KK    125     CP
  842     KM       COMBINE CP 119A, SUB 1A, SUB 2, & CP 124
  843     HC     4

  844     KK    PR1     SUB
  845     KM       RUNOFF FROM RESIDENTIAL & COMMERCIAL AREAS NEAR PRINCESS RESORT.
  846     KM       THIS AREA IS LOCATED ALONG THE NORTH SIDE OF THE THE TPC GOLF COURSE,
  847     KM       BETWEEN SCOTTSDALE & HAYDEN ROADS.
  848     BA   .2878
  849     LS            74     40
  850     UK    150   .0100     .15    100
  851     RK   3000   .0150    .035          TRAP    50     2
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

852       KK   TPC1     SUB
853       KM       RUNOFF FROM THE TPC GOLF COURSE BETWEEN SCOTTSDALE & HAYDEN ROADS.
854       KM       THE CURVE NUMBER HAS BEEN INCREASED FROM 74 TO 88 TO REFLECT AMC 3 THAT
855       KM       WILL RESULT FROM CONSTANT WATERING OF THE GOLF COURSE.
856       BA  .3246
857       LS          88
858       UK   150  .0100   .15   100
859       RK  1400  .0150  .035        TRAP   100    20

860       KK   126     CP
861       KM       COMBINE CP 125, SUB PR1, & TPC1
862       KM       THIS IS THE TOTAL INFLOW TO CAP DIKE No.3 FROM THE CORE SOUTH SYSTEM
863       KM       LOCATED BETWEEN SCOTTSDALE & HAYDEN ROADS.
864       HC     3
        *    *************                          ************************
        *    ************* END OF CORE SOUTH CHANNEL SYSTEM ************************

865       KK   3IN     CP
866       KM       COMBINE CP 126 & CP 222
867       KM       THIS IS THE TOTAL INFLOW TO CAP DIKE No.3
868       HC     2

869       KK  DIKE3     DAM
870       KM       ROUTE CP 3IN THROUGH CAP DIKE NO.3
871       KO     1     2
872       RS     1   STOR
873       SV     0     2     7    15    27    43    68   125   243   447
874       SV   749  1130  1586  2112  2695  3328  4001  4757  5580  6484
875       SE  1504  1506  1508  1510  1512  1514  1516  1518  1520  1522
876       SE  1524  1526  1528  1530  1532  1534  1536  1538  1540  1542
877       SS  1541   100   2.9   1.5
878       ST  1542   100   2.9   1.5
        *    ******************                          ***************
        *    ****************** BEGIN DRAINAGE AREA FOR CAP DIKE No.2
        *    ******************                          ***************

879       KK  SUB7B
880       KM       RUNOFF FROM SUB-BASIN 7B
881       BA  .5334
882       PB  4.25
883       PC     0  .005  .009  .010  .013  .019  .021  .028  .032  .044
884       PC  .057  .100  .660  .745  .776  .800  .816  .830  .840  .850
885       PC  .861  .868  .878  .884  .891  .900  .905  .912  .919  .923
886       PC  .930  .934  .939  .944  .950  .958  .961  .963  .969  .971
887       PC  .974  .979  .981  .985  .989  .991  .993  .996 1.000
888       LS          78   8.2
889       UK   255 .0262   .20   100
890       RK 12200 .0197  .045        TRAP    40    20
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  891     KK    11A     SUB
  892     KM        RUNOFF FROM SUB 11A
  893     BA   .3171
  894     LS            74     7.9
  895     UK    150  .0425    .20     100
  896     RK   6200  .0226   .045          TRAP     30     50

  897     KK    8.1     CP
  898     KM        COMBINE SUB7B & SUB 11A
  899     HC      2

  900     KK    8B1     SUB
  901     KM        RUNOFF FROM SUB 8B1 & ROUTE CP 8.1
  902     BA   .6306
  903     LS            74     9.9
  904     UK    116  .0213    .10     100
  905     RK   5300  .0196   .045          TRAP     30    100    YES

  906     KK  8B1.2     CP
  907     KM        ROUTE SUB 8B1 DOWN SCOTTSDALE ROAD CHANNEL TO CP 8B1.2
  908     RS      1   FLOW     -1
  909     RC   .035   .035   .035   3400  .0171
  910     RX      0      8      9     21    46    58    59    67
  911     RY     10      6      6      0     0     6     6    10

  912     KK  8B1.3     DIV
  913     KM        DIVERT LOW-FLOWS TO EXISTING WASHS WEST OF SCOTTSDALE ROAD (SUB 8B2)
  914     DT  8B1.4
  915     DI      0    106    500   1000  5000
  916     DQ      0      0      0      0     0

  917     KK   12R1     CP
  918     KM        ROUTE NON-DIVERTED FLOW DOWN SCOTTSDALE ROAD CHANNEL TO CP 12R1
  919     RS      1   FLOW     -1
  920     RC   .035   .035   .035   6500  .0171
  921     RX      0      8      9     21    61    73    74    82
  922     RY     10      6      6      0     0     6     6    10

  923     KK    11B     SUB
  924     KM        RUNOFF FROM SUB-BASIN 11B
  925     BA   .2547
  926     LS            74    11.9
  927     UK    150  .0425    .20     100
  928     RK   4700  .0213   .045          TRAP     30     50

  929     KK    12R     SUB
  930     KM        RUNOFF FROM SUB 12R & ROUTE SUB 11B
  931     BA  1.2375
  932     LS            74    22.3
  933     UK     95  .0213    .10     100
  934     RK   9900  .0214   .045          TRAP     50    100    YES
1
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

935       KK   12R2     CP
936       KM       ROUTE SUB 12R DOWN SCOTTSDALE ROAD CHANNEL TO CP 12R2
937       RS     1   FLOW     -1
938       RC   .035   .035   .035   3600  .0171
939       RX     0     8     9     21    61    73    74    82
940       RY    10     6     6      0     0     6     6    10

941       KK   12R3     CP
942       KM       COMBINE CP 12R1 & CP 12R2
943       HC     2

944       KK   12R4    DIV
945       KM       DIVERT LOW-FLOWS TO WEST SIDE OF SCOTTSDALE ROAD (SUB 13R)
946       DT   12R5
947       DI     0   145   500   1000   5000
948       DQ     0     0     0      0      0

949       KK    4B1     CP
950       KM       ROUTE NON-DIVERTED FLOW FROM DIV 12R4 TO CP 4B1
951       RS     1   FLOW     -1
952       RC   .035   .035   .035   3150  .0171
953       RX     0     8     9     21    61    73    74    82
954       RY    10     6     6      0     0     6     6    10

955       KK   SUB16
956       KM       RUNOFF FROM SUB-BASIN 16
957       BA  1.4570
958       LS           83    9.8
959       UK    217  .0581   .20   100
960       RK  14800  .0216   .045         TRAP    25     3

961       KK   SUB17
962       KM       RUNOFF FROM SUB-BASIN 17
963       BA  1.1851
964       LS           83    9.8
965       UK    285  .0421   .20   100
966       RK  12200  .0254   .045         TRAP    25     3

967       KK   SUB18
968       KM       RUNOFF FROM SUB-BASIN 18
969       BA  1.2641
970       LS           83    6.5
971       UK    285  .0421   .20   100
972       RK  10840  .0259   .045         TRAP    25     3

973       KK   CP19A
974       KM       COMBINE HYDROGRAPHS SUB16, SUB17, & SUB18
975       HC     3
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1

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

  976     KK  CP19B
  977     KM      ROUTE CP19A TO CP19B
  978     RK   1100  .0155  0.045        TRAP    35     3

  979     KK  SUB15
  980     KM      RUNOFF FROM SUB-BASIN 15
  981     BA  1.3702
  982     LS          82    5.4
  983     UK    217  .0581   .20    100
  984     RK  21200  .0236  .045        TRAP    25     3

  985     KK  CP19C
  986     KM      COMBINE HYDROGRAPHS SUB15 & CP19B
  987     HC     2

  988     KK  SUB19
  989     KM      RUNOFF FROM SUB-BASIN 19 & ROUTE CP 19C
  990     BA  .1872
  991     LS          84    7.2
  992     UK    275  .0800   .20    100
  993     RK   3730  .0352  .045   .160  TRAP    15     3
  994     RK   1800  .0200  .045        TRAP    50    30   YES

  995     KK  SUB20
  996     KM      RUNOFF FROM SUB-BASIN 20
  997     BA  .5698
  998     LS          84    3.6
  999     UK    300  .0750   .20    100
 1000     RK   9640  .0197  .045        TRAP    15     3

 1001     KK  CP21
 1002     KM      COMBINE HYDROGRAPHS SUB19 & SUB20
 1003     HC     2

 1004     KK  SUB21
 1005     KM      RUNOFF FROM SUB-BASIN 21 & ROUTE CP 21
 1006     BA  3.6659
 1007     LS          80    6.4
 1008     UK    297  .0558   .20    100
 1009     RK  27600  .0196  .045        TRAP    50    30   YES

 1010     KK  SUB22
 1011     KM      RUNOFF FROM SUB-BASIN 22
 1012     BA  1.3860
 1013     LS          84    5.1
 1014     UK    225  .0590   .20    100
 1015     RK  13000  .0238  .045        TRAP    25     3

 1016     KK  SUB23
 1017     KM      RUNOFF FROM SUB-BASIN 23
 1018     BA  .3945
 1019     LS          84    6.3
 1020     UK    225  .0590   .20    100
 1021     RK  10200  .0304  .045        TRAP    20     3
```

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

1022      KK   CP24
1023      KM       COMBINE HYDROGRAPHS SUB22 & SUB23
1024      HC     2

1025      KK  SUB24
1026      KM       RUNOFF FROM SUB-BASIN 24 & ROUTE CP 24
1027      BA  .4907
1028      LS           77    6.8
1029      UK    295  .0438    .20    100
1030      RK   6800  .0257    .045          TRAP     15      3    YES

1031      KK  SUB25
1032      KM       RUNOFF FROM SUB-BASIN 25
1033      BA 1.5166
1034      LS           85    9.0
1035      UK    295  .0438    .20    100
1036      RK  16700  .0302    .045          TRAP     25      3

1037      KK   CP26
1038      KM       COMBINE HYDROGRAPHS SUB24 & SUB25
1039      HC     2

1040      KK  SUB26
1041      KM       RUNOFF FROM SUB-BASIN 26 & ROUTE CP 26
1042      BA  .2231
1043      LS           78    6.9
1044      UK    200  .0250    .20    100
1045      RK   1400  .0217    .045          TRAP     60      7    YES

1046      KK   26.1    DIV
1047      KM       DIVERT FLOW FROM SUB 26 TO SUB 26A
1048      DT   26.2
1049      DI     0    500   1000  10000
1050      DQ     0    250    500   5000

1051      KK   21.1     CP
1052      KM       ROUTE DIV 26.1 TO OUTLET OF SUB 21
1053      RK  10600  .0263    .045          TRAP     35     10

1054      KK   CP27
1055      KM       COMBINE SUB 21 & CP 21.1
1056      HC     2

1057      KK   26.2    RET
1058      KM       RETRIEVE DIVERTED FLOW FROM CP 26
1059      DR   26.2

1060      KK  SUB26A
1061      KM       RUNOFF FROM SUB 26A & ROUTE RET 26.2
1062      BA  .5251
1063      LS           74   14.5
1064      UK    200  .0250    .20    100
1065      RK  10000  .0263    .045          TRAP     35     10    YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1066      KK   27.1     CP
1067      KM       COMBINE CP 27 & SUB 26A
1068      HC     2

1069      KK   27.2     CP
1070      KM       ROUTE CP 27.1 THROUGH NEW CHANNEL TO CP 27.2
1071      RS     1   FLOW     -1
1072      RC   .035   .035   .035   3150   .0227
1073      RX     0     8     9     21    171    183    184    192
1074      RY    10     6     6      0      0      6      6     10

1075      KK   SUB27
1076      KM       RUNOFF FROM SUB-BASIN 27
1077      BA   .6385
1078      LS           73   16.3
1079      UK    159  .0213    .10    100
1080      RK   3200  .0227   .035          TRAP    150      2

1081      KK   27.3     CP
1082      KM       COMBINE CP 27.2 & SUB 27
1083      HC     2

1084      KK   28A1     CP
1085      KM       ROUTE CP 27.3 THROUGH NEW CHANNEL TO PINNACLE PEAK ROAD
1086      RS     1   FLOW     -1
1087      RC   .035   .035   .035   4150   .0227
1088      RX     0     8     9     21    171    183    184    192
1089      RY    10     6     6      0      0      6      6     10

1090      KK    28A    SUB
1091      KM       RUNOFF FROM SUB-BASIN 28A
1092      BA   .6708
1093      LS           73   35.0
1094      UK     96  .0213    .10    100
1095      RK   4150  .0227   .035          TRAP    150      2

1096      KK   28A2     CP
1097      KM       COMBINE SUB 28A & CP 28A1
1098      HC     2

1099      KK    4B2     CP
1100      KM       ROUTE CP 28A2 TO CP 4B2
1101      RS     1   FLOW     -1
1102      RC   .035   .035   .035   1300   .0227
1103      RX     0     8     9     21    171    183    184    192
1104      RY    10     6     6      0      0      6      6     10

1105      KK    4B3     CP
1106      KM       COMBINE CP 4B1 & CP 4B2
1107      KM       THIS IS THE COMBINED FLOW AT RAWHIDE FROM CHANNELS 4C-4B & 4A-4B.
1108      HC     2
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1109      KK   28B1     CP
1110      KM       ROUTE CP 4B3 DOWN SCOTTSDALE ROAD CHANNEL TO CP 28B1
1111      RS     1   FLOW     -1
1112      RC   .035   .035   .035   3300   .0227
1113      RX     0     8     9     21    171    183    184    192
1114      RY    10     6     6      0      0      6      6     10

1115      KK   28B     SUB
1116      KM       RUNOFF FROM SUB 28B
1117      BA   .9182
1118      LS            74   53.3
1119      UK    96   .0213    .10    100
1120      RK   4750   .0227   .035          TRAP    150      2

1121      KK   28.1     DIV
1122      KM       DIVERT FLOW TO SIMULATE RUNOFF FROM SUB 28B THAT IS INTERCEPTED BY THE
1123      KM       CORE NORTH CHANNEL AT THE INTXN OF SCOTTSDALE & DEER VALLEY ROADS.
1124      KM       DIVERT RATIO IS BASED ON THE PERCENTAGE OF THE DOWNSTREAM BOUNDARY OF
1125      KM       SUB 28 THAT IS INTERCEPTED BY THE CORE NORTH CHANNEL.
1126      DT   28.2
1127      DI     0    100   10000
1128      DQ     0     20    2000

1129      KK   28B2     CP
1130      KM       COMBINE NON-DIVERTED FLOW FROM SUB 28B WITH CP 28B1
1131      HC     2

1132      KK   29A1     CP
1133      KM       ROUTE CP 28B2 DOWN RAWHIDE WASH CHANNEL TO CP 29A1
1134      RS     1   FLOW     -1
1135      RC   .035   .035   .035  10200   .0150
1136      RX     0     8     9     21    171    183    184    192
1137      RY    10     6     6      0      0      6      6     10

1138      KK   29A     SUB
1139      KM       RUNOFF FROM SUB 29A
1140      BA  1.7630
1141      LS            74   40.6
1142      UK    88   .0213    .10    100
1143      RK   2500   .0100   .035    .34   TRAP     25      2
1144      RK  10200   .0150   .035          TRAP    150      2

1145      KK   29A2     CP
1146      KM       COMBINE SUB 29A & CP 29A1
1147      HC     2

1148      KK  29.1A     CP
1149      KM       ROUTE CP 29A2 DOWN RAWHIDE WASH CHANNEL TO CAP DIKE No.2
1150      RS     1   FLOW     -1
1151      RC   .035   .035   .035   5500   .0150
1152      RX     0     8     9     21    171    183    184    192
1153      RY    10     6     6      0      0      6      6     10
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1154      KK   29.1     SUB
1155      KM        RUNOFF FROM SUB 29.1
1156      BA  1.3896
1157      LS            74    28.6
1158      UK     88  .0213    .10     100
1159      RK   2500  .0100   .035     .26   TRAP     25      2
1160      RK   5500  .0150   .035          TRAP    150      2

1161      KK  29.1B      CP
1162      KM        COMBINE SUB 29.1 & CP 29.1A
1163      HC      2

1164      KK   32A2     RET
1165      KM        RETRIEVE DIVERTED FLOW FROM SUB 32A
1166      DR   32A2

1167      KK   CNC6      CP
1168      KM        ROUTE RET 32A2 TO THE INTXN OF SCOTTSDALE & DEER VALLEY ROADS
1169      RS      1   FLOW     -1
1170      RC   .035   .035   .035   2650  .0125
1171      RX      0      8      9     21     71     83     84     92
1172      RY     10      6      6      0      0      6      6     10

1173      KK   28.2     RET
1174      KM        RETRIEVE PORTION OF RUNOFF FROM SUB 28 THAT MAY FLOW TO THE
1175      KM        SCOTTSDALE ROAD-DEER VALLEY ROAD INTXN
1176      DR   28.2

1177      KK   CNC7      CP
1178      KM        COMBINE CP CNC6 & RET 28.2
1179      HC      2

1180      KK   CNC8      CP
1181      KM        ROUTE CP CNC7 DOWN SCOTTSDALE ROAD CHANNEL TO BEARDSLEY ROAD
1182      RS      1   FLOW     -1
1183      RC   .035   .035   .035   5400  .0150
1184      RX      0      8      9     21     91    103    104    112
1185      RY     10      6      6      0      0      6      6     10

1186      KK    CN4     SUB
1187      KM        RUNOFF FROM SUB CN4
1188      BA   .5546
1189      LS            74    48.9
1190      UK    100  .0150    .15     100
1191      RK   1400  .0100   .018    .111   TRAP     30      5
1192      RK   5400  .0150   .035          TRAP     75      2

1193      KK   CNC9      CP
1194      KM        COMBINE SUB CN4 & CP CNC8
1195      KM        THIS FLOW IS ASSUMED TO SHEETFLOW ACROSS SCOTTSDALE ROAD
1196      HC      2
```

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

1197      KK    33A     SUB
1198      KM        RUNOFF FROM SUB-BASIN 33A & ROUTE CNC9
1199      KM        DRAINAGE AREA REVISED ON 8/10/90 TO REFLECT DELETION OF 0.1040 SQ MI
1200      KM        FROM CORRIGAN-MARLEY PARCEL.  NO OTHER PARAMETERS WERE CHANGED.
1201      BA  .3738
1202      LS            74    57.7
1203      UK     89  .0213    .10     100
1204      RK   4000  .0161    .045          TRAP     50     50     YES

1205      KK  33.1A     SUB
1206      KM        RUNOFF FROM SUB 33.1A & ROUTE SUB 33A
1207      KM        THE OUTER LOOP IS NOT ASSUMED TO BE IN-PLACE FOR THE PURPOSE OF
1208      KM        ROUTING FLOWS FROM SUB 33A TO SUB 33.1A.  IF THE OUTER LOOP WERE
1209      KM        IN-PLACE, THE CHANNEL SIDE-SLOPES WOULD BE 2:1 RATHER THAN 50:1.
1210      BA  .7109
1211      LS            74    48.2
1212      UK     89  .0213    .10     100
1213      RK   6700  .0116    .045          TRAP     50     50     YES

1214      KK  8B1.4     RET
1215      KM        RETRIEVE LOW-FLOW DIVERT FROM SUB 8B1
1216      DR  8B1.4

1217      KK    8B2     SUB
1218      KM        RUNOFF FROM SUB 8B2 & ROUTE LOW-FLOW DIVERT FROM SUB 8B1
1219      BA  .2260
1220      LS            74    20.4
1221      UK    116  .0213    .10     100
1222      RK   4500  .0196    .045          TRAP     30     30     YES

1223      KK  SUB9B
1224      KM        RUNOFF FROM SUB-BASIN 9B & ROUTE SUB 8B2
1225      BA  .8767
1226      LS            74    37.6
1227      UK     95  .0213    .10     100
1228      RK  10400  .0192    .045          TRAP     30    130     YES

1229      KK  SUB10B
1230      KM        RUNOFF FROM SUB-BASIN 10B ROUTE SUB 9B
1231      BA  1.4377
1232      LS            74     31
1233      UK    107  .0213    .10     100
1234      RK  11000  .0136    .045          TRAP     30    175     YES

1235      KK  10.1B     SUB
1236      KM        RUNOFF FROM SUB 10.1B & ROUTE SUB 10B
1237      BA  .8989
1238      LS            74    28.2
1239      UK    107  .0213    .10     100
1240      RK   6000  .0106    .045          TRAP     30    190     YES
```

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

1241      KK   12R5    RET
1242      KM       RETRIEVE LOW-FLOW DIVERT FROM SUB 12R
1243      DR   12R5

1244      KK    13R    SUB
1245      KM       RUNOFF FROM SUB 13R & ROUTE LOW-FLOW DIVERT FROM SUB 12R
1246      BA  1.0668
1247      LS           74   44.0
1248      UK    86  .0213    .10    100
1249      RK   9200  .0192   .045          TRAP     30     50    YES

1250      KK  SUB14
1251      KM       RUNOFF FROM SUB-BASIN 14 & ROUTE SUB 13
1252      BA  1.3910
1253      LS           74   46.7
1254      UK   101  .0213    .10    100
1255      RK  11200  .0142   .045          TRAP     50    150    YES

1256      KK   14.1    SUB
1257      KM       RUNOFF FROM SUB 14.1 & ROUTE SUB 14
1258      BA  .6112
1259      LS           74   43.8
1260      UK   101  .0213    .10    100
1261      RK   5800  .0112   .045          TRAP     50    160    YES

1262      KK    2IN     CP
1263      KM       COMBINE SUB 10.1B, SUB 14.1, CP 29.1B, & SUB 33.1
1264      KM       THIS IS THE TOTAL INFLOW TO CAP DIKE No.2
1265      HC     4

1266      KK  DIKE2    DAM
1267      KM       ROUTE CP 2IN THROUGH CAP DIKE No.2
1268      KO     1      2
1269      RS     1   STOR
1270      SV     0      2     48    169    342    546    775   1031   1332   1732
1271      SV  2273   2958   3796   4783   5904   7170   8578  10131  11834  12000
1272      SE  1514   1516   1518   1520   1522   1524   1526   1528   1530   1532
1273      SE  1534   1536   1538   1540   1542   1544   1546   1548   1550 1550.2
1274      SS  1550    100    2.9    1.5
1275      ST 1550.2   100    2.9    1.5
1276      ZZ
```

1

SCHEMATIC DIAGRAM OF STREAM NETWORK

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

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

 41       30R
          .
          .
 55        .------->   30R2
 53      30R1
          V
          V
 58      31.1
          .
          .
 64        .       31A
          .         .
          .         .
 71        .         .       34R
          .         .         V
          .         .         V
 77        .         .       31.3
          .         .         .
          .         .         .
 80      31.2......................
          .
          .
 85        .------->   31A2
 83      31A1
          V
          V
 88      36.2
          .
          .
 94        .       35N
          .         .
          .         .
 103       .         .------->   35N1
 101       .       35N2
          .         V
          .         V
 106       .       35L1
          .         .
          .         .
 109       .         .       35L
          .         .         .
          .         .         .
 115       .       35L2............
          .         V
          .         V
 118       .       36L1 ***
          .         V
          .         V
 124       .       36.3
          .         .
          .         .
 130     36.4............
          .
          .
 135       .------->   36.6
 133     36.5
          V
          V
```

```
138     36.7
         .
         .
146      .          .<-------    35N1
144      .       35N1
         .        V
         .        V
147      .       35R ***
         .        V
         .        V
153      .       36R1 ***
         .        .
         .        .
159     36.8............
         .
         .
165      .------->  36.10
163     36.9
         V
         V
168     37.1
         .
         .
175      .       37B
         .        V
         .        V
181      .       37.2
         .        .
         .        .
187     37.3............
         .
         .
192      .------->  37.5
190     37.4
         V
         V
195     52.1
         .
         .
201      .       SUB39
         .        .
         .        .
207      .        .      SUB40
         .        .       .
         .        .       .
213      .       CP41............
         .        V
         .        V
216      .       SUB41 ***
         .        .
         .        .
222      .        .      SUB42
         .        .       .
         .        .       .
228      .        .       .     SUB43
         .        .       .      .
         .        .       .      .
234      .        .       .      .     SUB44
         .        .       .      .      .
         .        .       .      .      .
240      .        .       .     CP45............
         .        .       .      V
         .        .       .      V
243      .        .       .     SUB45 ***
         .        .       .      .
```

```
249     .       .       .       .   SUB45A
        .       .       .       .       .
        .       .       .       .       .
255     .       .       .       .       .   SUB46
        .       .       .       .       .       .
        .       .       .       .       .       .
262     .       .       .   CP47.......................
        .       .       .    V
        .       .       .    V
265     .       .       .   SUB47 ***
        .       .       .       .
        .       .       .       .
271     .   CP48.......................
        .    V
        .    V
274     .   SUB48 ***
        .       .
        .       .
280     .       .   SUB50
        .       .       .
        .       .       .
287     .   CP51............
        .       .
        .       .
295     .       .-------->  2003
290     .   2004
        .       .
        .       .
298     .       .   SUB49
        .       .       .
        .       .       .
304     .   49.1............
        .    V
        .    V
307     .   SUB51 ***
        .    V
        .    V
313     .   52A ***
        .       .
        .       .
319   52.2............
       V
       V
322   52A1
       .
       .
329     .   53A
        .       .
        .       .
335   53A1............
       V
       V
338   DB3.1
       .
       .
344     .   CN6
        .       .
        .       .
351   DB3............
       V
       V
355   53R
       .
       .
```

```
379      .-------> 53RD
372    200
       V
       V
382    202
       .
       .
385     .      14CS
       .       .
       .       .
391    203............
       V
       V
395    204
       .
       .
398     .     15ACS
       .       .
       .       .
404     .       .     15BCS
       .       .       .
       .       .       .
410     .     205............
       .       .
       .       .
413    206............
       .
       .
419     .       .<-------  53RD
417     .     201
       .       V
       .       V
420     .     207
       .       .
       .       .
423     .       .     21ACS
       .       .       .
       .       .       .
429     .       .       .     21BCS
       .       .       .       .
       .       .       .       .
435     .       .     208............
       .       .       V
       .       .       V
439     .       .     209
       .       .       .
       .       .       .
442     .       .       .     17BCS
       .       .       .       .
       .       .       .       .
448     .       .     210............
       .       .       .
       .       .       .
452     .       .       .     17ACS
       .       .       .       .
       .       .       .       .
458     .       .     211............
       .       .       V
       .       .       V
461     .       .     212
       .       .       .
       .       .       .
464     .       .       .     16BCS
       .       .       .       .
       .       .       .       .
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470     .       .       213.........
        .       .       .
        .       .       .
474     .       .       .       16ACS
        .       .       .       .
        .       .       .       .
480     .       214.......................
        .       V
        .       V
483     .       215
        .       .
        .       .
486     .       .       19CS
        .       .       V
        .       .       V
492     .       .       216
        .       .       V
        .       .       V
495     .       .       217
        .       .       .
        .       .       .
498     .       .       .       18CS
        .       .       .       .
        .       .       .       .
504     .       .       218.........
        .       .       .
        .       .       .
508     .       219.........
        .       .
        .       .
512     .       .       20ACS
        .       .       V
        .       .       V
519     .       .       220
        .       .       .
        .       .       .
522     .       .       .       20BCS
        .       .       .       .
        .       .       .       .
528     .       .       221.........
        .       .       .
        .       .       .
532     .       .       .       TPC2
        .       .       .       .
        .       .       .       .
540     222.................................
        .
        .
547     .       .<------- 30R2
545     .       30R2
        .       .
        .       .
550     .       .       .<------- 31A2
548     .       .       31A2
        .       .       .
        .       .       .
551     .       31B1.........
        .       V
        .       V
554     .       31B ***
        .       .
        .       .
562     .       .       .<------- 36.6
560     .       .       36.6
        .       .       V
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          .        .        V
563       .        .      36L2 ***
          .        .        .
          .        .        .
569       .      32.1............
          .        V
          .        V
572       .      32A ***
          .        .
          .        .
580       .        .-------->   32A2
578       .      32A1
          .        V
          .        V
583       .      CNC1
          .        .
          .        .
591       .        .        .<-------   36.10
589       .        .      36.10
          .        .        .
          .        .        .
594       .        .        .        .<-------   37.5
592       .        .        .      37.5
          .        .        .        .
          .        .        .        .
595       .        .      37A1............
          .        .        V
          .        .        V
598       .        .      37A ***
          .        .        V
          .        .        V
604       .        .      CNC2
          .        .        .
          .        .        .
610       .      CNC3............
          .        V
          .        V
613       .      CNC4
          .        .
          .        .
620       .        .      CN1
          .        .        .
          .        .        .
629       .      CNC5............
          .        V
          .        V
632       .      DB1.1
          .        .
          .        .
639       .        .      CN2
          .        .        .
          .        .        .
646       .        .        .      CN3
          .        .        .        .
          .        .        .        .
653       .      DB1........................
          .        V
          .        V
657       .      38R-1
          .        V
          .        V
671       .      DB2.1
          .        .
          .        .
677       .        .      CN5
```

686 DB2.....
690 38R-2
704 108
707 60CS
713 109
716 4A-BCS
722 110.....
727 111.....
730 112
733 12ACS
739 113
742 11CS
748 113A.....
752 114
755 115.....
758 116
761 3A-BCS
767 118.....
770 119
773 1BCS
779 119B

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                .    .    .    .    .
1022            .    .    .   CP24............
                .    .    .    V
                .    .    .    V
1025            .    .    .   SUB24 ***
                .    .    .    .
                .    .    .    .
1031            .    .    .    .    SUB25
                .    .    .    .    .
                .    .    .    .    .
1037            .    .    .   CP26............
                .    .    .    V
                .    .    .    V
1040            .    .    .   SUB26 ***
                .    .    .    .
                .    .    .    .
1048            .    .    .    .-------> 26.2
1046            .    .    .   26.1
                .    .    .    V
                .    .    .    V
1051            .    .    .   21.1
                .    .    .    .
                .    .    .    .
1054            .    .   CP27............
                .    .    .
                .    .    .
1059            .    .    .    .<------- 26.2
1057            .    .    .   26.2
                .    .    .    V
                .    .    .    V
1060            .    .    .   SUB26A ***
                .    .    .    .
                .    .    .    .
1066            .    .   27.1............
                .    .    V
                .    .    V
1069            .    .   27.2
                .    .    .
                .    .    .
1075            .    .    .   SUB27
                .    .    .    .
                .    .    .    .
1081            .    .   27.3............
                .    .    V
                .    .    V
1084            .    .   28A1
                .    .    .
                .    .    .
1090            .    .    .   28A
                .    .    .    .
                .    .    .    .
1096            .    .   28A2............
                .    .    V
                .    .    V
1099            .    .   4B2
                .    .    .
                .    .    .
1105            .   4B3............
                .    V
                .    V
1109            .   28B1
                .    .
                .    .
1115            .    .   28B
                .    .    .
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.       .       .
1126    .       .       .-------> 28.2
1121    .       .       28.1
        .       .       .
        .       .       .
1129    .       28B2............
        .       V
        .       V
1132    .       29A1
        .       .
        .       .
1138    .       .       29A
        .       .       .
        .       .       .
1145    .       29A2............
        .       V
        .       V
1148    .       29.1A
        .       .
        .       .
1154    .       .       29.1
        .       .       .
        .       .       .
1161    .       29.1B............
        .       .
        .       .
1166    .       .       .<------- 32A2
1164    .       .       32A2
        .       .       V
        .       .       V
1167    .       .       CNC6
        .       .       .
        .       .       .
1176    .       .       .       .<------- 28.2
1173    .       .       .       28.2
        .       .       .       .
        .       .       .       .
1177    .       .       CNC7............
        .       .       V
        .       .       V
1180    .       .       CNC8
        .       .       .
        .       .       .
1186    .       .       .       CN4
        .       .       .       .
        .       .       .       .
1193    .       .       CNC9............
        .       .       V
        .       .       V
1197    .       .       33A ***
        .       .       V
        .       .       V
1205    .       .       33.1A ***
        .       .       .
        .       .       .
1216    .       .       .       .<------- 8B1.4
1214    .       .       .       8B1.4
        .       .       .       V
        .       .       .       V
1217    .       .       .       8B2 ***
        .       .       .       V
        .       .       .       V
1223    .       .       .       SUB9B ***
        .       .       .       V
        .       .       .       V
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1229      .      .      .    SUB10B ***
        .      .      .      V
        .      .      .      V
1235      .      .      .    10.1B ***
        .      .      .      .
        .      .      .      .
1243      .      .      .      .        .<-------   12R5
1241      .      .      .      .      12R5
        .      .      .      .       V
        .      .      .      .       V
1244      .      .      .      .      13R ***
        .      .      .      .       V
        .      .      .      .       V
1250      .      .      .      .     SUB14 ***
        .      .      .      .       V
        .      .      .      .       V
1256      .      .      .      .     14.1 ***
        .      .      .      .       .
        .      .      .      .       .
1262      .    2IN.................................
        .      V
        .      V
1266      .    DIKE2
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(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

1 ****

FLOOD HYDROGRAPH PACKAGE HEC-1 (IBM XT 512K VERSION) -FEB 1,1985
U.S. ARMY CORPS OF ENGINEERS, THE HYDROLOGIC ENGINEERING CENTER, 609 SECOND STREET, DAVIS, CA. 95616
****

UPPER INDIAN BEND WASH REGIONAL FLOOD CONTROL & DRAINAGE PLAN

MODEL MP3.24I -- SUB-BASIN SERIES 7B TO 53.1

THIS IS AN INTEGRATED MASTER PLAN MODEL WITH A NORTH-SOUTH INTERCEPTOR
CHANNEL IN-PLACE ALONG PIMA ROAD FROM POINT 3A TO 3K TO 3L.
ALL CORE NORTH-CORE SOUTH CHANNELS & DETENTION BASINS ARE IN-PLACE.
THE RAWHIDE WASH CHANNEL IS IN-PLACE ALONG ALIGNMENT 4A-4B-4D.
A NORTH-SOUTH INTERCEPTOR CHANNEL IS IN-PLACE ALONG SCOTTSDALE ROAD FROM
POINT 4C TO 4B.

DETENTION BASIN 53R HAS BEEN RECONFIGURED TO REFLECT NEW VOLUMES
& OUTLET DESIGN FROM STANLEY CONSULTANTS (8/10/90)
OUTLET DESIGN WAS SUBSEQUENTLY MODIFIED BY RLW

SUB 33A & CN5 MODIFIED TO REFLECT DRAINAGE SPLIT ON CORRIGAN-MARLEY

FUTURE CONDITION LAND-USE

LOW-FLOW CULVERT DIVERTS ARE SET AT ZERO

100% OF REATA PASS FAN IS DIVERTED WEST TO PIMA ROAD.

RESERVOIR ROUTING OPERATIONS ARE IN-PLACE FOR CAP DIKES 2 & 3.

THIS MODEL REFLECTS ALL D.A. ADJUSTMENTS MADE TO MODEL F3.24I AND FLOW
DIVERSIONS NEAR RAWHIDE WASH APEX & PINNACLE PEAK.
THE TPC GOLF COURSE AND ADJACENT RESIDENTIAL AREAS HAVE BEEN ADDED TO
THE CORE SOUTH AREA.

100-YR, 24-HR STORM, USING SCS TYPE IIA RAINFALL DISTRIBUTION
RAINFALL FROM NOAA ATLAS, USING 25 SQ MI AREAL REDUCTION FACTOR (.968)

FUTURE LAND-USE DENSITIES FROM OCT 1987 GENERAL PLAN, BRW PLANS, AND
THE TOMTO FOOTHILLS PLAN, ALL SCOTTSDALE RESIDENTIAL AREAS HAVE THE
PERCENT OF IMPERVIOUS COVER ADJUSTED FOR NAOS REQUIREMENTS.

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

  IT       HYDROGRAPH TIME DATA
             NMIN         5  MINUTES IN COMPUTATION INTERVAL
            IDATE    28APR90  STARTING DATE
            ITIME      0000  STARTING TIME
               NQ       300  NUMBER OF HYDROGRAPH ORDINATES
           NDDATE    29APR90  ENDING DATE
           NDTIME      0055  ENDING TIME

          COMPUTATION INTERVAL     .08 HOURS
             TOTAL TIME BASE   24.92 HOURS

      ENGLISH UNITS
```

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 5929. TO 17125.

THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 1046. TO 17125.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 644. TO 17125.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 5929. TO 17125.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
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*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 644. TO 17125.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 8692. TO 24217.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 1863. TO 19861.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 3010. TO 8694.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 4760. TO 13747.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 286. TO 15059.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 2383. TO 15059.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** ***

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          **************
          *            *
869 KK    *   DIKE3    *        DAM
          *            *
          **************

871 KO        OUTPUT CONTROL VARIABLES
                IPRNT          1  PRINT CONTROL
                IPLOT          2  PLOT CONTROL
                QSCAL         0.  HYDROGRAPH PLOT SCALE

          HYDROGRAPH ROUTING DATA

872 RS        STORAGE ROUTING
                NSTPS          1  NUMBER OF SUBREACHES
                ITYP        STOR  TYPE OF INITIAL CONDITION
               RSVRIC        .00  INITIAL CONDITION
```

X .00 WORKING R AND D COEFFICIENT

873 SV	STORAGE	.0	2.0	7.0	15.0	27.0	43.0	68.0	125.0	243.0	447.0
	749.0	1130.0	1586.0	2112.0	2695.0	3328.0	4001.0	4757.0	5580.0	6484.0	
875 SE	ELEVATION	1504.00	1506.00	1508.00	1510.00	1512.00	1514.00	1516.00	1518.00	1520.00	1522.00
	1524.00	1526.00	1528.00	1530.00	1532.00	1534.00	1536.00	1538.00	1540.00	1542.00	

877 SS SPILLWAY

CREL	1541.00	SPILLWAY CREST ELEVATION
SPWID	100.00	SPILLWAY WIDTH
COQW	2.90	WEIR COEFFICIENT
EXPW	1.50	EXPONENT OF HEAD

878 ST TOP OF DAM

TOPEL	1542.00	ELEVATION AT TOP OF DAM
DAMWID	100.00	DAM WIDTH
COQD	2.90	WEIR COEFFICIENT
EXPD	1.50	EXPONENT OF HEAD

***

COMPUTED OUTFLOW-ELEVATION DATA

(EXCLUDING FLOW OVER DAM)

OUTFLOW	.00	.00	.05	.40	1.35	3.19	6.21	10.74	17.06	25.46
ELEVATION	1504.00	1541.00	1541.00	1541.01	1541.03	1541.05	1541.08	1541.11	1541.15	1541.20
OUTFLOW	36.25	49.71	66.17	85.93	109.25	136.46	167.83	203.69	244.30	290.00
ELEVATION	1541.25	1541.31	1541.37	1541.44	1541.52	1541.60	1541.69	1541.79	1541.89	1542.00

COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

(INCLUDING FLOW OVER DAM)

STORAGE	.00	2.00	7.00	15.00	27.00	43.00	68.00	125.00	243.00	447.00
OUTFLOW	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
ELEVATION	1504.00	1506.00	1508.00	1510.00	1512.00	1514.00	1516.00	1518.00	1520.00	1522.00
STORAGE	749.00	1130.00	1586.00	2112.00	2695.00	3328.00	4001.00	4757.00	5580.00	6032.00
OUTFLOW	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
ELEVATION	1524.00	1526.00	1528.00	1530.00	1532.00	1534.00	1536.00	1538.00	1540.00	1541.00
STORAGE	6037.57	6044.58	6054.35	6066.87	6082.21	6100.36	6121.27	6145.00	6171.48	6200.78
OUTFLOW	.40	1.35	3.19	6.21	10.74	17.06	25.46	36.25	49.71	66.17
ELEVATION	1541.01	1541.03	1541.05	1541.08	1541.11	1541.15	1541.20	1541.25	1541.31	1541.37
STORAGE	6232.90	6267.77	6305.45	6345.90	6389.15	6435.17	6484.00			
OUTFLOW	85.93	109.25	136.46	167.83	203.69	244.30	290.00			
ELEVATION	1541.44	1541.52	1541.60	1541.69	1541.79	1541.89	1542.00			

****

HYDROGRAPH AT STATION DIKE3

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DA MON HRMN ORD	OUTFLOW	STORAGE	STAGE *	DA MON HRMN ORD	OUTFLOW	STORAGE	STAGE *	DA MON HRMN ORD	OUTFLOW	STORAGE	STAGE
28 APR 0000 1	0.	.0	1504.0 *	28 APR 0820 101	0.	802.9	1524.3 *	28 APR 1640 201	0.	2392.4	1531.0
28 APR 0005 2	0.	.0	1504.0 *	28 APR 0825 102	0.	823.9	1524.4 *	28 APR 1645 202	0.	2403.5	1531.0
28 APR 0010 3	0.	.0	1504.0 *	28 APR 0830 103	0.	844.7	1524.5 *	28 APR 1650 203	0.	2414.5	1531.0

28 APR 0015	4	0.	.0	1504.0	*	28 APR 0835	104	0.	865.4	1524.6	*	28 APR 1655	204	0.	2425.5	1531.1
28 APR 0020	5	0.	.0	1504.0	*	28 APR 0840	105	0.	885.9	1524.7	*	28 APR 1700	205	0.	2436.3	1531.1
28 APR 0025	6	0.	.0	1504.0	*	28 APR 0845	106	0.	906.4	1524.8	*	28 APR 1705	206	0.	2447.0	1531.1
28 APR 0030	7	0.	.0	1504.0	*	28 APR 0850	107	0.	926.8	1524.9	*	28 APR 1710	207	0.	2457.7	1531.2
28 APR 0035	8	0.	.0	1504.0	*	28 APR 0855	108	0.	947.0	1525.0	*	28 APR 1715	208	0.	2468.2	1531.2
28 APR 0040	9	0.	.0	1504.0	*	28 APR 0900	109	0.	967.1	1525.1	*	28 APR 1720	209	0.	2478.7	1531.3
28 APR 0045	10	0.	.0	1504.0	*	28 APR 0905	110	0.	987.0	1525.2	*	28 APR 1725	210	0.	2489.1	1531.3
28 APR 0050	11	0.	.0	1504.0	*	28 APR 0910	111	0.	1006.9	1525.4	*	28 APR 1730	211	0.	2499.4	1531.3
28 APR 0055	12	0.	.0	1504.0	*	28 APR 0915	112	0.	1026.6	1525.5	*	28 APR 1735	212	0.	2509.7	1531.4
28 APR 0100	13	0.	.0	1504.0	*	28 APR 0920	113	0.	1046.3	1525.6	*	28 APR 1740	213	0.	2519.8	1531.4
28 APR 0105	14	0.	.0	1504.0	*	28 APR 0925	114	0.	1065.8	1525.7	*	28 APR 1745	214	0.	2529.9	1531.4
28 APR 0110	15	0.	.0	1504.0	*	28 APR 0930	115	0.	1085.1	1525.8	*	28 APR 1750	215	0.	2539.9	1531.5
28 APR 0115	16	0.	.0	1504.0	*	28 APR 0935	116	0.	1104.4	1525.9	*	28 APR 1755	216	0.	2549.7	1531.5
28 APR 0120	17	0.	.0	1504.0	*	28 APR 0940	117	0.	1123.6	1526.0	*	28 APR 1800	217	0.	2559.5	1531.5
28 APR 0125	18	0.	.0	1504.0	*	28 APR 0945	118	0.	1142.7	1526.1	*	28 APR 1805	218	0.	2569.1	1531.6
28 APR 0130	19	0.	.0	1504.0	*	28 APR 0950	119	0.	1161.7	1526.1	*	28 APR 1810	219	0.	2578.7	1531.6
28 APR 0135	20	0.	.0	1504.0	*	28 APR 0955	120	0.	1180.7	1526.2	*	28 APR 1815	220	0.	2588.2	1531.6
28 APR 0140	21	0.	.1	1504.1	*	28 APR 1000	121	0.	1199.5	1526.3	*	28 APR 1820	221	0.	2597.5	1531.7
28 APR 0145	22	0.	.1	1504.1	*	28 APR 1005	122	0.	1218.3	1526.4	*	28 APR 1825	222	0.	2606.8	1531.7
28 APR 0150	23	0.	.1	1504.1	*	28 APR 1010	123	0.	1236.9	1526.5	*	28 APR 1830	223	0.	2615.9	1531.7
28 APR 0155	24	0.	.2	1504.2	*	28 APR 1015	124	0.	1255.5	1526.6	*	28 APR 1835	224	0.	2624.9	1531.8
28 APR 0200	25	0.	.2	1504.2	*	28 APR 1020	125	0.	1273.9	1526.6	*	28 APR 1840	225	0.	2633.8	1531.8
28 APR 0205	26	0.	.3	1504.3	*	28 APR 1025	126	0.	1292.3	1526.7	*	28 APR 1845	226	0.	2642.5	1531.8
28 APR 0210	27	0.	.4	1504.4	*	28 APR 1030	127	0.	1310.5	1526.8	*	28 APR 1850	227	0.	2651.2	1531.8
28 APR 0215	28	0.	.4	1504.4	*	28 APR 1035	128	0.	1328.6	1526.9	*	28 APR 1855	228	0.	2659.8	1531.9
28 APR 0220	29	0.	.5	1504.5	*	28 APR 1040	129	0.	1346.6	1527.0	*	28 APR 1900	229	0.	2668.2	1531.9
28 APR 0225	30	0.	.6	1504.6	*	28 APR 1045	130	0.	1364.6	1527.0	*	28 APR 1905	230	0.	2676.6	1531.9
28 APR 0230	31	0.	.7	1504.7	*	28 APR 1050	131	0.	1382.4	1527.1	*	28 APR 1910	231	0.	2684.9	1532.0
28 APR 0235	32	0.	.8	1504.8	*	28 APR 1055	132	0.	1400.1	1527.2	*	28 APR 1915	232	0.	2693.1	1532.0
28 APR 0240	33	0.	.9	1504.9	*	28 APR 1100	133	0.	1417.8	1527.3	*	28 APR 1920	233	0.	2701.3	1532.0
28 APR 0245	34	0.	1.1	1505.1	*	28 APR 1105	134	0.	1435.3	1527.3	*	28 APR 1925	234	0.	2709.3	1532.0
28 APR 0250	35	0.	1.2	1505.2	*	28 APR 1110	135	0.	1452.8	1527.4	*	28 APR 1930	235	0.	2717.3	1532.1
28 APR 0255	36	0.	1.4	1505.4	*	28 APR 1115	136	0.	1470.2	1527.5	*	28 APR 1935	236	0.	2725.1	1532.1
28 APR 0300	37	0.	1.5	1505.5	*	28 APR 1120	137	0.	1487.5	1527.6	*	28 APR 1940	237	0.	2732.9	1532.1
28 APR 0305	38	0.	1.7	1505.7	*	28 APR 1125	138	0.	1504.7	1527.6	*	28 APR 1945	238	0.	2740.6	1532.1
28 APR 0310	39	0.	1.9	1505.9	*	28 APR 1130	139	0.	1521.7	1527.7	*	28 APR 1950	239	0.	2748.1	1532.2
28 APR 0315	40	0.	2.1	1506.0	*	28 APR 1135	140	0.	1538.7	1527.8	*	28 APR 1955	240	0.	2755.6	1532.2
28 APR 0320	41	0.	2.3	1506.1	*	28 APR 1140	141	0.	1555.5	1527.9	*	28 APR 2000	241	0.	2763.0	1532.2
28 APR 0325	42	0.	2.5	1506.2	*	28 APR 1145	142	0.	1572.3	1527.9	*	28 APR 2005	242	0.	2770.3	1532.2
28 APR 0330	43	0.	2.8	1506.3	*	28 APR 1150	143	0.	1589.0	1528.0	*	28 APR 2010	243	0.	2777.4	1532.3
28 APR 0335	44	0.	3.0	1506.4	*	28 APR 1155	144	0.	1605.6	1528.1	*	28 APR 2015	244	0.	2784.6	1532.3
28 APR 0340	45	0.	3.2	1506.5	*	28 APR 1200	145	0.	1622.1	1528.1	*	28 APR 2020	245	0.	2791.6	1532.3
28 APR 0345	46	0.	3.5	1506.6	*	28 APR 1205	146	0.	1638.5	1528.2	*	28 APR 2025	246	0.	2798.5	1532.3
28 APR 0350	47	0.	3.8	1506.7	*	28 APR 1210	147	0.	1654.7	1528.3	*	28 APR 2030	247	0.	2805.4	1532.3
28 APR 0355	48	0.	4.1	1506.8	*	28 APR 1215	148	0.	1670.9	1528.3	*	28 APR 2035	248	0.	2812.2	1532.4
28 APR 0400	49	0.	4.4	1507.0	*	28 APR 1220	149	0.	1687.0	1528.4	*	28 APR 2040	249	0.	2818.9	1532.4
28 APR 0405	50	0.	4.7	1507.1	*	28 APR 1225	150	0.	1703.1	1528.4	*	28 APR 2045	250	0.	2825.6	1532.4
28 APR 0410	51	0.	5.0	1507.2	*	28 APR 1230	151	0.	1719.0	1528.5	*	28 APR 2050	251	0.	2832.2	1532.4
28 APR 0415	52	0.	5.4	1507.4	*	28 APR 1235	152	0.	1734.8	1528.6	*	28 APR 2055	252	0.	2838.6	1532.5
28 APR 0420	53	0.	5.8	1507.5	*	28 APR 1240	153	0.	1750.6	1528.6	*	28 APR 2100	253	0.	2845.1	1532.5
28 APR 0425	54	0.	6.1	1507.7	*	28 APR 1245	154	0.	1766.2	1528.7	*	28 APR 2105	254	0.	2851.4	1532.5
28 APR 0430	55	0.	6.5	1507.8	*	28 APR 1250	155	0.	1781.8	1528.7	*	28 APR 2110	255	0.	2857.7	1532.5
28 APR 0435	56	0.	7.0	1508.0	*	28 APR 1255	156	0.	1797.2	1528.8	*	28 APR 2115	256	0.	2863.8	1532.5
28 APR 0440	57	0.	7.4	1508.1	*	28 APR 1300	157	0.	1812.5	1528.9	*	28 APR 2120	257	0.	2869.9	1532.6
28 APR 0445	58	0.	7.9	1508.2	*	28 APR 1305	158	0.	1827.7	1528.9	*	28 APR 2125	258	0.	2876.0	1532.6
28 APR 0450	59	0.	8.5	1508.4	*	28 APR 1310	159	0.	1842.9	1529.0	*	28 APR 2130	259	0.	2881.9	1532.6
28 APR 0455	60	0.	9.1	1508.5	*	28 APR 1315	160	0.	1857.9	1529.0	*	28 APR 2135	260	0.	2887.8	1532.6
28 APR 0500	61	0.	9.7	1508.7	*	28 APR 1320	161	0.	1872.8	1529.1	*	28 APR 2140	261	0.	2893.5	1532.6
28 APR 0505	62	0.	10.3	1508.8	*	28 APR 1325	162	0.	1887.6	1529.1	*	28 APR 2145	262	0.	2899.1	1532.6
28 APR 0510	63	0.	11.0	1509.0	*	28 APR 1330	163	0.	1902.3	1529.2	*	28 APR 2150	263	0.	2904.7	1532.7
28 APR 0515	64	0.	11.8	1509.2	*	28 APR 1335	164	0.	1916.9	1529.3	*	28 APR 2155	264	0.	2910.1	1532.7
28 APR 0520	65	0.	12.6	1509.4	*	28 APR 1340	165	0.	1931.4	1529.3	*	28 APR 2200	265	0.	2915.5	1532.7
28 APR 0525	66	0.	13.6	1509.7	*	28 APR 1345	166	0.	1945.8	1529.4	*	28 APR 2205	266	0.	2920.7	1532.7
28 APR 0530	67	0.	14.7	1509.9	*	28 APR 1350	167	0.	1960.1	1529.4	*	28 APR 2210	267	0.	2925.9	1532.7
28 APR 0535	68	0.	16.0	1510.2	*	28 APR 1355	168	0.	1974.4	1529.5	*	28 APR 2215	268	0.	2930.9	1532.7

28	APR	0540	69	0.	17.9	1510.5	*	28	APR	1400	169	0.	1988.6	1529.5	*	28	APR	2220	269	0.	2935.9	1532.8
28	APR	0545	70	0.	22.4	1511.2	*	28	APR	1405	170	0.	2002.6	1529.6	*	28	APR	2225	270	0.	2940.8	1532.8
28	APR	0550	71	0.	33.5	1512.8	*	28	APR	1410	171	0.	2016.6	1529.6	*	28	APR	2230	271	0.	2945.7	1532.8
28	APR	0555	72	0.	54.1	1514.9	*	28	APR	1415	172	0.	2030.5	1529.7	*	28	APR	2235	272	0.	2950.4	1532.8
28	APR	0600	73	0.	83.9	1516.6	*	28	APR	1420	173	0.	2044.3	1529.7	*	28	APR	2240	273	0.	2955.0	1532.8
28	APR	0605	74	0.	121.2	1517.9	*	28	APR	1425	174	0.	2057.9	1529.8	*	28	APR	2245	274	0.	2959.6	1532.8
28	APR	0610	75	0.	160.5	1518.6	*	28	APR	1430	175	0.	2071.5	1529.8	*	28	APR	2250	275	0.	2964.1	1532.9
28	APR	0615	76	0.	196.1	1519.2	*	28	APR	1435	176	0.	2085.0	1529.9	*	28	APR	2255	276	0.	2968.5	1532.9
28	APR	0620	77	0.	227.9	1519.7	*	28	APR	1440	177	0.	2098.4	1529.9	*	28	APR	2300	277	0.	2972.7	1532.9
28	APR	0625	78	0.	257.7	1520.1	*	28	APR	1445	178	0.	2111.6	1530.0	*	28	APR	2305	278	0.	2977.0	1532.9
28	APR	0630	79	0.	286.6	1520.4	*	28	APR	1450	179	0.	2124.8	1530.0	*	28	APR	2310	279	0.	2981.1	1532.9
28	APR	0635	80	0.	315.0	1520.7	*	28	APR	1455	180	0.	2138.0	1530.1	*	28	APR	2315	280	0.	2985.2	1532.9
28	APR	0640	81	0.	342.7	1521.0	*	28	APR	1500	181	0.	2151.0	1530.1	*	28	APR	2320	281	0.	2989.1	1532.9
28	APR	0645	82	0.	369.7	1521.2	*	28	APR	1505	182	0.	2164.0	1530.2	*	28	APR	2325	282	0.	2993.0	1532.9
28	APR	0650	83	0.	395.8	1521.5	*	28	APR	1510	183	0.	2176.9	1530.2	*	28	APR	2330	283	0.	2996.9	1533.0
28	APR	0655	84	0.	421.2	1521.7	*	28	APR	1515	184	0.	2189.6	1530.3	*	28	APR	2335	284	0.	3000.6	1533.0
28	APR	0700	85	0.	445.9	1522.0	*	28	APR	1520	185	0.	2202.3	1530.3	*	28	APR	2340	285	0.	3004.3	1533.0
28	APR	0705	86	0.	470.1	1522.2	*	28	APR	1525	186	0.	2214.9	1530.4	*	28	APR	2345	286	0.	3007.9	1533.0
28	APR	0710	87	0.	493.9	1522.3	*	28	APR	1530	187	0.	2227.5	1530.4	*	28	APR	2350	287	0.	3011.5	1533.0
28	APR	0715	88	0.	517.3	1522.5	*	28	APR	1535	188	0.	2239.9	1530.4	*	28	APR	2355	288	0.	3015.0	1533.0
28	APR	0720	89	0.	540.4	1522.6	*	28	APR	1540	189	0.	2252.2	1530.5	*	29	APR	0000	289	0.	3018.5	1533.0
28	APR	0725	90	0.	563.3	1522.8	*	28	APR	1545	190	0.	2264.4	1530.5	*	29	APR	0005	290	0.	3021.9	1533.0
28	APR	0730	91	0.	585.9	1522.9	*	28	APR	1550	191	0.	2276.5	1530.6	*	29	APR	0010	291	0.	3025.2	1533.0
28	APR	0735	92	0.	608.4	1523.1	*	28	APR	1555	192	0.	2288.5	1530.6	*	29	APR	0015	292	0.	3028.5	1533.1
28	APR	0740	93	0.	630.7	1523.2	*	28	APR	1600	193	0.	2300.5	1530.6	*	29	APR	0020	293	0.	3031.8	1533.1
28	APR	0745	94	0.	652.8	1523.4	*	28	APR	1605	194	0.	2312.3	1530.7	*	29	APR	0025	294	0.	3035.0	1533.1
28	APR	0750	95	0.	674.7	1523.5	*	28	APR	1610	195	0.	2324.0	1530.7	*	29	APR	0030	295	0.	3038.2	1533.1
28	APR	0755	96	0.	696.4	1523.7	*	28	APR	1615	196	0.	2335.6	1530.8	*	29	APR	0035	296	0.	3041.2	1533.1
28	APR	0800	97	0.	718.0	1523.8	*	28	APR	1620	197	0.	2347.2	1530.8	*	29	APR	0040	297	0.	3044.3	1533.1
28	APR	0805	98	0.	739.4	1523.9	*	28	APR	1625	198	0.	2358.6	1530.8	*	29	APR	0045	298	0.	3047.2	1533.1
28	APR	0810	99	0.	760.7	1524.1	*	28	APR	1630	199	0.	2370.0	1530.9	*	29	APR	0050	299	0.	3050.1	1533.1
28	APR	0815	100	0.	781.9	1524.2	*	28	APR	1635	200	0.	2381.3	1530.9	*	29	APR	0055	300	0.	3053.0	1533.1
					*							*										

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PEAK OUTFLOW IS 0. AT TIME .00 HOURS

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)				
	(CFS)				
+ 0.	.08	0.	0.	0.	0.
	(INCHES)	.000	.000	.000	.000
	(AC-FT)	0.	0.	0.	0.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
3053.	24.92	2892.	1591.	1533.	1533.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)				
1533.13	24.92	1532.62	1524.45	1523.69	1523.69

CUMULATIVE AREA = 24.25 SQ MI

1 STATION DIKE3

(I) INFLOW, (O) OUTFLOW

0.	1000.	2000.	3000.	4000.	5000.	6000.	0.	0.	0.	0.	0.	0.

(S) STORAGE

0.	0.	0.	0.	0.	0.	0.	1000.	2000.	3000.	4000.	0.	0.

DAHRMN PER
280000

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1I---------.---------.---------.---------.---------.---------S---------.---------.---------.---------.---------.---------.
280005  2I   .   .   .   .   .   S   .   .   .   .   .   .
280010  3I   .   .   .   .   .   S   .   .   .   .   .   .
280015  4I   .   .   .   .   .   S   .   .   .   .   .   .
280020  5I   .   .   .   .   .   S   .   .   .   .   .   .
280025  6I   .   .   .   .   .   S   .   .   .   .   .   .
280030  7I   .   .   .   .   .   S   .   .   .   .   .   .
280035  8I   .   .   .   .   .   S   .   .   .   .   .   .
280040  9I   .   .   .   .   .   S   .   .   .   .   .   .
280045 10I   .   .   .   .   .   S   .   .   .   .   .   .
280050 11I...............................S...............................
280055 12I   .   .   .   .   .   S   .   .   .   .   .   .
280100 13I   .   .   .   .   .   S   .   .   .   .   .   .
280105 14I   .   .   .   .   .   S   .   .   .   .   .   .
280110 15I   .   .   .   .   .   S   .   .   .   .   .   .
280115 16I   .   .   .   .   .   S   .   .   .   .   .   .
280120 17I   .   .   .   .   .   S   .   .   .   .   .   .
280125 18I   .   .   .   .   .   S   .   .   .   .   .   .
280130 19I   .   .   .   .   .   S   .   .   .   .   .   .
280135 20I   .   .   .   .   .   S   .   .   .   .   .   .
280140 21I...............................S...............................
280145 22I   .   .   .   .   .   S   .   .   .   .   .   .
280150 23I   .   .   .   .   .   S   .   .   .   .   .   .
280155 24I   .   .   .   .   .   S   .   .   .   .   .   .
280200 25I   .   .   .   .   .   S   .   .   .   .   .   .
280205 26I   .   .   .   .   .   S   .   .   .   .   .   .
280210 27I   .   .   .   .   .   S   .   .   .   .   .   .
280215 28I   .   .   .   .   .   S   .   .   .   .   .   .
280220 29I   .   .   .   .   .   S   .   .   .   .   .   .
280225 30I   .   .   .   .   .   S   .   .   .   .   .   .
280230 31I...............................S...............................
280235 32I   .   .   .   .   .   S   .   .   .   .   .   .
280240 33I   .   .   .   .   .   S   .   .   .   .   .   .
280245 34I   .   .   .   .   .   S   .   .   .   .   .   .
280250 35I   .   .   .   .   .   S   .   .   .   .   .   .
280255 36I   .   .   .   .   .   S   .   .   .   .   .   .
280300 37I   .   .   .   .   .   S   .   .   .   .   .   .
280305 38I   .   .   .   .   .   S   .   .   .   .   .   .
280310 39I   .   .   .   .   .   S   .   .   .   .   .   .
280315 40I   .   .   .   .   .   S   .   .   .   .   .   .
280320 41I...............................S...............................
280325 42I   .   .   .   .   .   S   .   .   .   .   .   .
280330 43I   .   .   .   .   .   S   .   .   .   .   .   .
280335 44I   .   .   .   .   .   S   .   .   .   .   .   .
280340 45I   .   .   .   .   .   S   .   .   .   .   .   .
280345 46I   .   .   .   .   .   S   .   .   .   .   .   .
280350 47I   .   .   .   .   .   S   .   .   .   .   .   .
280355 48I   .   .   .   .   .   S   .   .   .   .   .   .
280400 49I   .   .   .   .   .   S   .   .   .   .   .   .
280405 50I   .   .   .   .   .   S   .   .   .   .   .   .
280410 51I...............................S...............................
280415 52OI   .   .   .   .   .   S   .   .   .   .   .   .
280420 53OI   .   .   .   .   .   S   .   .   .   .   .   .
280425 54OI   .   .   .   .   .   S   .   .   .   .   .   .
280430 55OI   .   .   .   .   .   S   .   .   .   .   .   .
280435 56OI   .   .   .   .   .   S   .   .   .   .   .   .
280440 57OI   .   .   .   .   .   S   .   .   .   .   .   .
280445 58OI   .   .   .   .   .   S   .   .   .   .   .   .
280450 59OI   .   .   .   .   .   S   .   .   .   .   .   .
280455 60OI   .   .   .   .   .   S   .   .   .   .   .   .
280500 61OI..............................S...............................
280505 62OI   .   .   .   .   .   S   .   .   .   .   .   .
280510 63OI   .   .   .   .   .   S   .   .   .   .   .   .
280515 64OI   .   .   .   .   .   S   .   .   .   .   .   .
280520 65OI   .   .   .   .   .   S   .   .   .   .   .   .
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280525 66OI   .   .   .   .   .   S   .   .   .   .   .   .
280530 67O I  .   .   .   .   .   S   .   .   .   .   .   .
280535 68O I  .   .   .   .   .   S   .   .   .   .   .   .
280540 69O  I .   .   .   .   .   S   .   .   .   .   .   .
280545 70O    I   .   .   .   .   S   .   .   .   .   .   .
280550 71O ..........I..................S.............................
280555 72O    .   .   .   I   .   .   .S  .   .   .   .   .
280600 73O    .   .   .   .   .  I.   .S  .   .   .   .   .
280605 74O    .   .   .   .   .   .  I.S  .   .   .   .   .
280610 75O    .   .   .   .   .   .  I .S  .   .   .   .   .
280615 76O    .   .   .   .   .  I.   . S  .   .   .   .   .
280620 77O    .   .   .   .  I .   . S  .   .   .   .   .
280625 78O    .   .   .   .I   .   . S  .   .   .   .   .
280630 79O    .   .   .   .I   .   . S  .   .   .   .   .
280635 80O    .   .   .   .I   .   . S  .   .   .   .   .
280640 81O ....................I...........S.............................
280645 82O    .   .   .   I   .   .   . S  .   .   .   .   .
280650 83O    .   .   .   I   .   .   . S  .   .   .   .   .
280655 84O    .   .   .   I   .   .   . S  .   .   .   .   .
280700 85O    .   .   .   I   .   .   . S  .   .   .   .   .
280705 86O    .   .   .   I   .   .   . S  .   .   .   .   .
280710 87O    .   .   .   I   .   .   . S  .   .   .   .   .
280715 88O    .   .   .   I   .   .   . S  .   .   .   .   .
280720 89O    .   .   .   I   .   .   . S  .   .   .   .   .
280725 90O    .   .   .   I   .   .   . S  .   .   .   .   .
280730 91O ................I.................S...........................
280735 92O    .   .   .I   .   .   .   . S  .   .   .   .   .
280740 93O    .   .   .I   .   .   .   . S  .   .   .   .   .
280745 94O    .   .   .I   .   .   .   . S  .   .   .   .   .
280750 95O    .   .   .I   .   .   .   . S  .   .   .   .   .
280755 96O    .   .   .I   .   .   .   . S  .   .   .   .   .
280800 97O    .   .   .I   .   .   .   . S  .   .   .   .   .
280805 98O    .   .   .I   .   .   .   . S  .   .   .   .   .
280810 99O    .   .   .I   .   .   .   . S  .   .   .   .   .
280815 100O   .   .   .I   .   .   .   . S  .   .   .   .   .
280820 101O ...............I...................S...........................
280825 102O   .   .   I   .   .   .   . S  .   .   .   .   .
280830 103O   .   .   I   .   .   .   . S  .   .   .   .   .
280835 104O   .   .   I   .   .   .   . S. .   .   .   .   .
280840 105O   .   .   I   .   .   .   . S. .   .   .   .   .
280845 106O   .   .   I   .   .   .   . S. .   .   .   .   .
280850 107O   .   .  I.   .   .   .   . S. .   .   .   .   .
280855 108O   .   .  I.   .   .   .   . S. .   .   .   .   .
280900 109O   .   .  I.   .   .   .   . S  .   .   .   .   .
280905 110O   .   .  I.   .   .   .   . S  .   .   .   .   .
280910 111O ..............I.....................S...........................
280915 112O   .   .  I.   .   .   .   . S  .   .   .   .   .
280920 113O   .   . I .   .   .   .   . S  .   .   .   .   .
280925 114O   .   . I .   .   .   .   .S  .   .   .   .   .
280930 115O   .   . I .   .   .   .   .S  .   .   .   .   .
280935 116O   .   . I .   .   .   .   .S  .   .   .   .   .
280940 117O   .   . I .   .   .   .   .S  .   .   .   .   .
280945 118O   .   . I .   .   .   .   .S  .   .   .   .   .
280950 119O   .   . I .   .   .   .   . S .   .   .   .   .
280955 120O   .   .I  .   .   .   .   . S .   .   .   .   .
281000 121O ............I.....................S...........................
281005 122O   .   . I .   .   .   .   . S .   .   .   .   .
281010 123O   .   . I .   .   .   .   . S .   .   .   .   .
281015 124O   .   . I .   .   .   .   . S  .   .   .   .   .
281020 125O   .   . I .   .   .   .   . S  .   .   .   .   .
281025 126O   .   . I .   .   .   .   . S  .   .   .   .   .
281030 127O   .   .I  .   .   .   .   . S  .   .   .   .   .
281035 128O   .   .I  .   .   .   .   . S  .   .   .   .   .
281040 129O   .   .I  .   .   .   .   . S  .   .   .   .   .
281045 130O   .   .I  .   .   .   .   . S  .   .   .   .   .
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281050 1310 ............I.......................S.......................
281055 1320 .   .   I   .   .   .   .   .   S   .   .   .   .   .
281100 1330 .   .   I   .   .   .   .   .   S   .   .   .   .   .
281105 1340 .   .   I   .   .   .   .   .   S   .   .   .   .   .
281110 1350 .   .   I   .   .   .   .   .   S   .   .   .   .   .
281115 1360 .   .   I   .   .   .   .   .   S   .   .   .   .   .
281120 1370 .   .   I   .   .   .   .   .   S   .   .   .   .   .
281125 1380 .   .   I   .   .   .   .   .   S   .   .   .   .   .
281130 1390 .   .   I   .   .   .   .   .   S   .   .   .   .   .
281135 1400 .   .   I   .   .   .   .   .   S   .   .   .   .   .
281140 1410 ............I.......................S.......................
281145 1420 .   .   I   .   .   .   .   .   S   .   .   .   .   .
281150 1430 .   .   I   .   .   .   .   .   S   .   .   .   .   .
281155 1440 .   .   I   .   .   .   .   .   S   .   .   .   .   .
281200 1450 .   .   I   .   .   .   .   .   S   .   .   .   .   .
281205 1460 .   .   I   .   .   .   .   .   S   .   .   .   .   .
281210 1470 .   .   I   .   .   .   .   .   S   .   .   .   .   .
281215 1480 .   .   I   .   .   .   .   .   S   .   .   .   .   .
281220 1490 .   .   I   .   .   .   .   .   S   .   .   .   .   .
281225 1500 .   .   I   .   .   .   .   .   S   .   .   .   .   .
281230 1510 ............I.......................S.......................
281235 1520 .   .   I   .   .   .   .   .   S   .   .   .   .   .
281240 1530 .   .   I   .   .   .   .   .   S   .   .   .   .   .
281245 1540 .   .   I   .   .   .   .   .   S   .   .   .   .   .
281250 1550 .   .   I   .   .   .   .   .   S   .   .   .   .   .
281255 1560 .   .   I   .   .   .   .   .   S   .   .   .   .   .
281300 1570 .   .   I   .   .   .   .   .   S   .   .   .   .   .
281305 1580 .   .   I   .   .   .   .   .   S   .   .   .   .   .
281310 1590 .   .   I   .   .   .   .   .   S   .   .   .   .   .
281315 1600 .   .   I   .   .   .   .   .   S   .   .   .   .   .
281320 1610 ............I.......................S.......................
281325 1620 .   .   I   .   .   .   .   .   S   .   .   .   .   .
281330 1630 .   .   I   .   .   .   .   .   S   .   .   .   .   .
281335 1640 .   .   I   .   .   .   .   .   S   .   .   .   .   .
281340 1650 .   .   I   .   .   .   .   .   S   .   .   .   .   .
281345 1660 .   .   I   .   .   .   .   .   S   .   .   .   .   .
281350 1670 .   .   I   .   .   .   .   .   S   .   .   .   .   .
281355 1680 .   .   I   .   .   .   .   .   S   .   .   .   .   .
281400 1690 .   .   I   .   .   .   .   .   S   .   .   .   .   .
281405 1700 .   .   I   .   .   .   .   .   S   .   .   .   .   .
281410 1710 ............I.......................S.......................
281415 1720 .   .   I   .   .   .   .   .   S   .   .   .   .   .
281420 1730 .   .   I   .   .   .   .   .   S   .   .   .   .   .
281425 1740 .   .   I   .   .   .   .   .   .S   .   .   .   .   .
281430 1750 .   .   I   .   .   .   .   .   .S   .   .   .   .   .
281435 1760 .   .   I   .   .   .   .   .   .S   .   .   .   .   .
281440 1770 .   .   I.  .   .   .   .   .   .S   .   .   .   .   .
281445 1780 .   .   I.  .   .   .   .   .   .S   .   .   .   .   .
281450 1790 .   .   I.  .   .   .   .   .   .S   .   .   .   .   .
281455 1800 .   .   I.  .   .   .   .   .   .S   .   .   .   .   .
281500 1810 ............I.......................S.......................
281505 1820 .   .   I.  .   .   .   .   .   .   .S   .   .   .   .
281510 1830 .   .   I.  .   .   .   .   .   .   .S   .   .   .   .
281515 1840 .   .   I.  .   .   .   .   .   .   .S   .   .   .   .
281520 1850 .   .   I.  .   .   .   .   .   .   .S   .   .   .   .
281525 1860 .   .   I.  .   .   .   .   .   .   .S   .   .   .   .
281530 1870 .   .   I.  .   .   .   .   .   .   .S   .   .   .   .
281535 1880 .   .   I.  .   .   .   .   .   .   .S   .   .   .   .
281540 1890 .   .   I.  .   .   .   .   .   .   .   .S   .   .   .
281545 1900 .   .   I.  .   .   .   .   .   .   .   .S   .   .   .
281550 1910 ............I.......................S.......................
281555 1920 .   .   I.  .   .   .   .   .   .   .   .S   .   .   .
281600 1930 .   .   I.  .   .   .   .   .   .   .   .S   .   .   .
281605 1940 .   .   I.  .   .   .   .   .   .   .   .S   .   .   .
281610 1950 .   .   I.  .   .   .   .   .   .   .   .S   .   .   .
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281615 1960   .  I .  .  .  .  .  .  .  .  S  .  .  .  .
281620 1970   .  I .  .  .  .  .  .  .  .  S  .  .  .  .
281625 1980   .  I .  .  .  .  .  .  .  .  S  .  .  .  .
281630 1990   .  I .  .  .  .  .  .  .  .  S  .  .  .  .
281635 2000   .  I .  .  .  .  .  .  .  .  S  .  .  .  .
281640 2010 .....I.....................................S..................
281645 2020   .  I .  .  .  .  .  .  .  .  S  .  .  .  .
281650 2030   .  I .  .  .  .  .  .  .  .  S  .  .  .  .
281655 2040   .  I .  .  .  .  .  .  .  .  S  .  .  .  .
281700 2050   .  I .  .  .  .  .  .  .  .  S  .  .  .  .
281705 2060   .  I .  .  .  .  .  .  .  .  S  .  .  .  .
281710 2070   .  I .  .  .  .  .  .  .  .  S  .  .  .  .
281715 2080   .  I .  .  .  .  .  .  .  .  S  .  .  .  .
281720 2090   .  I .  .  .  .  .  .  .  .  S  .  .  .  .
281725 2100   .  I .  .  .  .  .  .  .  .  S  .  .  .  .
281730 2110 .....I.....................................S..................
281735 2120   .  I .  .  .  .  .  .  .  .  S  .  .  .  .
281740 2130   .  I .  .  .  .  .  .  .  .  S  .  .  .  .
281745 2140   .  I .  .  .  .  .  .  .  .  S  .  .  .  .
281750 2150   .  I .  .  .  .  .  .  .  .  S  .  .  .  .
281755 2160   .  I .  .  .  .  .  .  .  .  S  .  .  .  .
281800 2170   .  I .  .  .  .  .  .  .  .  S  .  .  .  .
281805 2180   .  I .  .  .  .  .  .  .  .  S  .  .  .  .
281810 2190   .  I .  .  .  .  .  .  .  .  S  .  .  .  .
281815 2200   .  I .  .  .  .  .  .  .  .  S  .  .  .  .
281820 2210 .....I.....................................S..................
281825 2220   .  I .  .  .  .  .  .  .  .  S  .  .  .  .
281830 2230   .  I .  .  .  .  .  .  .  .  S  .  .  .  .
281835 2240   .  I .  .  .  .  .  .  .  .  S  .  .  .  .
281840 2250   .  I .  .  .  .  .  .  .  .  S  .  .  .  .
281845 2260   .  I .  .  .  .  .  .  .  .  S  .  .  .  .
281850 2270   .  I .  .  .  .  .  .  .  .  S  .  .  .  .
281855 2280   .  I .  .  .  .  .  .  .  .  S  .  .  .  .
281900 2290   .  I .  .  .  .  .  .  .  .  S  .  .  .  .
281905 2300   .  I .  .  .  .  .  .  .  .  S  .  .  .  .
281910 2310 .....I.....................................S..................
281915 2320   .  I .  .  .  .  .  .  .  .  S  .  .  .  .
281920 2330   .  I .  .  .  .  .  .  .  .  S  .  .  .  .
281925 2340   .  I .  .  .  .  .  .  .  .  S  .  .  .  .
281930 2350   .I  .  .  .  .  .  .  .  .  S  .  .  .  .
281935 2360   .I  .  .  .  .  .  .  .  .  S  .  .  .  .
281940 2370   .I  .  .  .  .  .  .  .  .  S  .  .  .  .
281945 2380   .I  .  .  .  .  .  .  .  .  S  .  .  .  .
281950 2390   .I  .  .  .  .  .  .  .  .  S  .  .  .  .
281955 2400   .I  .  .  .  .  .  .  .  .  S  .  .  .  .
282000 2410 ....I.....................................S.................
282005 2420   .I  .  .  .  .  .  .  .  .  S  .  .  .  .
282010 2430   I   .  .  .  .  .  .  .  .  S  .  .  .  .
282015 2440   I   .  .  .  .  .  .  .  .  S  .  .  .  .
282020 2450   I   .  .  .  .  .  .  .  .  S  .  .  .  .
282025 2460   I   .  .  .  .  .  .  .  .  S  .  .  .  .
282030 2470   I   .  .  .  .  .  .  .  .  S  .  .  .  .
282035 2480   I   .  .  .  .  .  .  .  .  S  .  .  .  .
282040 2490   I   .  .  .  .  .  .  .  .  S  .  .  .  .
282045 2500   I   .  .  .  .  .  .  .  .  S  .  .  .  .
282050 2510 ...I.....................................S................
282055 2520   I.  .  .  .  .  .  .  .  .  S  .  .  .  .
282100 2530   I.  .  .  .  .  .  .  .  .  S  .  .  .  .
282105 2540   I.  .  .  .  .  .  .  .  .  S.  .  .  .  .
282110 2550   I.  .  .  .  .  .  .  .  .  S.  .  .  .  .
282115 2560   I.  .  .  .  .  .  .  .  .  S.  .  .  .  .
282120 2570   I.  .  .  .  .  .  .  .  .  S.  .  .  .  .
282125 2580   I.  .  .  .  .  .  .  .  .  S.  .  .  .  .
282130 2590   I.  .  .  .  .  .  .  .  .  S.  .  .  .  .
282135 2600   I.  .  .  .  .  .  .  .  .  S.  .  .  .  .
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282140 2610 . . . I . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . . . . . . . . . . . .
282145 2620     I .    .    .    .    .    .    .    .    .    .    S.    .    .    .    .
282150 2630     I .    .    .    .    .    .    .    .    .    .    S.    .    .    .    .
282155 2640     I .    .    .    .    .    .    .    .    .    .    S.    .    .    .    .
282200 2650     I .    .    .    .    .    .    .    .    .    .    S.    .    .    .    .
282205 2660     I .    .    .    .    .    .    .    .    .    .    S.    .    .    .    .
282210 2670    I  .    .    .    .    .    .    .    .    .    .    S.    .    .    .    .
282215 2680    I  .    .    .    .    .    .    .    .    .    .    S.    .    .    .    .
282220 2690    I  .    .    .    .    .    .    .    .    .    .    S.    .    .    .    .
282225 2700    I  .    .    .    .    .    .    .    .    .    .    S.    .    .    .    .
282230 2710 . . .I. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . . . . . . . . . . . .
282235 2720    I  .    .    .    .    .    .    .    .    .    .     S    .    .    .    .
282240 2730    I  .    .    .    .    .    .    .    .    .    .     S    .    .    .    .
282245 2740    I  .    .    .    .    .    .    .    .    .    .     S    .    .    .    .
282250 2750   I   .    .    .    .    .    .    .    .    .    .     S    .    .    .    .
282255 2760   I   .    .    .    .    .    .    .    .    .    .     S    .    .    .    .
282300 2770   I   .    .    .    .    .    .    .    .    .    .     S    .    .    .    .
282305 2780   I   .    .    .    .    .    .    .    .    .    .     S    .    .    .    .
282310 2790   I   .    .    .    .    .    .    .    .    .    .     S    .    .    .    .
282315 2800   I   .    .    .    .    .    .    .    .    .    .     S    .    .    .    .
282320 2810 . . I . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . .
282325 2820   I   .    .    .    .    .    .    .    .    .    .     S    .    .    .    .
282330 2830  I    .    .    .    .    .    .    .    .    .    .     S    .    .    .    .
282335 2840  I    .    .    .    .    .    .    .    .    .    .     S    .    .    .    .
282340 2850  I    .    .    .    .    .    .    .    .    .    .     S    .    .    .    .
282345 2860  I    .    .    .    .    .    .    .    .    .    .     S    .    .    .    .
282350 2870  I    .    .    .    .    .    .    .    .    .    .     S    .    .    .    .
282355 2880  I    .    .    .    .    .    .    .    .    .    .     S    .    .    .    .
290000 2890  I    .    .    .    .    .    .    .    .    .    .     S    .    .    .    .
290005 2900  I    .    .    .    .    .    .    .    .    .    .     S    .    .    .    .
290010 2910 . .I. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . .
290015 2920  I    .    .    .    .    .    .    .    .    .    .     S    .    .    .    .
290020 2930  I    .    .    .    .    .    .    .    .    .    .     S    .    .    .    .
290025 2940  I    .    .    .    .    .    .    .    .    .    .     S    .    .    .    .
290030 2950  I    .    .    .    .    .    .    .    .    .    .     S    .    .    .    .
290035 2960 I     .    .    .    .    .    .    .    .    .    .     S    .    .    .    .
290040 2970 I     .    .    .    .    .    .    .    .    .    .     S    .    .    .    .
290045 2980 I     .    .    .    .    .    .    .    .    .    .     S    .    .    .    .
290050 2990 I     .    .    .    .    .    .    .    .    .    .    .S    .    .    .    .
290055 3000---I-----.---------.---------.---------.---------.---------.---------.---------.---------.S--------.---------.---------.
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1

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 3649. TO 9713.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 4553. TO 13523.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 3845. TO 13523.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 6597. TO 48171.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 13035. TO 48171.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 331. TO 48171.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 6597. TO 48171.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 3355. TO 13747.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** ***

1

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

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT	30R	1914.	6.17	275.	85.	82.	1.31		
+	DIVERSION TO	30R2	0.	6.17	0.	0.	0.	1.31		
+	HYDROGRAPH AT	30R1	1914.	6.17	275.	85.	82.	1.31		
+	ROUTED TO	31.1	1669.	6.25	273.	85.	81.	1.31		
+								3.14	6.25	
+	HYDROGRAPH AT	31A	616.	6.08	63.	20.	19.	.41		
+	HYDROGRAPH AT	34R	977.	6.08	116.	36.	35.	.64		
+	ROUTED TO	31.3	964.	6.33	120.	37.	36.	.64		
+	3 COMBINED AT	31.2	3028.	6.25	455.	142.	137.	2.37		
+	DIVERSION TO	31A2	0.	6.25	0.	0.	0.	2.37		
+	HYDROGRAPH AT	31A1	3028.	6.25	455.	142.	137.	2.37		
+	ROUTED TO	36.2	2950.	6.25	453.	141.	136.	2.37		
+								3.86	6.25	
+	HYDROGRAPH AT	35N	946.	6.08	102.	31.	30.	.41		
+	DIVERSION TO	35N1	378.	6.08	41.	12.	12.	.41		
+	HYDROGRAPH AT	35N2	568.	6.08	61.	19.	18.	.41		
+	ROUTED TO	35L1	476.	6.17	61.	18.	18.	.41		
+	HYDROGRAPH AT	35L	685.	6.25	124.	39.	37.	.65		
+	2 COMBINED AT	35L2	1159.	6.25	185.	57.	55.	1.06		
+	HYDROGRAPH AT	36L1	1284.	6.33	247.	78.	75.	1.47		

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     ROUTED TO
+                36.3    1284.   6.33     246.     77.     75.    1.47
+                                                                 2.37     6.33

     2 COMBINED AT
+                36.4    4165.   6.33     699.    219.    211.    3.84

     DIVERSION TO
+                36.6       0.   6.33       0.      0.      0.    3.84

     HYDROGRAPH AT
+                36.5    4165.   6.33     699.    219.    211.    3.84

     ROUTED TO
+                36.7    4206.   6.33     698.    219.    211.    3.84
+                                                                 4.75     6.33

     HYDROGRAPH AT
+                35N1     378.   6.08      41.     12.     12.     .00

     HYDROGRAPH AT
+                35R      650.   6.25     121.     38.     37.     .45

     HYDROGRAPH AT
+                36R1    1028.   6.17     239.     76.     73.    1.12

     2 COMBINED AT
+                36.8    5156.   6.33     935.    294.    283.    4.96

     DIVERSION TO
+                36.10      0.   6.33       0.      0.      0.    4.96

     HYDROGRAPH AT
+                36.9    5156.   6.33     935.    294.    283.    4.96

     ROUTED TO
+                37.1    4976.   6.33     932.    294.    283.    4.96
+                                                                 5.24     6.33

     HYDROGRAPH AT
+                37B      212.   6.08      20.      6.      6.     .11

     ROUTED TO
+                37.2     188.   6.08      20.      6.      6.     .11
+                                                                  .73     6.08

     2 COMBINED AT
+                37.3    5050.   6.33     951.    300.    289.    5.07

     DIVERSION TO
+                37.5       0.   6.33       0.      0.      0.    5.07

     HYDROGRAPH AT
+                37.4    5050.   6.33     951.    300.    289.    5.07

     ROUTED TO
+                52.1    4974.   6.42     947.    299.    288.    5.07
+                                                                 4.18     6.42

     HYDROGRAPH AT
+                SUB39   4477.   6.08     489.    149.    143.    1.93

     HYDROGRAPH AT
+                SUB40   1343.   6.08     132.     40.     39.     .58
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	2 COMBINED AT						
+	CP41	5821.	6.08	622.	189.	182.	2.51
	HYDROGRAPH AT						
+	SUB41	6325.	6.17	775.	236.	227.	3.31
	HYDROGRAPH AT						
+	SUB42	1252.	6.08	126.	39.	37.	.58
	HYDROGRAPH AT						
+	SUB43	2512.	6.08	255.	77.	75.	1.07
	HYDROGRAPH AT						
+	SUB44	1951.	6.08	198.	60.	58.	.84
	2 COMBINED AT						
+	CP45	4463.	6.08	453.	138.	132.	1.91
	HYDROGRAPH AT						
+	SUB45	4602.	6.08	498.	151.	146.	2.11
	HYDROGRAPH AT						
+	SUB45A	425.	6.08	43.	13.	12.	.17
	HYDROGRAPH AT						
+	SUB46	2271.	6.08	230.	69.	66.	.93
	3 COMBINED AT						
+	CP47	7298.	6.08	771.	233.	224.	3.21
	HYDROGRAPH AT						
+	SUB47	7150.	6.17	870.	263.	253.	3.58
	3 COMBINED AT						
+	CP48	14513.	6.17	1769.	537.	517.	7.47
	HYDROGRAPH AT						
+	SUB48	14273.	6.17	1774.	539.	519.	7.52
	HYDROGRAPH AT						
+	SUB50	824.	6.08	81.	25.	24.	.36
	2 COMBINED AT						
+	CP51	14935.	6.17	1855.	563.	543.	7.88
	DIVERSION TO						
+	2003	0.	6.17	0.	0.	0.	7.88
	HYDROGRAPH AT						
+	2004	14935.	6.17	1855.	563.	543.	7.88
	HYDROGRAPH AT						
+	SUB49	713.	6.08	68.	21.	20.	.35
	2 COMBINED AT						
+	49.1	15505.	6.17	1923.	584.	563.	8.23
	HYDROGRAPH AT						
+	SUB51	15427.	6.33	2175.	661.	637.	9.25
	HYDROGRAPH AT						
+	52A	15753.	6.50	2352.	724.	697.	10.30
	2 COMBINED AT						
+	52.2	20724.	6.42	3300.	1023.	986.	15.37

	ROUTED TO							
+	52A1	20582.	6.50	3290.	1020.	983.	15.37	
+							10.20	6.50
	HYDROGRAPH AT							
+	53A	554.	6.08	61.	19.	18.	.33	
	2 COMBINED AT							
+	53A1	20717.	6.50	3335.	1039.	1001.	15.70	
	ROUTED TO							
+	DB3.1	20670.	6.50	3334.	1038.	1000.	15.70	
+							10.22	6.50
	HYDROGRAPH AT							
+	CN6	2124.	6.17	313.	97.	93.	1.37	
	2 COMBINED AT							
+	DB3	21670.	6.50	3628.	1135.	1093.	17.07	
	ROUTED TO							
+	53R	2277.	8.25	2131.	1123.	1081.	17.07	
+							1622.43	8.25
	DIVERSION TO							
+	53RD	2277.	.08	2131.	1123.	1081.	17.07	
	HYDROGRAPH AT							
+	200	0.	.08	0.	0.	0.	17.07	
	ROUTED TO							
+	202	0.	.08	0.	0.	0.	17.07	
	HYDROGRAPH AT							
+	14CS	272.	6.08	38.	11.	11.	.11	
	2 COMBINED AT							
+	203	272.	6.08	38.	11.	11.	17.17	
	ROUTED TO							
+	204	251.	6.25	39.	12.	11.	17.17	
	HYDROGRAPH AT							
+	15ACS	166.	6.25	34.	10.	10.	.10	
	HYDROGRAPH AT							
+	15BCS	133.	6.33	33.	10.	9.	.09	
	2 COMBINED AT							
+	205	298.	6.25	66.	20.	19.	.19	
	2 COMBINED AT							
+	206	549.	6.25	106.	32.	30.	17.37	
	HYDROGRAPH AT							
+	201	2277.	8.25	2131.	1123.	1081.	.00	
	ROUTED TO							
+	207	2276.	8.33	2131.	1122.	1080.	.00	
	HYDROGRAPH AT							
+	21ACS	209.	6.17	36.	11.	10.	.10	
	HYDROGRAPH AT							

+	21BCS	154.	6.08	26.	8.	8.	.08
	2 COMBINED AT						
+	208	362.	6.17	63.	19.	18.	.18
	ROUTED TO						
+	209	362.	6.17	63.	19.	18.	.18
	HYDROGRAPH AT						
+	17BCS	73.	6.08	10.	3.	3.	.03
	2 COMBINED AT						
+	210	429.	6.17	73.	22.	21.	.21
	HYDROGRAPH AT						
+	17ACS	101.	6.08	15.	4.	4.	.04
	2 COMBINED AT						
+	211	524.	6.17	88.	26.	25.	.25
	ROUTED TO						
+	212	520.	6.17	88.	26.	25.	.25
	HYDROGRAPH AT						
+	16BCS	146.	6.08	25.	8.	7.	.07
	2 COMBINED AT						
+	213	665.	6.17	113.	34.	33.	.32
	HYDROGRAPH AT						
+	16ACS	81.	6.08	12.	3.	3.	.03
	3 COMBINED AT						
+	214	2333.	7.92	2181.	1159.	1116.	.36
	ROUTED TO						
+	215	2333.	8.00	2181.	1158.	1116.	.36
	HYDROGRAPH AT						
+	19CS	63.	6.08	8.	2.	2.	.02
	ROUTED TO						
+	216	62.	6.08	8.	2.	2.	.02
	ROUTED TO						
+	217	59.	6.08	8.	2.	2.	.02
	HYDROGRAPH AT						
+	18CS	216.	6.08	32.	10.	9.	.09
	2 COMBINED AT						
+	218	275.	6.08	40.	12.	12.	.12
	2 COMBINED AT						
+	219	2352.	7.83	2197.	1170.	1127.	.47
	HYDROGRAPH AT						
+	20ACS	66.	6.08	9.	3.	3.	.03
	ROUTED TO						
+	220	64.	6.17	9.	3.	3.	.03
	HYDROGRAPH AT						
+	20BCS	158.	6.08	26.	8.	7.	.07

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      2 COMBINED AT
+                221   219.  6.17    35.    11.    10.    .10

      HYDROGRAPH AT
+                TPC2  1055.  6.08   106.    32.    31.    .41

      4 COMBINED AT
+                222   2928.  6.08  2360.  1244.  1198.  18.36

      HYDROGRAPH AT
+                30R2    0.   .08     0.     0.     0.    .00

      HYDROGRAPH AT
+                31A2    0.   .08     0.     0.     0.    .00

      2 COMBINED AT
+                31B1    0.   .08     0.     0.     0.    .00

      HYDROGRAPH AT
+                31B   1011.  6.17   173.    54.    52.    .99

      HYDROGRAPH AT
+                36.6    0.   .08     0.     0.     0.    .00

      HYDROGRAPH AT
+                36L2  284.  6.08    32.    10.    10.    .17

      2 COMBINED AT
+                32.1  1262.  6.17   204.    64.    62.   1.16

      HYDROGRAPH AT
+                32A   1511.  6.33   367.   116.   112.   2.04

      DIVERSION TO
+                32A2  1511.   .08   367.   116.   112.   2.04

      HYDROGRAPH AT
+                32A1    0.   .08     0.     0.     0.   2.04

      ROUTED TO
+                CNC1    0.   .08     0.     0.     0.   2.04
+                                                          .00    14.67

      HYDROGRAPH AT
+                36.10   0.   .08     0.     0.     0.    .00

      HYDROGRAPH AT
+                37.5    0.   .08     0.     0.     0.    .00

      2 COMBINED AT
+                37A1    0.   .08     0.     0.     0.    .00

      HYDROGRAPH AT
+                37A   1118.  6.08   134.    42.    40.    .68

      ROUTED TO
+                CNC2  1009.  6.17   133.    42.    40.    .68
+                                                          2.34     6.17

      2 COMBINED AT
+                CNC3  1009.  6.17   133.    42.    40.   2.71

      ROUTED TO
+                CNC4   674.  6.33   132.    41.    40.   2.71
+                                                          1.35     6.33
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     HYDROGRAPH AT
+                CN1   1060.  6.17    141.    44.    42.    .74

     2 COMBINED AT
+                CNC5  1530.  6.17    273.    85.    82.   3.45

     ROUTED TO
+                DB1.1 1552.  6.25    272.    85.    82.   3.45
+                                                         2.86     6.25

     HYDROGRAPH AT
+                CN2   272.   6.08     30.     9.     9.    .15

     HYDROGRAPH AT
+                CN3   899.   6.08     98.    30.    29.    .39

     3 COMBINED AT
+                DB1   2421.  6.17    400.   124.   120.   3.99

     ROUTED TO
+                38R-1 305.   7.50    277.   124.   119.   3.99
+                                                      1650.66     7.50

     ROUTED TO
+                DB2.1 305.   7.58    277.   124.   119.   3.99
+                                                         1.09     7.58

     HYDROGRAPH AT
+                CN5   1870.  6.08    217.    65.    63.    .70

     2 COMBINED AT
+                DB2   1998.  6.08    473.   189.   182.   4.69

     ROUTED TO
+                38R-2 694.   6.25    448.   189.   182.   4.69
+                                                      1610.61     6.25

     ROUTED TO
+                108   686.   6.33    448.   189.   182.   4.69

     HYDROGRAPH AT
+                60CS  104.   6.08     13.     4.     4.    .04

     ROUTED TO
+                109   98.    6.08     13.     4.     4.    .04

     HYDROGRAPH AT
+                4A-BCS 154.  6.08     21.     6.     6.    .06

     2 COMBINED AT
+                110   252.   6.08     34.    10.    10.    .10

     2 COMBINED AT
+                111   841.   6.25    480.   199.   192.   4.79

     ROUTED TO
+                112   833.   6.33    480.   199.   192.   4.79

     HYDROGRAPH AT
+                12ACS 121.   6.08     15.     5.     4.    .04

     ROUTED TO
+                113   116.   6.08     16.     5.     4.    .04
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	HYDROGRAPH AT						
+	11CS	92.	6.08	14.	4.	4.	.04
	2 COMBINED AT						
+	113A	208.	6.08	29.	9.	8.	.08
	ROUTED TO						
+	114	203.	6.08	29.	9.	8.	.08
	2 COMBINED AT						
+	115	984.	6.25	508.	208.	200.	4.87
	ROUTED TO						
+	116	980.	6.25	508.	208.	200.	4.87
	HYDROGRAPH AT						
+	3A-BCS	229.	6.33	58.	17.	17.	.17
	2 COMBINED AT						
+	118	1206.	6.25	565.	225.	217.	5.04
	ROUTED TO						
+	119	1199.	6.25	565.	225.	217.	5.04
	HYDROGRAPH AT						
+	1BCS	118.	6.08	15.	4.	4.	.04
	ROUTED TO						
+	119B	117.	6.08	15.	4.	4.	.04
	2 COMBINED AT						
+	119A	1271.	6.25	578.	229.	221.	5.08
	HYDROGRAPH AT						
+	1ACS	19.	6.08	3.	1.	1.	.01
	HYDROGRAPH AT						
+	2CS	29.	6.08	4.	1.	1.	.01
	HYDROGRAPH AT						
+	10ABCS	293.	6.08	50.	15.	15.	.14
	ROUTED TO						
+	120	292.	6.17	50.	15.	15.	.14
	HYDROGRAPH AT						
+	13CS	58.	6.08	7.	2.	2.	.02
	ROUTED TO						
+	121	56.	6.08	7.	2.	2.	.02
	HYDROGRAPH AT						
+	12BCS	44.	6.08	5.	2.	2.	.02
	2 COMBINED AT						
+	122	101.	6.08	13.	4.	4.	.04
	2 COMBINED AT						
+	123	383.	6.08	63.	19.	18.	.18
	ROUTED TO						
+	124	380.	6.17	63.	19.	18.	.18
	4 COMBINED AT						
+	125	1670.	6.17	646.	250.	241.	5.28

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      HYDROGRAPH AT
+                PR1    605.   6.08      67.      20.      20.     .29

      HYDROGRAPH AT
+                TPC1   827.   6.08      83.      25.      24.     .32

      3 COMBINED AT
+                126   2981.   6.08     794.     295.     285.    5.89

      2 COMBINED AT
+                3IN   5910.   6.08    3138.    1540.    1483.   24.25

      ROUTED TO
+                DIKE3    0.    .08       0.       0.       0.   24.25
+                                                                1533.13    24.92

      HYDROGRAPH AT
+                SUB7B   426.   6.42      96.      31.      29.     .53

      HYDROGRAPH AT
+                11A     321.   6.17      50.      16.      15.     .32

      2 COMBINED AT
+                8.1     697.   6.25     146.      46.      45.     .85

      HYDROGRAPH AT
+                8B1    1026.   6.17     249.      80.      77.    1.48

      ROUTED TO
+                8B1.2   991.   6.33     248.      79.      76.    1.48
+                                                                   3.10     6.33

      DIVERSION TO
+                8B1.4     0.   6.33       0.       0.       0.   1.48

      HYDROGRAPH AT
+                8B1.3   991.   6.33     248.      79.      76.    1.48

      ROUTED TO
+                12R1    895.   6.58     245.      79.      76.    1.48
+                                                                   2.26     6.58

      HYDROGRAPH AT
+                11B     333.   6.17      42.      13.      13.     .25

      HYDROGRAPH AT
+                12R    1379.   6.17     283.      89.      86.    1.49

      ROUTED TO
+                12R2   1317.   6.25     281.      89.      85.    1.49
+                                                                   2.83     6.25

      2 COMBINED AT
+                12R3   2024.   6.42     525.     168.     162.    2.97

      DIVERSION TO
+                12R5      0.   6.42       0.       0.       0.   2.97

      HYDROGRAPH AT
+                12R4   2024.   6.42     525.     168.     162.    2.97

      ROUTED TO
+                4B1    2002.   6.42     523.     167.     161.    2.97
+                                                                   3.62     6.42
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	HYDROGRAPH AT						
+	SUB16	2476.	6.08	317.	97.	94.	1.46
	HYDROGRAPH AT						
+	SUB17	2003.	6.08	257.	79.	76.	1.19
	HYDROGRAPH AT						
+	SUB18	2319.	6.08	269.	83.	80.	1.26
	3 COMBINED AT						
+	CP19A	6799.	6.08	843.	260.	250.	3.91
	ROUTED TO						
+	CP19B	6528.	6.17	843.	260.	250.	3.91
	HYDROGRAPH AT						
+	SUB15	1533.	6.17	275.	86.	83.	1.37
	2 COMBINED AT						
+	CP19C	8060.	6.17	1118.	346.	333.	5.28
	HYDROGRAPH AT						
+	SUB19	8079.	6.17	1159.	359.	345.	5.46
	HYDROGRAPH AT						
+	SUB20	1019.	6.08	123.	38.	37.	.57
	2 COMBINED AT						
+	CP21	9051.	6.17	1282.	396.	382.	6.03
	HYDROGRAPH AT						
+	SUB21	5879.	6.67	1908.	610.	588.	9.70
	HYDROGRAPH AT						
+	SUB22	2676.	6.08	303.	93.	90.	1.39
	HYDROGRAPH AT						
+	SUB23	733.	6.08	87.	27.	26.	.39
	2 COMBINED AT						
+	CP24	3409.	6.08	389.	120.	115.	1.78
	HYDROGRAPH AT						
+	SUB24	3684.	6.17	478.	147.	142.	2.27
	HYDROGRAPH AT						
+	SUB25	2506.	6.17	349.	107.	103.	1.52
	2 COMBINED AT						
+	CP26	6190.	6.17	826.	254.	245.	3.79
	HYDROGRAPH AT						
+	SUB26	6214.	6.17	866.	267.	257.	4.01
	DIVERSION TO						
+	26.2	3107.	6.17	433.	134.	129.	4.01
	HYDROGRAPH AT						
+	26.1	3107.	6.17	433.	134.	129.	4.01
	ROUTED TO						
+	21.1	2718.	6.33	427.	133.	128.	4.01
	2 COMBINED AT						

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+                CP27    7564.  6.50     2335.     743.     716.    13.71

     HYDROGRAPH AT
+                26.2    3107.  6.17      433.     134.     129.      .00

     HYDROGRAPH AT
+              SUB26A    3255.  6.33      518.     162.     156.      .53

     2 COMBINED AT
+                27.1   10182.  6.42     2853.     905.     871.    14.24

     ROUTED TO
+                27.2   10148.  6.42     2846.     903.     870.    14.24
+                                                             4.08     6.42

     HYDROGRAPH AT
+               SUB27    1146.  6.08      112.      35.      34.      .64

     2 COMBINED AT
+                27.3   10339.  6.42     2940.     938.     903.    14.87

     ROUTED TO
+                28A1   10252.  6.50     2932.     935.     901.    14.87
+                                                             4.10     6.50

     HYDROGRAPH AT
+                 28A    1402.  6.08      148.      46.      44.      .67

     2 COMBINED AT
+                28A2   10481.  6.50     3057.     981.     945.    15.54

     ROUTED TO
+                 4B2   10478.  6.50     3056.     980.     944.    15.54
+                                                             4.16     6.50

     2 COMBINED AT
+                 4B3   12477.  6.50     3578.    1147.    1105.    18.52

     ROUTED TO
+                28B1   12383.  6.58     3571.    1145.    1103.    18.52
+                                                             4.59     6.58

     HYDROGRAPH AT
+                 28B    2205.  6.08      244.      74.      72.      .92

     DIVERSION TO
+                28.2     441.  6.08       49.      15.      14.      .92

     HYDROGRAPH AT
+                28.1    1764.  6.08      195.      59.      57.      .92

     2 COMBINED AT
+                28B2   12661.  6.58     3739.    1205.    1160.    19.44

     ROUTED TO
+                29A1   11783.  6.75     3697.    1195.    1151.    19.44
+                                                             5.04     6.75

     HYDROGRAPH AT
+                 29A    3452.  6.08      406.     124.     120.     1.76

     2 COMBINED AT
+                29A2   12402.  6.75     4080.    1319.    1271.    21.20

     ROUTED TO
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+                29.1A   12215.  6.83    4062.   1314.   1265.   21.20
+                                                                5.15    6.83

  HYDROGRAPH AT
+                29.1    2758.   6.08    289.    89.     85.     1.39

  2 COMBINED AT
+                29.1B   12585.  6.75    4332.   1403.   1351.   22.59

  HYDROGRAPH AT
+                32A2    1511.   6.33    367.    116.    112.    .00

  ROUTED TO
+                CNC6    1495.   6.42    365.    116.    111.    .00
+                                                                2.95    6.42

  HYDROGRAPH AT
+                28.2    441.    6.08    49.     15.     14.     .00

  2 COMBINED AT
+                CNC7    1564.   6.42    412.    131.    126.    .00

  ROUTED TO
+                CNC8    1527.   6.50    408.    130.    125.    .00
+                                                                2.33    6.50

  HYDROGRAPH AT
+                CN4     1271.   6.08    139.    42.     41.     .55

  2 COMBINED AT
+                CNC9    2118.   6.17    546.    172.    166.    .55

  HYDROGRAPH AT
+                33A     2272.   6.17    641.    203.    195.    .93

  HYDROGRAPH AT
+                33.1A   2828.   6.17    814.    257.    247.    1.64

  HYDROGRAPH AT
+                8B1.4   0.      .08     0.      0.      0.      .00

  HYDROGRAPH AT
+                8B2     355.    6.08    42.     13.     13.     .23

  HYDROGRAPH AT
+                SUB9B   1023.   6.17    241.    75.     72.     1.10

  HYDROGRAPH AT
+                SUB10B  1520.   6.50    539.    170.    163.    2.54

  HYDROGRAPH AT
+                10.1B   1786.   6.58    715.    227.    218.    3.44

  HYDROGRAPH AT
+                12R5    0.      .08     0.      0.      0.      .00

  HYDROGRAPH AT
+                13R     1843.   6.08    257.    79.     76.     1.07

  HYDROGRAPH AT
+                SUB14   2191.   6.33    599.    185.    178.    2.46

  HYDROGRAPH AT
+                14.1    2324.   6.58    740.    230.    221.    3.07
```

```
4 COMBINED AT
+                2IN   18689.  6.75     6598.     2116.     2038.     30.74
ROUTED TO
+                DIKE2     0.   .08       0.        0.        0.    30.74
+                                                                   1538.81     24.92
```

1 SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION 53R

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1600.00	1625.00	1626.00
STORAGE	0.	1287.	1355.
OUTFLOW	0.	2438.	2500.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	MAXIMUM OVER TOP HOURS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1622.43	.00	1117.	2277.	.00	8.25	.00	

SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION 38R-1

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1642.00	1657.00	1658.00
STORAGE	0.	317.	352.
OUTFLOW	0.	434.	450.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1650.66	.00	119.	305.	.00	7.50	.00

SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION 38R-2

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1600.00	1609.00	1610.00
STORAGE	0.	41.	51.
OUTFLOW	0.	490.	530.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1610.61	.61	57.	694.	.92	6.25	.00

SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION DIKE3

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1504.00	1541.00	1542.00
STORAGE	0.	6032.	6484.
OUTFLOW	0.	0.	290.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1533.13	.00	3053.	0.	.00	.00	.00

SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION DIKE2

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1514.00	1550.00	1550.20
STORAGE	0.	11834.	12000.
OUTFLOW	0.	0.	26.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	MAXIMUM OVER TOP HOURS	DURATION MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1538.81	.00	4195.	0.	.00	.00	.00

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

FILE: MP5.24I

(100-Year, 24-Hour, SCS Type IIA Storm)

This model includes the Pima Road channel, the Rawhide Wash channel, the Scottsdale Road channel, the Deer Valley Road channel, the Core North system, the Core South system, and reservoir routing operations for CAP Dikes 2 and 3. Low-flow culvert diverts are activated. All of the Reata Pass flows are diverted to CAP Dike 3.

What is the difference between this file & C1P4R.24I

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

  1       ID      UPPER INDIAN BEND WASH REGIONAL FLOOD CONTROL & DRAINAGE PLAN
  2       ID
  3       ID
  4       ID      MODEL MP5.24I -- SUB-BASIN SERIES 7B TO 53.1
  5       ID
  6       ID      THIS IS AN INTEGRATED MASTER PLAN MODEL WITH A NORTH-SOUTH INTERCEPTOR
  7       ID      CHANNEL IN-PLACE ALONG PIMA ROAD FROM POINT 3A TO 3K TO 3L.
  8       ID      ALL CORE NORTH-CORE SOUTH CHANNELS & DETENTION BASINS ARE IN-PLACE.
  9       ID      THE RAWHIDE WASH CHANNEL IS IN-PLACE ALONG ALIGNMENT 4A-4B-4D.
 10       ID      A NORTH-SOUTH INTERCEPTOR CHANNEL IS IN-PLACE ALONG SCOTTSDALE ROAD FROM
 11       ID      POINT 4C TO 4B.
 12       ID
 13       ID      FUTURE CONDITION LAND-USE
 14       ID
 15       ID      LOW-FLOW CULVERT DIVERSIONS ARE IN-PLACE
 16       ID
 17       ID      DET BASIN 53R HAS BEEN MODIFIED TO REFLECT 8/10/90 CHANGES BY
 18       ID      STANLEY CONSULTANTS & R. WARD
 19       ID
 20       ID      CN5 & 33A HAVE BEEN MODIFIED TO REFLECT DRAINAGE SPLIT ON MARLEY PARCEL
 21       ID
 22       ID      100% OF REATA PASS FAN IS DIVERTED WEST TO PIMA ROAD.
 23       ID
 24       ID      RESERVOIR ROUTING OPERATIONS ARE IN-PLACE FOR CAP DIKES 2 & 3.
 25       ID
 26       ID      THIS MODEL REFLECTS ALL D.A. ADJUSTMENTS MADE TO MODEL F3.24I AND FLOW
 27       ID      DIVERSIONS NEAR RAWHIDE WASH APEX & PINNACLE PEAK.
 28       ID      THE TPC GOLF COURSE AND ADJACENT RESIDENTIAL AREAS HAVE BEEN ADDED TO
 29       ID      THE CORE SOUTH AREA.
 30       ID
 31       ID      100-YR, 24-HR STORM, USING SCS TYPE IIA RAINFALL DISTRIBUTION
 32       ID      RAINFALL FROM NOAA ATLAS, USING 25 SQ MI AREAL REDUCTION FACTOR (.968)
 33       ID
 34       ID      FUTURE LAND-USE DENSITIES FROM OCT 1987 GENERAL PLAN, BRW PLANS, AND
 35       ID      THE TOMTO FOOTHILLS PLAN,   ALL SCOTTSDALE RESIDENTIAL AREAS HAVE THE
 36       ID      PERCENT OF IMPERVIOUS COVER ADJUSTED FOR NAOS REQUIREMENTS.
         *DIAGRAM
 37       IT      5 28APR90      0     289
 38       IO      5      0
 39       IN     30 28APR90      0

 40       KK     30R     SUB
 41       KM        RUNOFF FROM SUB-BASIN 30R
 42       BA  1.3105
 43       PB   4.25
 44       PC      0   .005   .009   .010   .013   .019   .021   .028   .032   .044
 45       PC   .057   .100   .660   .745   .776   .800   .816   .830   .840   .850
 46       PC   .861   .868   .878   .884   .891   .900   .905   .912   .919   .923
 47       PC   .930   .934   .939   .944   .950   .958   .961   .963   .969   .971
 48       PC   .974   .979   .981   .985   .989   .991   .993   .996  1.000
 49       LS           82    6.6
 50       UK    110  .0408    .20    100
 51       RK  10640  .0371    .045          TRAP     50    100
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  52      KK   30R1     DIV
  53      KM       DIVERT LOW-FLOWS TO EXISTING WASHS WEST OF PIMA ROAD ( SUB 31B)
  54      DT   30R2
  55      DI     0    679      1000
  56      DQ     0    323       400

  57      KK   31.1      CP
  58      KM       ROUTE NON-DIVERTED FLOW DOWN PIMA ROAD CHANNEL TO THE BOTTOM OF SUB 31A
  59      RS     1   FLOW      -1
  60      RC  .035   .035    .035   5600  .0194
  61      RX     0      8      9     21     61     73     74     82
  62      RY    10      6      6      0      0      6      6     10

  63      KK    31A     SUB
  64      KM       RUNOFF FROM SUB 31A
  65      BA  .4132
  66      LS            70   15.0
  67      UK    102  .0213    .10    100
  68      RK   2500  .0213   .045   .042   TRAP      8      2
  69      RK   5600  .0194   .035          TRAP     40      2

  70      KK    34R     SUB
  71      KM       RUNOFF FROM SUB 34R
  72      BA  .6421
  73      LS            77    9.9
  74      UK    110  .0408    .20    100
  75      RK   6800  .0644   .045          TRAP     50    100

  76      KK   31.3      CP
  77      KM       ROUTE SUB 34R TO CP 31.3
  78      RK   4500  .0243   .045          TRAP     15     30

  79      KK   31.2      CP
  80      KM       COMBINE SUB 31A, CP 31.1, & CP 31.3
  81      HC     3

  82      KK   31A1     DIV
  83      KM       DIVERT LOW-FLOWS TO EXISTING WASHS WEST OF PIMA ROAD (SUB 31B)
  84      DT   31A2
  85      DI     0   2840    4000
  86      DQ     0   1000    1200

  87      KK   36.2      CP
  88      KM       ROUTE NON-DIVERTED FLOW DOWN PIMA ROAD CHANNEL TO THE BOTTOM OF SUB 36L1
  89      RS     1   FLOW      -1
  90      RC  .035   .035    .035   3600  .0194
  91      RX     0      8      9     21     71     83     84     92
  92      RY    10      6      6      0      0      6      6     10
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  93      KK   35N     SUB
  94      KM      RUNOFF FROM SUB-BASIN 35N
  95      KM      THIS BASIN DRAINS TO A CBC AT THE EAST SIDE OF DESERT HIGHLANDS
  96      BA  .4068
  97      LS          82   31.8
  98      UK   265  .0381    .20    100
  99      RK  5200  .0269   .045          TRAP     25      4

 100      KK   35N2    DIV
 101      KM      DIVERT FLOW THROUGH BLOCK WALL OPENINGS AT EAST SIDE OF DESERT HIGHLANDS
 102      DT   35N1
 103      DI     0    100   1000
 104      DQ     0     40    400

 105      KK   35L1     CP
 106      KM      ROUTE DIV 35N2 TO CP 35L1
 107      RK  7500  .0367   .045          TRAP     50      5

 108      KK    35L    SUB
 109      KM      RUNOFF FROM SUB 35L
 110      BA  .6521
 111      LS          78   12.7
 112      UK   265  .0381    .20    100
 113      RK  9400  .0463   .045          TRAP     50    100

 114      KK   35L2     CP
 115      KM      COMBINE SUB 35L & CP 35L1
 116      HC     2

 117      KK   36L1    SUB
 118      KM      RUNOFF FROM SUB 36L1 & ROUTE CP 35L2
 119      BA  .4125
 120      LS          73    7.2
 121      UK   116  .0213    .10    100
 122      RK  4350  .0269   .045          TRAP     50    130    YES

 123      KK   36.3     CP
 124      KM      ROUTE SUB 36L1 TO CP 36.3
 125      RS     1   FLOW     -1
 126      RC  .035   .035   .035   2000  .0194
 127      RX     0     8     9     21    71    83    84    92
 128      RY    10     6     6      0     0     6     6    10

 129      KK   36.4     CP
 130      KM      COMBINE CP 36.2 & CP 36.3
 131      HC     2

 132      KK   36.5    DIV
 133      KM      DIVERT LOW-FLOWS TO EXISTING WASHS WEST OF PIMA ROAD (SUB 36L2)
 134      DT   36.6
 135      DI     0   4544   6000
 136      DQ     0    647    800
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  137     KK   36.7     CP
  138     KM       ROUTE NON-DIVERTED FLOW DOWN PIMA ROAD CHANNEL TO BOUNDARY OF SUB 36R1
  139     RS     1   FLOW     -1
  140     RC  .035   .035   .035   1850  .0194
  141     RX     0     8     9     21    71    83    84    92
  142     RY    10     6     6      0     0     6     6    10

  143     KK   35N1    RET
  144     KM       RETRIEVE DIVERTED FLOW FROM SUB 35N
  145     DR   35N1

  146     KK    35R    SUB
  147     KM       RUNOFF FROM SUB 35R & ROUTE RET 35N1
  148     BA  .4455
  149     LS           77   10.4
  150     UK    265  .0381    .20    100
  151     RK   7700  .0357   .045          TRAP    50   100    YES

  152     KK   36R1    SUB
  153     KM       RUNOFF FROM SUB 36R1 & ROUTE SUB 35R
  154     BA  .6736
  155     LS           72   19.5
  156     UK    116  .0213    .10    100
  157     RK   6500  .0331   .045          TRAP    50   130    YES

  158     KK   36.8     CP
  159     KM       COMBINE SUB 36R1 & CP 36.7
  160     KM       D.A. FOR SUB 36R1 HAS BEEN REDUCED TO REFLECT THE PIMA ROAD CHANNEL
  161     HC     2

  162     KK   36.9    DIV
  163     KM       DIVERT LOW-FLOWS TO EXISTING WASHS WEST OF PIMA ROAD (SUB 37A)
  164     DT  36.10
  165     DI     0   5581   6500
  166     DQ     0    441    500

  167     KK   37.1     CP
  168     KM       ROUTE NON-DIVERTED FLOW DOWN PIMA ROAD CHANNEL TO PINNACLE PEAK ROAD
  169     KM       THIS LOCATION TIES INTO THE CORE NORTH, PIMA ROAD CHANNEL.
  170     RS     1   FLOW     -1
  171     RC  .035   .035   .035   3950  .0194
  172     RX     0     8     9     21    71    83    84    92
  173     RY    10     6     6      0     0     6     6    10

  174     KK    37B    SUB
  175     KM       RUNOFF FROM SUB 37B
  176     BA  .1148
  177     LS           73   15.4
  178     UK     61  .0213    .10    100
  179     RK   1300  .0237   .045          TRAP    25     3
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  180     KK   37.2     CP
  181     KM       ROUTE SUB 37B DOWN PIMA ROAD CHANNEL TO PINNACLE PEAK ROAD
  182     RS     1   FLOW     -1
  183     RC   .035   .035   .035   1900  .0194
  184     RX     0     8     9     21    71    83    84    92
  185     RY    10     6     6      0     0     6     6    10

  186     KK   37.3     CP
  187     KM       COMBINE CP 37.1 & CP 37.2
  188     HC     2

  189     KK   37.4    DIV
  190     KM       DIVERT LOW-FLOWS TO EXISTING WASHS WEST OF PIMA ROAD (SUB37A)
  191     DT   37.5
  192     DI     0   5533   6500
  193     DQ     0    941    975

  194     KK   52.1     CP
  195     KM       ROUTE NON-DIVERTED FLOW DOWN CORE NORTH, PIMA ROAD CHANNEL
  196     RS     1   FLOW     -1
  197     RC   .035   .035   .035   4100  .0223
  198     RX     0     8     9     21    91   103   104   112
  199     RY    10     6     6      0     0     6     6    10
        *    ***********************************************************************
        *
        *          INSERT SUB-BASINS 39 TO 53
        *
        *    ***********************************************************************

  200     KK  SUB39
  201     KM       RUNOFF FROM SUB-BASIN 39
  202     BA  1.9302
  203     LS           85   23.4
  204     UK    330  .0433    .20    100
  205     RK  11240  .0253    .045         TRAP    30     3

  206     KK  SUB40
  207     KM       RUNOFF FROM SUB-BASIN 40
  208     BA  .5844
  209     LS           83    9.9
  210     UK    160  .0627    .20    100
  211     RK   7000  .0350    .045         TRAP    20     3

  212     KK   CP41
  213     KM       COMBINE HYDROGRAPHS SUB39 & SUB40
  214     HC     2

  215     KK  SUB41
  216     KM       RUNOFF FROM SUB-BASIN 41 & ROUTE CP 41
  217     BA  .7911
  218     LS           74   10.1
  219     UK    280  .2386    .20    100
  220     RK   9400  .0282    .045         TRAP    50     3    YES
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  221       KK  SUB42
  222       KM      RUNOFF FROM SUB-BASIN 42
  223       BA  .5844
  224       LS          78   23.3
  225       UK   280  .2386   .20   100
  226       RK  8750  .0573  .045         TRAP    20     3

  227       KK  SUB43
  228       KM      RUNOFF FROM SUB-BASIN 43
  229       BA 1.0665
  230       LS          85   10.5
  231       UK   260  .0515   .20   100
  232       RK  7400  .0255  .045         TRAP    25     3

  233       KK  SUB44
  234       KM      RUNOFF FROM SUB-BASIN 44
  235       BA  .8389
  236       LS          85    8.1
  237       UK   260  .0515   .20   100
  238       RK  9840  .0622  .045         TRAP    25     3

  239       KK  CP45
  240       KM      COMBINE HYDROGRAPHS SUB43 & SUB44
  241       HC    2

  242       KK  SUB45
  243       KM      RUNOFF FROM SUB-BASIN 45 & ROUTE CP 45
  244       BA  .2037
  245       LS          81   14.5
  246       UK   125  .1166   .20   100
  247       RK  3600  .0366  .045         TRAP    30     3    YES

  248       KK SUB45A
  249       KM      RUNOFF FROM SUB 45A
  250       BA  .1720
  251       LS          86    6.9
  252       UK   275  .2200   .20   100
  253       RK  5400  .0411  .045         TRAP    15     3

  254       KK  SUB46
  255       KM      RUNOFF FROM SUB-BASIN 46
  256       BA  .9268
  257       LS          86    3.7
  258       UK   265  .4958   .20   100
  259       RK  3300  .2271  .045  .111   TRAP    10     3
  260       RK  7100  .0535  .045         TRAP    25     3

  261       KK  CP47
  262       KM      COMBINE HYDROGRAPHS SUB45, SUB45A, & SUB46
  263       HC    3
1
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  264     KK  SUB47
  265     KM      RUNOFF FROM SUB-BASIN 47 & ROUTE CP 47
  266     BA  .3757
  267     LS          77    8.6
  268     UK   375  .1000   .20    100
  269     RK  9600  .0217  .045          TRAP    50     3    YES

  270     KK   CP48
  271     KM      COMBINE HYDROGRAPHS SUB41, SUB42, & SUB47
  272     HC     3

  273     KK  SUB48
  274     KM      RUNOFF FROM SUB-BASIN 48 & ROUTE CP 48
  275     BA  .0438
  276     LS          73    6.9
  277     UK   150  .0733   .20    100
  278     RK  1300  .0338  .045          TRAP    75     3    YES

  279     KK  SUB50
  280     KM      RUNOFF FROM SUB-BASIN 50
  281     BA  .3580
  282     LS          84    2.8
  283     UK   300  .3555   .20    100
  284     RK   730  .1506  .045   .036   TRAP    10     3
  285     RK  6400  .0453  .045          TRAP    25     3

  286     KK   CP51
  287     KM      COMBINE HYDROGRAPHS SUB 48 & SUB 50
  288     HC     2

  289     KK   2004    DIV
  290     KM      DIVERT FLOW TO SUB 2005
  291     KM      THIS DIVERT OCCURS AT A BRAIDED CHANNEL BIFURCATION LOCATED 1000 FEET
  292     KM      SOUTH OF THE EAST END OF PINNACLE PEAK ROAD.
  293     KM      THIS IS AN ACTIVE ALLUVIAL FAN APEX.
  294     DT   2003
  295     DI     0  15000
  296     DQ     0      0

  297     KK  SUB49
  298     KM      RUNOFF FROM SUB-BASIN 49
  299     BA  .3528
  300     LS          79    6.9
  301     UK   135  .0758   .20    100
  302     RK  5400  .0370  .045          TRAP    30     3

  303     KK   49.1    CP
  304     KM      COMBINE SUB 49 & NON-DIVERTED FLOW FROM DIV 2004
  305     HC     2
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  306     KK  SUB51
  307     KM      RUNOFF FROM SUB-BASIN 51 & ROUTE CP 49.1
  308     BA  1.0201
  309     LS          72   12.8
  310     UK    94  .0213    .10    100
  311     RK   6400  .0329   .045          TRAP   1500     2    YES

  312     KK    52A    SUB
  313     KM      RUNOFF FROM SUB-BASIN 52A & ROUTE SUB 51
  314     BA  1.0474
  315     LS          71   17.7
  316     UK    76  .0213    .10    100
  317     RK   5800  .0300   .045          TRAP   2500     2    YES

  318     KK   52.2     CP
  319     KM      COMBINE SUB 52A & CP 52.1
  320     HC     2

  321     KK   52A1     CP
  322     KM      ROUTE RUNOFF FROM CP 52.2 DOWN PIMA ROAD CHANNEL TO COMBINE WITH
  323     KM      RUNOFF FROM SUB 53A.
  324     RS     1   FLOW     -1
  325     RC  .035   .035   .035   5300  .0150
  326     RX     0     8     9     21    91   103   104   112
  327     RY    10     6     6      0     0     6     6    10

  328     KK    53A    SUB
  329     KM      RUNOFF FROM SUB-BASIN 53A
  330     BA  .3329
  331     LS          74    18
  332     UK    67  .0213    .10    100
  333     RK   3900  .0196   .045          TRAP     50    50

  334     KK   53A1     CP
  335     KM      COMBINE SUB 53A & CP 52A1
  336     HC     2

  337     KK  DB3.1     CP
  338     KM      ROUTE CP 53A1 TO DETENTION BASIN No.3
  339     RS     1   FLOW     -1
  340     RC  .035   .035   .035   2200  .0150
  341     RX     0     8     9     21    91   103   104   112
  342     RY    10     6     6      0     0     6     6    10

  343     KK    CN6    SUB
  344     KM      RUNOFF FROM SUB CN6 (REVISED: 5/1/90)
  345     BA  1.3659
  346     LS          74   40.3
  347     UK   100  .0150    .15    100
  348     RK   1400  .0100   .018  .1921   TRAP     30     5
  349     RK   9000  .0070   .040          TRAP    100    20
1
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  350     KK    DB3     CP
  351     KM       COMBINE CP DB3.1 & SUB CN6
  352     KM       THIS IS THE TOTAL INFLOW TO DETENTION BASIN No.3
  353     HC     2

  354     KK    53R     DAM
  355     KM       PERFORM RESERVOIR ROUTING OPERATION FOR DETENTION BASIN No.3
  356     KM       USE SV/SE DATA PROVIDED BY STANLEY & ASSC.  THIS DATA HAS BEEN EXTENDED
  357     KM       ABOVE ELEV. 1620 BY R. WARD.  SQ/SE DATA IS BASED ON 2-4x10 & 1-4x5
  358     KM       BOX CULVERTS OPERATING UNDER INLET CONTROL.  CULVERT INVERTS ARE AT
  359     KM       ELEV. 1600
  360     RS     1   STOR
  361     SQ     0    210    382    575    775    912   1175   1375   1550   1700
  362     SQ  1850   2000   2125   2250   2375   2500
  363     SE  1600   1602   1603   1604   1605   1606   1608   1610   1612   1614
  364     SE  1616   1618   1620   1622   1624   1626
  365     SV     0   1.80   9.80  28.40     59   99.9  148.8  201.5  255.0  309.2
  366     SV 364.3  420.2  476.9  534.4  592.6  711.6  833.8  959.2 1219.6 1354.6
  367     SE  1600   1601   1602   1603   1604   1605   1606   1607   1608   1609
  368     SE  1610   1611   1612   1613   1614   1616   1618   1620   1624   1626
  369     SS  1625    100    2.9    1.5
  370     ST  1626    100    2.9    1.5
        * ************************************************************************
        *          ROUTE OUTFLOW FROM DETENTION BASIN No. 3 TO CORE SOUTH CHANNELS
        *
        *          A "CS" SUFFIX HAS BEEN ADDED TO THE ORIGINAL, SLA CORE SOUTH
        *          SUB-BASIN NUMBERS TO DISTINGUISH THEM FROM OTHER, UPSTREAM
        *          SUB-BASINS WITH THE SAME NUMBER.
        * ************************************************************************

  371     KK    200     CP
  372     KM       USE DIVERT ROUTINE TO MODEL DUAL OUTLETS FROM DETENTION BASIN #3 IN
  373     KM       CORE NORTH. THE WESTERN OUTLET TO THE HAYDEN ROAD CHANNEL IS A WEIR
  374     KM       OUTLET. THE EASTERN OUTLET IS A CONCRETE BOX CULVERT. THIS OPERATION
  375     KM       DIVERTS FLOW TO THE EASTERN OUTLET, WHICH IS A DESIGNATED AS CP 201.
  376     KM       DIVERT RATIOS WERE CHANGED ON 8/10/90 TO REFLECT A SINGLE OUTLET
  377     KM       NEAR THE EAST END OF THE DETENTION BASIN, PER STANLEY & ASSOCIATES
  378     DT    53RD
  379     DI     0    669    715   1858   3157
  380     DQ     0    669    715   1858   3157

  381     KK    202     CP
  382     KM       ROUTE CP 200 SOUTH ALONG HAYDEN ROAD TO CP 202.
  383     RK   2100 0.0137  0.018          TRAP    100      1

  384     KK    14CS    SUB
  385     KM       RUNOFF FROM SUB 14
  386     BA 0.1090
  387     LS            75     90
  388     UK   1133 0.0135   0.10     100
  389     RK   2400 0.0065  0.018          TRAP      8      1
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  390     KK    203     CP
  391     KM       COMBINE CP 202 WITH SUB 14. THIS WILL BE THE TOTAL CHANNEL DISCHARGE
  392     KM       LEAVING THE INTERSECTION OF HAYDEN RD AND UNION HILLS RD.
  393     HC      2

  394     KK    204     CP
  395     KM       ROUTE CP 203 T0 CP 204
  396     RK   3550 0.0130  0.018          TRAP    100      1

  397     KK  15ACS     SUB
  398     KM       RUNOFF FROM SUB 15A
  399     BA 0.0996
  400     LS            75      90
  401     UK   2170 0.0133   0.10     100
  402     RK   3550 0.0130  0.018          TRAP    100      1

  403     KK  15BCS     SUB
  404     KM       RUNOFF FROM SUB 15B
  405     BA 0.0944
  406     LS            75      90
  407     UK   2700 0.0130   0.10     100
  408     RK   1590 0.0038  0.018          TRAP      8      1

  409     KK    205     CP
  410     KM       COMBINE SUB 15A WITH 15B. THIS IS THE TOTAL RUNOFF FROM SUB 15.
  411     HC      2

  412     KK    206     CP
  413     KM       COMBINE CP 204 WITH CP 205. THIS IS THE TOTAL RUNOFF AT THE
  414     KM       INTERSECTION OF HAYDEN ROAD AND BELL ROAD.
  415     HC      2

  416     KK    201     CP
  417     KM       RETRIEVE DIVERTED OUTFLOW FROM EAST END OF DETENTION BASIN IN SUB 53
  418     DR   53RD

  419     KK    207     CP
  420     KM       ROUTE CP 201 TO CP 207
  421     RK   3040 0.0141  0.018          TRAP     40      1

  422     KK  21ACS     SUB
  423     KM       RUNOFF FROM SUB 21A
  424     BA 0.1041
  425     LS            75      90
  426     UK   1800 0.0164   0.10     100
  427     RK   2300 0.0070  0.018          TRAP      8      1

  428     KK  21BCS     SUB
  429     KM       RUNOFF FROM SUB 21B
  430     BA 0.0762
  431     LS            75      90
  432     UK   1900 0.0184   0.10     100
  433     RK   2320 0.0151  0.018          TRAP      8      1
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

434       KK    208     CP
435       KM       COMBINE SUB 21A WITH 21B. THIS IS THE TOTAL RUNOFF FROM SUB 21.
436       KM       CORE SOUTH
437       HC      2

438       KK    209     CP
439       KM       ROUTE CP 208 TO CP 209
440       RK   1600 0.0119  0.018          TRAP     8     1

441       KK  17BCS     SUB
442       KM       RUNOFF FROM SUB 17B
443       BA  0.0299
444       LS           75     90
445       UK   1400 0.0157   0.10    100
446       RK   1000 0.0100  0.018          TRAP     8     1

447       KK    210     CP
448       KM       COMBINE SUB 17B WITH CP 209. THIS IS THE PEAK DISCHARGE THROUGH THE
449       KM       CHANNEL ALONG THE SOUTH SIDE OF SUB 17.
450       HC      2

451       KK  17ACS     SUB
452       KM       RUNOFF FROM SUB 17A
453       BA  0.0423
454       LS           75     90
455       UK   1400 0.0157   0.10    100
456       RK   2150 0.0116  0.018          TRAP     8     1

457       KK    211     CP
458       KM       COMBINE SUB 17A WITH CP 210
459       HC      2

460       KK    212     CP
461       KM       ROUTE CP 211 TO CP 212
462       RK   1640 0.0052  0.018          TRAP    10     1

463       KK  16BCS     SUB
464       KM       RUNOFF FROM SUB 16B
465       BA  0.0722
466       LS           75     90
467       UK   1760 0.0159   0.10    100
468       RK   1640 0.0052  0.018          TRAP    10     1

469       KK    213     CP
470       KM       COMBINE SUB 16B WITH CP 212. THIS IS THE PEAK DISCHARGE THROUGH THE
471       KM       CHANNEL ALONG THE SOUTH SIDE OF SUB 16.
472       HC      2

473       KK  16ACS     SUB
474       KM       RUNOFF FROM SUB 16A
475       BA  0.0331
476       LS           75     90
477       UK   1300 0.0146   0.10    100
478       RK   2000 0.0110  0.018          TRAP     8     1
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

479       KK    214     CP
480       KM       COMBINE SUB 16A WITH CP 213, AND CP 207
481       HC      3

482       KK    215     CP
483       KM       ROUTE CP 214 TO CP 215 (BELL ROAD)
484       RK   1600  0.0131   0.018          TRAP     40      1

485       KK   19CS     SUB
486       KM       RUNOFF FROM SUB 19
487       BA  0.0225
488       LS            75      90
489       UK    680  0.0124    0.10     100
490       RK    920  0.0050   0.018          TRAP      8      1

491       KK    216     CP
492       KM       ROUTE SUB 19 TO CP 216
493       RK    980  0.0122   0.018          TRAP      8      1

494       KK    217     CP
495       KM       ROUTE CP 216 TO CP 217
496       RK    950  0.0042   0.018          TRAP      8      1

497       KK   18CS     SUB
498       KM       RUNOFF FROM SUB 18
499       BA  0.0932
500       LS            75      90
501       UK   1350  0.0137    0.10     100
502       RK   2040  0.0029   0.018          TRAP      8      1

503       KK    218     CP
504       KM       COMBINE CP 217 WITH SUB 18. THIS IS THE PEAK DISCHARGE THROUGH THE
505       KM       CHANNEL ALONG THE SOUTH SIDE OF SUB 18.
506       HC      2

507       KK    219     CP
508       KM       COMBINE CP 215 WITH CP 218. THIS IS THE PEAK DISCHARGE PASSING BELL
509       KM       ROAD AT THIS LOCATION.
510       HC      2

511       KK   20ACS     SUB
512       KM       RUNOFF FROM SUB 20A. THIS IS THE PEAK DISCHARGE THROUGH THE CHANNEL
513       KM       ALONG THE WEST SIDE OF SUB 20.
514       BA  0.0264
515       LS            75      90
516       UK   1300  0.0154    0.10     100
517       RK   1870  0.0112   0.018          TRAP      8      1

518       KK    220     CP
519       KM       ROUTE SUB 20A TO CP 220
520       RK    880  0.0011   0.018          TRAP      8      1
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

521       KK  20BCS     SUB
522       KM       RUNOFF FROM SUB 20B
523       BA  0.0744
524       LS           75      90
525       UK   1650  0.0158    0.10     100
526       RK    880  0.0011   0.018  0.0372    TRAP      8      1

527       KK    221      CP
528       KM       COMBINE SUB 20B WITH CP 220. THIS IS THE PEAK DISCHARGE PASSING BELL
529       KM       ROAD AT THIS LOCATION.
530       HC      2

531       KK   TPC2     SUB
532       KM       RUNOFF FROM THE TPC GOLF COURSE BETWEEN HAYDEN & PIMA ROADS.
533       KM       THE CURVE NUMBER HAS BEEN INCREASED FROM 74 TO 88 TO REFLECT AMC 3 THAT
534       KM       WILL RESULT FROM CONSTANT WATERING OF THE GOLF COURSE.
535       BA  .4138
536       LS           88
537       UK    150  .0100    .15     100
538       RK   1400  .0150   .035          TRAP    100     20

539       KK    222      CP
540       KM       COMBINE CP 206, CP 219, CP 221, & SUB TPC2
541       KM       THIS IS THE TOTAL INFLOW TO CAP DIKE No.3 FROM THE CORE SOUTH SYSTEM
542       KM       LOCATED BETWEEN HAYDEN & PIMA ROADS.
543       HC      4
        *          *************                          ****************
        *          ************* END OF CORE SOUTH CHANNEL SYSTEM  ****************
        *          *************                          ****************

544       KK   30R2     RET
545       KM       RETRIEVE LOW-FLOW DIVERTS FROM SUB 30R
546       DR   30R2

547       KK   31A2     RET
548       KM       RETRIEVE LOW-FLOW DIVERTS FROM SUB 31A
549       DR   31A2

550       KK   31B1      CP
551       KM       COMBINE LOW-FLOW DIVERTS, RET 30R2 & RET 31A2
552       HC      2

553       KK    31B     SUB
554       KM       RUNOFF FROM SUB-BASIN 31B & ROUTE CP 31B1
555       BA  .9898
556       LS           74    13.8
557       UK    102  .0213    .10     100
558       RK   8800  .0228   .045          TRAP     50    130     YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

559       KK   36.6    RET
560       KM       RETRIEVE LOW-FLOW DIVERT FROM SUB 36L1
561       DR   36.6

562       KK   36L2    SUB
563       KM       RUNOFF FROM SUB 36L2 & ROUTE LOW-FLOW DIVERTS (RET 36.6)
564       BA   .1736
565       LS            74    18.4
566       UK    116   .0213    .10    100
567       RK   3000   .0269    .045          TRAP     50    130    YES

568       KK   32.1     CP
569       KM       COMBINE SUB 31B & SUB 36L2
570       HC     2

571       KK    32A    SUB
572       KM       RUNOFF FROM SUB-BASIN 32A & ROUTE CP 32.1
573       BA   .8745
574       LS            74    20.0
575       UK     67   .0213    .10    100
576       RK   8000   .0214    .045          TRAP     50    130    YES

577       KK   32A1    DIV
578       KM       DIVERT FLOW AT HAYDEN ROAD INTXN WITH DEER VALLEY ROAD
579       DT   32A2
580       DI     0    100   10000
581       DQ     0    100   10000

582       KK   CNC1     CP
583       KM       ROUTE DIV 32A1 TO CP CNC1
584       RS     1   FLOW     -1
585       RC   .035   .035   .035   1950   .0050
586       RX     0     8     9     21     71     83     84     92
587       RY    10     6     6      0      0      6      6     10

588       KK   36.10    RET
589       KM       RETRIEVE LOW-FLOW DIVERT FROM SUB 36R1
590       DR   36.10

591       KK   37.5    RET
592       KM       RETRIEVE LOW-FLOW DIVERT FROM SUB 37B
593       DR   37.5

594       KK   37A1     CP
595       KM       COMBINE LOW-FLOW DIVERTS, RET 36.10 & RET 37.5
596       HC     2

597       KK    37A    SUB
598       KM       RUNOFF FROM SUB-BASIN 37A & ROUTE LOW-FLOW DIVERTS (CP 37A1)
599       BA   .6765
600       LS            74    24.8
601       UK     61   .0213    .10    100
602       RK   4800   .0237    .045          TRAP     50    130    YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

603       KK   CNC2     CP
604       KM      ROUTE SUB 37A TO CP CNC2
605       RS     1   FLOW     -1
606       RC   .035   .035   .035   3000  .0125
607       RX     0     8     9     21    71    83    84    92
608       RY    10     6     6      0     0     6     6    10

609       KK   CNC3     CP
610       KM      COMBINE CP CNC1 & CP CNC2
611       HC     2

612       KK   CNC4     CP
613       KM      ROUTE CP CNC3 THROUGH GOLF COURSE TO CP CNC4
614       KM      BW=100', Z=20:1
615       RS     1   FLOW     -1
616       RC   .035   .035   .035   4200  .0070
617       RX     0    20    21    201   301   481   482   502
618       RY    10     9     9      0     0     9     9    10

619       KK    CN1    SUB
620       KM      RUNOFF FROM SUB CN1
621       KM      COLLECTOR CHANNEL HAS BEEN ADDED TO SIMULATE STREET FLOW
622       KM      THIS SAME COLLECTOR CHANNEL IS USED FOR ALL CORE NORTH SUB-BASINS
623       BA   .7361
624       LS          74   22.8
625       UK    100  .0150   .15   100
626       RK   1400  .0100   .018  .147  TRAP   30    5
627       RK   6000  .0070   .040        TRAP  100   20

628       KK   CNC5     CP
629       KM      COMBINE CP CNC4 & SUB CN1
630       HC     2

631       KK  DB1.1     CP
632       KM      ROUTE CP CNC5 TO DETENTION BASIN No.1 LOCATED AT THE INTXN OF HAYDEN
633       KM      ROAD & THOMPSON PEAK PARKWAY.
634       RS     1   FLOW     -1
635       RC   .035   .035   .035   1200  .0150
636       RX     0     8     9     21    71    83    84    92
637       RY    10     6     6      0     0     6     6    10

638       KK    CN2    SUB
639       KM      RUNOFF FROM SUB CN2 (REVISED: 5/1/90)
640       BA   .1507
641       LS          74   28.1
642       UK    100  .0150   .15   100
643       RK   1000  .0100   .018  .111  TRAP   30    5
644       RK   5000  .0150   .045        TRAP   25    2
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

645       KK    CN3     SUB
646       KM       RUNOFF FROM SUB CN3
647       BA   .3924
648       LS            74    47.7
649       UK    100  .0150    .15    100
650       RK   1400  .0100    .018   .078   TRAP     30      5
651       RK   3500  .0100    .035          TRAP     25      2

652       KK    DB1     CP
653       KM       COMBINE CP DB1.1, SUB CN2, & SUB CN3
654       KM       THIS IS THE TOTAL FLOW INTO DETENTION BASIN No.1
655       HC      3

656       KK   38R-1     DAM
657       KM       PERFORM RESERVOIR ROUTING OPERATION FOR DETENTION BASIN No.1
658       KM       USE RESERVOIR DATA PROVIDED BY CARTER & ASSC.
659       RS      1    STOR
660       SQ      0     23     64    115    156    197    231    262    289    313
661       SQ    337    358    378    398    416    434    450
662       SE   1642   1643   1644   1645   1646   1647   1648   1649   1650   1651
663       SE   1652   1653   1654   1655   1656   1657   1658
664       SV      0    .77    4.3   11.1   23.1   40.1   60.4     81    103    127
665       SV  155.5    184    213    248    280    317    352
666       SE   1642   1643   1644   1645   1646   1647   1648   1649   1650   1651
667       SE   1652   1653   1654   1655   1656   1657   1658
668       SS   1657
669       ST   1658    100    2.9    1.5

670       KK   DB2.1     CP
671       KM       ROUTE OUTFLOW FROM DETENTION BASIN No.1 TO DETENTION BASIN No.2
672       RS      1    FLOW     -1
673       RC   .035    .035   .035   2500  .0150
674       RX      0      8      9     21     71     83     84     92
675       RY     10      6      6      0      0      6      6     10

676       KK    CN5     SUB
677       KM       RUNOFF FROM SUB CN5
678       KM       D.A. MODIFIED TO REFLECT SPLIT ON CORRIGAN-MARLEY PARCEL
679       BA   .6980
680       LS            74    72.8
681       UK    100  .0150    .15    100
682       RK   1400  .0100    .018   .119   TRAP     30      5
683       RK   2500  .0150    .035          TRAP     50      2

684       KK    DB2     CP
685       KM       COMBINE CP DB2.1 & SUB CN5
686       KM       THIS IS THE TOTAL INFLOW TO DETENTION BASIN No.2
687       HC      2
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

688       KK  38R-2    DAM
689       KM       PERFORM RESERVOIR ROUTING OPERATION FOR DETENTION BASIN No.2
690       KM       USE RESERVOIR DATA PROVIDED BY CARTER & ASSC.
691       RS     1   STOR
692       SQ     0    30    85   146   220   289   338   395   445   490
693       SQ   530
694       SE  1600  1601  1602  1603  1604  1605  1606  1607  1608  1609
695       SE  1610
696       SV     0   .12   1.0   3.2   6.9  11.8  17.7  24.7  32.6  41.4
697       SV  51.1
698       SE  1600  1601  1602  1603  1604  1605  1606  1607  1608  1609
699       SE  1610
700       SS  1609
701       ST  1610   100   2.9   1.5
          *   ************************************************************************
          *        ROUTE OUTFLOW FROM 38R-2 THROUGH CORE SOUTH CHANNEL SYSTEM.
          *
          *        A "CS" SUFFIX HAS BEEN ADDED TO THE ORIGINAL, SLA CORE SOUTH
          *        SUB-BASIN NUMBERS TO DISTINGUISH THEM FROM OTHER, UPSTREAM
          *        SUB-BASINS WITH THE SAME NUMBER.
          *   ************************************************************************

702       KK   108     CP
703       KM       ROUTE OUTFLOW FROM DETENTION BASIN No.2 TO CP 108
704       RK  1600 0.0144  0.018          TRAP    50     1

705       KK   60CS    SUB
706       KM       RUNOFF FROM SUB 60
707       BA  .0386
708       LS          75    90
709       UK   830 0.0139   0.10   100
710       RK  1300 0.0035  0.018          TRAP     8     1

711       KK   109     CP
712       KM       ROUTE SUB 60CS TO CP 109
713       RK  1640 0.0055  0.018          TRAP     8     1

714       KK 4A-BCS    SUB
715       KM       RUNOFF FROM SUB 4A AND 4B
716       BA 0.0590
717       LS          75    90
718       UK  1053 0.0138   0.10   100
719       RK  1640 0.0055  0.018          TRAP     8     1

720       KK   110     CP
721       KM       COMBINE CP 109 AND SUB 4A-4B.
722       KM       THIS IS THE TOTAL CONTRIBUTION FROM THE CHANNEL ALONG THE SOUTH
723       KM       SIDE OF SUB 4A-4B.
724       HC     2
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  725     KK    111      CP
  726     KM       COMBINE CP 108 AND CP 110
  727     HC      2

  728     KK    112      CP
  729     KM       ROUTE CP 111 TO CP 112
  730     RK   1920  0.0115   0.018          TRAP     50      1

  731     KK  12ACS     SUB
  732     KM       RUNOFF FROM SUB 12A
  733     BA  0.0445
  734     LS            75      90
  735     UK    980  0.0143    0.10     100
  736     RK   1250  0.0028   0.018          TRAP      8      1

  737     KK    113      CP
  738     KM       ROUTE SUB 12A TO CP 113
  739     RK    690  0.0029   0.018          TRAP      8      1

  740     KK   11CS     SUB
  741     KM       RUNOFF FROM SUB 11
  742     BA  0.0396
  743     LS            75      90
  744     UK   1450  0.0148    0.10     100
  745     RK    690  0.0029   0.018          TRAP      8      1

  746     KK   113A      CP
  747     KM       COMBINE SUB 11CS WITH CP 113. THIS IS THE PEAK DISCHARGE THAT WILL
  748     KM       FLOW THROUGH THE CHANNEL ALONG THE SOUTH SIDE OF SUB 11 IN CORE SOUTH.
  749     HC      2

  750     KK    114      CP
  751     KM       ROUTE CP 113A TO CP 114
  752     RK    330  0.0029   0.018          TRAP      8      1

  753     KK    115      CP
  754     KM       COMBINE CP 112 WITH CP 114
  755     HC      2

  756     KK    116      CP
  757     KM       ROUTE CP 115 TO CP 116
  758     RK   1080  0.0106   0.018          TRAP     50      1

  759     KK 3A-BCS    SUB
  760     KM       RUNOFF FROM SUB 3A-3B
  761     BA  0.1676
  762     LS            75      90
  763     UK   2800  0.0129    0.10     100
  764     RK   1760  0.0114   0.018          TRAP     50      1
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

765       KK    118      CP
766       KM       COMBINE CP 116, AND SUB 3A-B
767       HC      2

768       KK    119      CP
769       KM       ROUTE CP 118 TO CP 119
770       RK   1150  0.0099   0.018          TRAP     50      1

771       KK   1BCS     SUB
772       KM       RUNOFF FROM SUB 1B
773       BA  0.0427
774       LS            75      90
775       UK    790  0.0149    0.10     100
776       RK    910  0.0099   0.018          TRAP     50      1

777       KK   119B      CP
778       KM       ROUTE SUB 1B TO CP 119B
779       RK    280  0.0099   0.018          TRAP     50      1

780       KK   119A      CP
781       KM       COMBINE CP 119 AND CP 119B
782       KM       THIS IS THE TERMINUS OF THE CHANNEL ALONG THE WEST SIDE OF PARCEL #1.
783       KM       WATER WILL ENTER THE CAP DETENTION BASIN AT THIS POINT.
784       HC      2

785       KK   1ACS     SUB
786       KM       RUNOFF FROM SUB 1A
787       KM       RUNOFF FROM THIS PARCEL WILL FLOW DIRECTLY SOUTH INTO THE CAP
788       KM       DETENTION BASIN.
789       BA  0.0073
790       LS            75      90
791       UK   1123  0.0129    0.10     100
792       RK      1  0.0010   0.018          TRAP      8      1

793       KK    2CS     SUB
794       KM       RUNOFF FROM SUB 2.
795       KM       RUNOFF FROM THIS SUB-BASIN WILL FLOW DIRECTLY TO THE SOUTH, BOTH
796       KM       THROUGH AND ALONG THE EAST SIDE OF SUB 1. NO CHANNEL IS PROVIDED
797       KM       FOR THIS SMALL BASIN SINCE IT WILL FLOW INTO THE CAP DETENTION BASIN.
798       BA  0.0105
799       LS            75      90
800       UK    830  0.0108    0.10     100
801       RK      1  0.0014   0.018          TRAP      8      1

802       KK  10ABCS     SUB
803       KM       RUNOFF FROM SUB 10A AND 10B
804       BA  0.1447
805       LS            75      90
806       UK   1660  0.0142    0.10     100
807       RK   1530  0.0026   0.018  0.0724   TRAP      8      1
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

808       KK    120     CP
809       KM       ROUTE SUB 10A-B TO CP 120
810       RK    860  0.0140   0.018          TRAP     8      1

811       KK   13CS     SUB
812       KM       RUNOFF FROM SUB 13
813       BA  0.0204
814       LS            75      90
815       UK    650  0.0129    0.10     100
816       RK    920  0.0022   0.018          TRAP     8      1

817       KK    121     CP
818       KM       ROUTE SUB 13 TO CP 121
819       RK    850  0.0041   0.018          TRAP     8      1

820       KK   12BCS     SUB
821       KM       RUNOFF FROM SUB 12B
822       BA  0.0157
823       LS            75      90
824       UK    645  0.0122    0.10     100
825       RK    850  0.0041   0.018          TRAP     8      1

826       KK    122     CP
827       KM       COMBINE CP 121 AND SUB 12B
828       KM       THIS IS THE PEAK DISCHARGE THROUGH THE CHANNEL ALONG THE SOUTH
829       KM       BOUNDARY OF SUB 12B.
830       HC      2

831       KK    123     CP
832       KM       COMBINE CP 120 AND CP 122
833       HC      2

834       KK    124     CP
835       KM       ROUTE CP 123 TO CP 124.
836       KM       THIS IS THE PEAK DISCHARGE (AT BELL ROAD) INTO THE CAP DETENTION BASIN
837       KM       FROM THE CHANNEL LOCATED APPROXIMATELY 1/3 MILE WEST OF HAYDEN ROAD.
838       RK   3000  0.0130   0.018          TRAP    10      1

839       KK    125     CP
840       KM       COMBINE CP 119A, SUB 1A, SUB 2, & CP 124
841       HC      4

842       KK    PR1     SUB
843       KM       RUNOFF FROM RESIDENTIAL & COMMERCIAL AREAS NEAR PRINCESS RESORT.
844       KM       THIS AREA IS LOCATED ALONG THE NORTH SIDE OF THE THE TPC GOLF COURSE,
845       KM       BETWEEN SCOTTSDALE & HAYDEN ROADS.
846       BA   .2878
847       LS            74      40
848       UK    150   .0100     .15     100
849       RK   3000   .0150    .035          TRAP    50      2
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  850     KK   TPC1     SUB
  851     KM       RUNOFF FROM THE TPC GOLF COURSE BETWEEN SCOTTSDALE & HAYDEN ROADS.
  852     KM       THE CURVE NUMBER HAS BEEN INCREASED FROM 74 TO 88 TO REFLECT AMC 3 THAT
  853     KM       WILL RESULT FROM CONSTANT WATERING OF THE GOLF COURSE.
  854     BA  .3246
  855     LS          88
  856     UK   150  .0100   .15    100
  857     RK  1400  .0150   .035          TRAP    100     20

  858     KK   126     CP
  859     KM       COMBINE CP 125, SUB PR1, & TPC1
  860     KM       THIS IS THE TOTAL INFLOW TO CAP DIKE No.3 FROM THE CORE SOUTH SYSTEM
  861     KM       LOCATED BETWEEN SCOTTSDALE & HAYDEN ROADS.
  862     HC     3
        *    *************                          ************************
        *    ************* END OF CORE SOUTH CHANNEL SYSTEM ************************

  863     KK   3IN     CP
  864     KM       COMBINE CP 126 & CP 222
  865     KM       THIS IS THE TOTAL INFLOW TO CAP DIKE No.3
  866     HC     2

  867     KK  DIKE3     DAM
  868     KM       ROUTE CP 3IN THROUGH CAP DIKE NO.3
  869     RS     1   STOR
  870     SV     0     2     7    15    27    43    68   125   243   447
  871     SV   749  1130  1586  2112  2695  3328  4001  4757  5580  6484
  872     SE  1504  1506  1508  1510  1512  1514  1516  1518  1520  1522
  873     SE  1524  1526  1528  1530  1532  1534  1536  1538  1540  1542
  874     SS  1541   100   2.9   1.5
  875     ST  1542   100   2.9   1.5
        *    ******************                          ***************
        *    ****************** BEGIN DRAINAGE AREA FOR CAP DIKE No.2
        *    ******************                          ***************

  876     KK  SUB7B
  877     KM       RUNOFF FROM SUB-BASIN 7B
  878     BA  .5334
  879     PB  4.25
  880     PC     0  .005  .009  .010  .013  .019  .021  .028  .032  .044
  881     PC  .057  .100  .660  .745  .776  .800  .816  .830  .840  .850
  882     PC  .861  .868  .878  .884  .891  .900  .905  .912  .919  .923
  883     PC  .930  .934  .939  .944  .950  .958  .961  .963  .969  .971
  884     PC  .974  .979  .981  .985  .989  .991  .993  .996 1.000
  885     LS          78   8.2
  886     UK   255  .0262   .20    100
  887     RK 12200  .0197   .045          TRAP     40     20

  888     KK   11A     SUB
  889     KM       RUNOFF FROM SUB 11A
  890     BA  .3171
  891     LS          74   7.9
  892     UK   150  .0425   .20    100
  893     RK  6200  .0226   .045          TRAP     30     50
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

894       KK    8.1     CP
895       KM       COMBINE SUB7B & SUB 11A
896       HC      2

897       KK    8B1     SUB
898       KM       RUNOFF FROM SUB 8B1 & ROUTE CP 8.1
899       BA   .6306
900       LS            74    9.9
901       UK    116  .0213    .10    100
902       RK   5300  .0196    .045          TRAP     30    100    YES

903       KK   8B1.2     CP
904       KM       ROUTE SUB 8B1 DOWN SCOTTSDALE ROAD CHANNEL TO CP 8B1.2
905       RS      1   FLOW     -1
906       RC   .035   .035   .035   3400  .0171
907       RX      0     8     9     21    46    58    59    67
908       RY     10     6     6      0     0     6     6    10

909       KK   8B1.3    DIV
910       KM       DIVERT LOW-FLOWS TO EXISTING WASHS WEST OF SCOTTSDALE ROAD (SUB 8B2)
911       DT   8B1.4
912       DI      0  1088   2000
913       DQ      0   265    300

914       KK   12R1     CP
915       KM       ROUTE NON-DIVERTED FLOW DOWN SCOTTSDALE ROAD CHANNEL TO CP 12R1
916       RS      1   FLOW     -1
917       RC   .035   .035   .035   6500  .0171
918       RX      0     8     9     21    61    73    74    82
919       RY     10     6     6      0     0     6     6    10

920       KK    11B     SUB
921       KM       RUNOFF FROM SUB-BASIN 11B
922       BA   .2547
923       LS            74   11.9
924       UK    150  .0425    .20    100
925       RK   4700  .0213    .045          TRAP     30     50

926       KK    12R     SUB
927       KM       RUNOFF FROM SUB 12R & ROUTE SUB 11B
928       BA  1.2375
929       LS            74   22.3
930       UK     95  .0213    .10    100
931       RK   9900  .0214    .045          TRAP     50    100    YES

932       KK   12R2     CP
933       KM       ROUTE SUB 12R DOWN SCOTTSDALE ROAD CHANNEL TO CP 12R2
934       RS      1   FLOW     -1
935       RC   .035   .035   .035   3600  .0171
936       RX      0     8     9     21    61    73    74    82
937       RY     10     6     6      0     0     6     6    10
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

938       KK   12R3      CP
939       KM       COMBINE CP 12R1 & CP 12R2
940       HC      2

941       KK   12R4     DIV
942       KM       DIVERT LOW-FLOWS TO WEST SIDE OF SCOTTSDALE ROAD (SUB 13R)
943       DT   12R5
944       DI      0   2199   3000
945       DQ      0    500    550

946       KK    4B1      CP
947       KM       ROUTE NON-DIVERTED FLOW FROM DIV 12R4 TO CP 4B1
948       RS      1   FLOW     -1
949       RC   .035   .035   .035   3150  .0171
950       RX      0      8      9     21     61     73     74     82
951       RY     10      6      6      0      0      6      6     10

952       KK   SUB16
953       KM       RUNOFF FROM SUB-BASIN 16
954       BA  1.4570
955       LS           83    9.8
956       UK    217  .0581    .20    100
957       RK  14800  .0216   .045          TRAP     25      3

958       KK   SUB17
959       KM       RUNOFF FROM SUB-BASIN 17
960       BA  1.1851
961       LS           83    9.8
962       UK    285  .0421    .20    100
963       RK  12200  .0254   .045          TRAP     25      3

964       KK   SUB18
965       KM       RUNOFF FROM SUB-BASIN 18
966       BA  1.2641
967       LS           83    6.5
968       UK    285  .0421    .20    100
969       RK  10840  .0259   .045          TRAP     25      3

970       KK   CP19A
971       KM       COMBINE HYDROGRAPHS SUB16, SUB17, & SUB18
972       HC      3

973       KK   CP19B
974       KM       ROUTE CP19A TO CP19B
975       RK   1100  .0155  0.045          TRAP     35      3

976       KK   SUB15
977       KM       RUNOFF FROM SUB-BASIN 15
978       BA  1.3702
979       LS           82    5.4
980       UK    217  .0581    .20    100
981       RK  21200  .0236   .045          TRAP     25      3
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 982      KK  CP19C
 983      KM      COMBINE HYDROGRAPHS SUB15 & CP19B
 984      HC     2

 985      KK  SUB19
 986      KM      RUNOFF FROM SUB-BASIN 19 & ROUTE CP 19C
 987      BA  .1872
 988      LS          84    7.2
 989      UK    275  .0800    .20    100
 990      RK   3730  .0352   .045   .160   TRAP    15     3
 991      RK   1800  .0200   .045          TRAP    50    30    YES

 992      KK  SUB20
 993      KM      RUNOFF FROM SUB-BASIN 20
 994      BA  .5698
 995      LS          84    3.6
 996      UK    300  .0750    .20    100
 997      RK   9640  .0197   .045          TRAP    15     3

 998      KK   CP21
 999      KM      COMBINE HYDROGRAPHS SUB19 & SUB20
1000      HC     2

1001      KK  SUB21
1002      KM      RUNOFF FROM SUB-BASIN 21 & ROUTE CP 21
1003      BA 3.6659
1004      LS          80    6.4
1005      UK    297  .0558    .20    100
1006      RK  27600  .0196   .045          TRAP    50    30    YES

1007      KK  SUB22
1008      KM      RUNOFF FROM SUB-BASIN 22
1009      BA 1.3860
1010      LS          84    5.1
1011      UK    225  .0590    .20    100
1012      RK  13000  .0238   .045          TRAP    25     3

1013      KK  SUB23
1014      KM      RUNOFF FROM SUB-BASIN 23
1015      BA  .3945
1016      LS          84    6.3
1017      UK    225  .0590    .20    100
1018      RK  10200  .0304   .045          TRAP    20     3

1019      KK   CP24
1020      KM      COMBINE HYDROGRAPHS SUB22 & SUB23
1021      HC     2

1022      KK  SUB24
1023      KM      RUNOFF FROM SUB-BASIN 24 & ROUTE CP 24
1024      BA  .4907
1025      LS          77    6.8
1026      UK    295  .0438    .20    100
1027      RK   6800  .0257   .045          TRAP    15     3    YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1028      KK  SUB25
1029      KM      RUNOFF FROM SUB-BASIN 25
1030      BA  1.5166
1031      LS          85    9.0
1032      UK    295  .0438    .20    100
1033      RK  16700  .0302    .045         TRAP    25     3

1034      KK   CP26
1035      KM      COMBINE HYDROGRAPHS SUB24 & SUB25
1036      HC     2

1037      KK  SUB26
1038      KM      RUNOFF FROM SUB-BASIN 26 & ROUTE CP 26
1039      BA  .2231
1040      LS          78    6.9
1041      UK    200  .0250    .20    100
1042      RK   1400  .0217    .045         TRAP    60     7    YES

1043      KK   26.1    DIV
1044      KM      DIVERT FLOW FROM SUB 26 TO SUB 26A
1045      DT   26.2
1046      DI     0    500   1000  10000
1047      DQ     0    250    500   5000

1048      KK   21.1     CP
1049      KM      ROUTE DIV 26.1 TO OUTLET OF SUB 21
1050      RK  10600  .0263    .045         TRAP    35    10

1051      KK   CP27
1052      KM      COMBINE SUB 21 & CP 21.1
1053      HC     2

1054      KK   26.2    RET
1055      KM      RETRIEVE DIVERTED FLOW FROM CP 26
1056      DR   26.2

1057      KK  SUB26A
1058      KM      RUNOFF FROM SUB 26A & ROUTE RET 26.2
1059      BA  .5251
1060      LS          74   14.5
1061      UK    200  .0250    .20    100
1062      RK  10000  .0263    .045         TRAP    35    10    YES

1063      KK   27.1     CP
1064      KM      COMBINE CP 27 & SUB 26A
1065      HC     2

1066      KK   27.2     CP
1067      KM      ROUTE CP 27.1 THROUGH NEW CHANNEL TO CP 27.2
1068      RS     1   FLOW     -1
1069      RC   .035   .035   .035   3150  .0227
1070      RX     0     8     9     21   171   183   184   192
1071      RY    10     6     6      0     0     6     6    10
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1072      KK  SUB27
1073      KM      RUNOFF FROM SUB-BASIN 27
1074      BA  .6385
1075      LS          73   16.3
1076      UK   159  .0213    .10    100
1077      RK  3200  .0227   .035          TRAP    150      2

1078      KK  27.3     CP
1079      KM      COMBINE CP 27.2 & SUB 27
1080      HC     2

1081      KK  28A1     CP
1082      KM      ROUTE CP 27.3 THROUGH NEW CHANNEL TO PINNACLE PEAK ROAD
1083      RS     1   FLOW     -1
1084      RC  .035   .035   .035   4150  .0227
1085      RX     0     8     9     21   171    183    184    192
1086      RY    10     6     6      0     0      6      6     10

1087      KK   28A    SUB
1088      KM      RUNOFF FROM SUB-BASIN 28A
1089      BA  .6708
1090      LS          73   35.0
1091      UK    96  .0213    .10    100
1092      RK  4150  .0227   .035          TRAP    150      2

1093      KK  28A2     CP
1094      KM      COMBINE SUB 28A & CP 28A1
1095      HC     2

1096      KK   4B2     CP
1097      KM      ROUTE CP 28A2 TO CP 4B2
1098      RS     1   FLOW     -1
1099      RC  .035   .035   .035   1300  .0227
1100      RX     0     8     9     21   171    183    184    192
1101      RY    10     6     6      0     0      6      6     10

1102      KK   4B3     CP
1103      KM      COMBINE CP 4B1 & CP 4B2
1104      KM      THIS IS THE COMBINED FLOW AT RAWHIDE FROM CHANNELS 4C-4B & 4A-4B.
1105      HC     2

1106      KK  28B1     CP
1107      KM      ROUTE CP 4B3 DOWN SCOTTSDALE ROAD CHANNEL TO CP 28B1
1108      RS     1   FLOW     -1
1109      RC  .035   .035   .035   3300  .0227
1110      RX     0     8     9     21   171    183    184    192
1111      RY    10     6     6      0     0      6      6     10

1112      KK   28B    SUB
1113      KM      RUNOFF FROM SUB 28B
1114      BA  .9182
1115      LS          74   53.3
1116      UK    96  .0213    .10    100
1117      RK  4750  .0227   .035          TRAP    150      2
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1118      KK   28.1    DIV
1119      KM       DIVERT FLOW TO SIMULATE RUNOFF FROM SUB 28B THAT IS INTERCEPTED BY THE
1120      KM       CORE NORTH CHANNEL AT THE INTXN OF SCOTTSDALE & DEER VALLEY ROADS.
1121      KM       DIVERT RATIO IS BASED ON THE PERCENTAGE OF THE DOWNSTREAM BOUNDARY OF
1122      KM       SUB 28 THAT IS INTERCEPTED BY THE CORE NORTH CHANNEL.
1123      DT   28.2
1124      DI     0    100   10000
1125      DQ     0     20    2000

1126      KK   28B2     CP
1127      KM       COMBINE NON-DIVERTED FLOW FROM SUB 28B WITH CP 28B1
1128      HC     2

1129      KK   29A1     CP
1130      KM       ROUTE CP 28B2 DOWN RAWHIDE WASH CHANNEL TO CP 29A1
1131      RS     1   FLOW     -1
1132      RC   .035   .035   .035  10200  .0150
1133      RX     0     8     9     21    171    183    184    192
1134      RY    10     6     6      0      0      6      6     10

1135      KK    29A    SUB
1136      KM       RUNOFF FROM SUB 29A
1137      BA  1.7630
1138      LS            74   40.6
1139      UK    88  .0213    .10    100
1140      RK  2500  .0100   .035    .34   TRAP    25     2
1141      RK 10200  .0150   .035          TRAP   150     2

1142      KK   29A2     CP
1143      KM       COMBINE SUB 29A & CP 29A1
1144      HC     2

1145      KK  29.1A     CP
1146      KM       ROUTE CP 29A2 DOWN RAWHIDE WASH CHANNEL TO CAP DIKE No.2
1147      RS     1   FLOW     -1
1148      RC   .035   .035   .035   5500  .0150
1149      RX     0     8     9     21    171    183    184    192
1150      RY    10     6     6      0      0      6      6     10

1151      KK   29.1    SUB
1152      KM       RUNOFF FROM SUB 29.1
1153      BA  1.3896
1154      LS            74   28.6
1155      UK    88  .0213    .10    100
1156      RK  2500  .0100   .035    .26   TRAP    25     2
1157      RK  5500  .0150   .035          TRAP   150     2

1158      KK  29.1B     CP
1159      KM       COMBINE SUB 29.1 & CP 29.1A
1160      HC     2
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1161      KK   32A2     RET
1162      KM       RETRIEVE DIVERTED FLOW FROM SUB 32A
1163      DR   32A2

1164      KK   CNC6     CP
1165      KM       ROUTE RET 32A2 TO THE INTXN OF SCOTTSDALE & DEER VALLEY ROADS
1166      RS     1   FLOW     -1
1167      RC   .035   .035   .035   2650   .0125
1168      RX     0     8     9     21     71     83     84     92
1169      RY    10     6     6      0      0      6      6     10

1170      KK   28.2     RET
1171      KM       RETRIEVE PORTION OF RUNOFF FROM SUB 28 THAT MAY FLOW TO THE
1172      KM       SCOTTSDALE ROAD-DEER VALLEY ROAD INTXN
1173      DR   28.2

1174      KK   CNC7     CP
1175      KM       COMBINE CP CNC6 & RET 28.2
1176      HC     2

1177      KK   CNC8     CP
1178      KM       ROUTE CP CNC7 DOWN SCOTTSDALE ROAD CHANNEL TO BEARDSLEY ROAD
1179      RS     1   FLOW     -1
1180      RC   .035   .035   .035   5400   .0150
1181      RX     0     8     9     21     91    103    104    112
1182      RY    10     6     6      0      0      6      6     10

1183      KK    CN4     SUB
1184      KM       RUNOFF FROM SUB CN4
1185      BA   .5546
1186      LS            74    48.9
1187      UK    100   .0150    .15    100
1188      RK   1400   .0100    .018   .111   TRAP    30     5
1189      RK   5400   .0150    .035          TRAP    75     2

1190      KK   CNC9     CP
1191      KM       COMBINE SUB CN4 & CP CNC8
1192      KM       THIS FLOW IS ASSUMED TO SHEETFLOW ACROSS SCOTTSDALE ROAD
1193      HC     2

1194      KK    33A     SUB
1195      KM       RUNOFF FROM SUB-BASIN 33A & ROUTE CNC9
1196      KM       DRAINAGE AREA REVISED ON 8/10/90 TO REFLECT DELETION OF 0.1040 SQ MI
1197      KM       FROM CORRIGAN-MARLEY PARCEL.  NO OTHER PARAMETERS WERE CHANGED.
1198      BA   .3738
1199      LS            74    57.7
1200      UK     89   .0213    .10    100
1201      RK   4000   .0161    .045          TRAP    50    50    YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1202      KK  33.1A    SUB
1203      KM       RUNOFF FROM SUB 33.1A & ROUTE SUB 33A
1204      KM       THE OUTER LOOP IS NOT ASSUMED TO BE IN-PLACE FOR THE PURPOSE OF
1205      KM       ROUTING FLOWS FROM SUB 33A TO SUB 33.1A.  IF THE OUTER LOOP WERE
1206      KM       IN-PLACE, THE CHANNEL SIDE-SLOPES WOULD BE 2:1 RATHER THAN 50:1.
1207      BA  .7109
1208      LS          74   48.2
1209      UK    89  .0213    .10    100
1210      RK   6700  .0116   .045         TRAP    50    50    YES

1211      KK  8B1.4    RET
1212      KM       RETRIEVE LOW-FLOW DIVERT FROM SUB 8B1
1213      DR  8B1.4

1214      KK   8B2    SUB
1215      KM       RUNOFF FROM SUB 8B2 & ROUTE LOW-FLOW DIVERT FROM SUB 8B1
1216      BA  .2260
1217      LS          74   20.4
1218      UK   116  .0213    .10    100
1219      RK   4500  .0196   .045         TRAP    30    30    YES

1220      KK  SUB9B
1221      KM       RUNOFF FROM SUB-BASIN 9B & ROUTE SUB 8B2
1222      BA  .8767
1223      LS          74   37.6
1224      UK    95  .0213    .10    100
1225      RK  10400  .0192   .045         TRAP    30   130    YES

1226      KK SUB10B
1227      KM       RUNOFF FROM SUB-BASIN 10B ROUTE SUB 9B
1228      BA 1.4377
1229      LS          74    31
1230      UK   107  .0213    .10    100
1231      RK  11000  .0136   .045         TRAP    30   175    YES

1232      KK  10.1B    SUB
1233      KM       RUNOFF FROM SUB 10.1B & ROUTE SUB 10B
1234      BA  .8989
1235      LS          74   28.2
1236      UK   107  .0213    .10    100
1237      RK   6000  .0106   .045         TRAP    30   190    YES

1238      KK   12R5    RET
1239      KM       RETRIEVE LOW-FLOW DIVERT FROM SUB 12R
1240      DR   12R5

1241      KK    13R    SUB
1242      KM       RUNOFF FROM SUB 13R & ROUTE LOW-FLOW DIVERT FROM SUB 12R
1243      BA 1.0668
1244      LS          74   44.0
1245      UK    86  .0213    .10    100
1246      RK   9200  .0192   .045         TRAP    30    50    YES
```

1

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

1247        KK   SUB14
1248        KM        RUNOFF FROM SUB-BASIN 14 & ROUTE SUB 13
1249        BA  1.3910
1250        LS            74    46.7
1251        UK    101   .0213    .10     100
1252        RK   11200  .0142    .045          TRAP     50     150     YES

1253        KK    14.1     SUB
1254        KM        RUNOFF FROM SUB 14.1 & ROUTE SUB 14
1255        BA   .6112
1256        LS            74    43.8
1257        UK    101   .0213    .10     100
1258        RK    5800  .0112    .045          TRAP     50     160     YES

1259        KK     2IN      CP
1260        KM        COMBINE SUB 10.1B, SUB 14.1, CP 29.1B, & SUB 33.1
1261        KM        THIS IS THE TOTAL INFLOW TO CAP DIKE No.2
1262        HC       4

1263        KK   DIKE2     DAM
1264        KM        ROUTE CP 2IN THROUGH CAP DIKE No.2
1265        RS       1    STOR
1266        SV       0      2     48    169    342    546    775   1031   1332   1732
1267        SV    2273   2958   3796   4783   5904   7170   8578  10131  11834  12000
1268        SE    1514   1516   1518   1520   1522   1524   1526   1528   1530   1532
1269        SE    1534   1536   1538   1540   1542   1544   1546   1548   1550 1550.2
1270        SS    1550    100    2.9    1.5
1271        ST  1550.2    100    2.9    1.5
1272        ZZ
1
            SCHEMATIC DIAGRAM OF STREAM NETWORK
INPUT
 LINE     (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

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

 40        30R
            .
            .
 54         .------->   30R2
 52       30R1
           V
           V
 57       31.1
            .
            .
 63         .        31A
            .         .
            .         .
 70         .         .       34R
            .         .        V
            .         .        V
 76         .         .       31.3
            .         .         .
            .         .         .
 79       31.2......................
            .
            .
 84         .------->   31A2
 82       31A1
```

```
          V
          V
87      36.2
          .
          .
93        .       35N
          .        .
          .        .
102       .         .-------> 35N1
100       .       35N2
          .        V
          .        V
105       .       35L1
          .        .
          .        .
108       .         .       35L
          .        .         .
          .        .         .
114       .       35L2............
          .        V
          .        V
117       .       36L1 ***
          .        V
          .        V
123       .       36.3
          .        .
          .        .
129     36.4............
          .
          .
134       .-------> 36.6
132     36.5
          V
          V
137     36.7
          .
          .
145       .         .<------- 35N1
143       .       35N1
          .        V
          .        V
146       .       35R ***
          .        V
          .        V
152       .       36R1 ***
          .        .
          .        .
158     36.8............
          .
          .
164       .-------> 36.10
162     36.9
          V
          V
167     37.1
          .
          .
174       .       37B
          .        V
          .        V
180       .       37.2
          .        .
          .        .
186     37.3............
          .
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        .
191     .-------> 37.5
189   37.4
       V
       V
194   52.1
        .
        .
200     .   SUB39
        .     .
        .     .
206     .     .   SUB40
        .     .     .
        .     .     .
212     .   CP41............
        .     V
        .     V
215     .   SUB41 ***
        .     .
        .     .
221     .     .   SUB42
        .     .     .
        .     .     .
227     .     .     .   SUB43
        .     .     .     .
        .     .     .     .
233     .     .     .     .   SUB44
        .     .     .     .     .
        .     .     .     .     .
239     .     .     .   CP45............
        .     .     .    V
        .     .     .    V
242     .     .     .   SUB45 ***
        .     .     .     .
        .     .     .     .
248     .     .     .     .   SUB45A
        .     .     .     .     .
        .     .     .     .     .
254     .     .     .     .     .   SUB46
        .     .     .     .     .     .
        .     .     .     .     .     .
261     .     .     .   CP47........................
        .     .     .    V
        .     .     .    V
264     .     .     .   SUB47 ***
        .     .     .     .
        .     .     .     .
270     .   CP48........................
        .    V
        .    V
273     .   SUB48 ***
        .     .
        .     .
279     .     .   SUB50
        .     .     .
        .     .     .
286     .   CP51............
        .     .
        .     .
294     .     .-------> 2003
289     .   2004
        .     .
        .     .
297     .     .   SUB49
        .     .     .
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        .          .          .
303     .        49.1............
        .          V
        .          V
306     .       SUB51 ***
        .          V
        .          V
312     .        52A ***
        .          .
        .          .
318   52.2............
      V
      V
321   52A1
      .
      .
328     .        53A
        .          .
        .          .
334   53A1............
      V
      V
337   DB3.1
      .
      .
343     .        CN6
        .          .
        .          .
350   DB3............
      V
      V
354   53R
      .
      .
378     .------->    53RD
371   200
      V
      V
381   202
      .
      .
384     .        14CS
        .          .
        .          .
390   203............
      V
      V
394   204
      .
      .
397     .       15ACS
        .          .
        .          .
403     .          .       15BCS
        .          .          .
        .          .          .
409     .        205............
        .          .
        .          .
412   206............
      .
      .
418     .          .<-------    53RD
416     .        201
        .          V
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. V
419 . 207
. .
. .
422 . . 21ACS
. . .
. . .
428 . . . 21BCS
. . . .
. . . .
434 . . 208.....
. . V
. . V
438 . . 209
. . .
. . .
441 . . . 17BCS
. . . .
. . . .
447 . . 210.....
. . .
. . .
451 . . . 17ACS
. . . .
. . . .
457 . . 211.....
. . V
. . V
460 . . 212
. . .
. . .
463 . . . 16BCS
. . . .
. . . .
469 . . 213.....
. . .
. . .
473 . . . 16ACS
. . . .
. . . .
479 . 214.....
. V
. V
482 . 215
. .
. .
485 . . 19CS
. . V
. . V
491 . . 216
. . V
. . V
494 . . 217
. . .
. . .
497 . . . 18CS
. . . .
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503 . . 218.....
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. . .
507 . 219.....
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. .
511 . . 20ACS

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        .       .       V
        .       .       V
518     .       .       220
        .       .       .
        .       .       .
521     .       .       .       20BCS
        .       .       .       .
        .       .       .       .
527     .       .       221............
        .       .       .
        .       .       .
531     .       .       .       TPC2
        .       .       .       .
        .       .       .       .
539     222.....................................
        .
        .
546     .       .<-------   30R2
544     .       30R2
        .       .
        .       .
549     .       .       .<-------   31A2
547     .       .       31A2
        .       .       .
        .       .       .
550     .       31B1............
        .       V
        .       V
553     .       31B ***
        .       .
        .       .
561     .       .       .<-------   36.6
559     .       .       36.6
        .       .       V
        .       .       V
562     .       .       36L2 ***
        .       .       .
        .       .       .
568     .       32.1............
        .       V
        .       V
571     .       32A ***
        .       .
        .       .
579     .       .------->   32A2
577     .       32A1
        .       V
        .       V
582     .       CNC1
        .       .
        .       .
590     .       .       .<-------   36.10
588     .       .       36.10
        .       .       .
        .       .       .
593     .       .       .       .<-------   37.5
591     .       .       .       37.5
        .       .       .       .
        .       .       .       .
594     .       .       37A1............
        .       .       V
        .       .       V
597     .       .       37A ***
        .       .       V
        .       .       V
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603     .       .       CNC2
        .       .       .
        .       .       .
609     .       CNC3............
        .       V
        .       V
612     .       CNC4
        .       .
        .       .
619     .       .       CN1
        .       .       .
        .       .       .
628     .       CNC5............
        .       V
        .       V
631     .       DB1.1
        .       .
        .       .
638     .       .       CN2
        .       .       .
        .       .       .
645     .       .       .       CN3
        .       .       .       .
        .       .       .       .
652     .       DB1........................
        .       V
        .       V
656     .       38R-1
        .       V
        .       V
670     .       DB2.1
        .       .
        .       .
676     .       .       CN5
        .       .       .
        .       .       .
684     .       DB2............
        .       V
        .       V
688     .       38R-2
        .       V
        .       V
702     .       108
        .       .
        .       .
705     .       .       60CS
        .       .       V
        .       .       V
711     .       .       109
        .       .       .
        .       .       .
714     .       .       .       4A-BCS
        .       .       .       .
        .       .       .       .
720     .       .       110............
        .       .       .
        .       .       .
725     .       111............
        .       V
        .       V
728     .       112
        .       .
        .       .
731     .       .       12ACS
        .       .       V
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          .     .     V
737       .     .     113
          .     .     .
          .     .     .
740       .     .     .     11CS
          .     .     .     .
          .     .     .     .
746       .     .     113A.............
          .     .     V
          .     .     V
750       .     .     114
          .     .     .
          .     .     .
753       .     115.............
          .     V
          .     V
756       .     116
          .     .
          .     .
759       .     .     3A-BCS
          .     .     .
          .     .     .
765       .     118.............
          .     V
          .     V
768       .     119
          .     .
          .     .
771       .     .     1BCS
          .     .     V
          .     .     V
777       .     .     119B
          .     .     .
          .     .     .
780       .     119A.............
          .     .
          .     .
785       .     .     1ACS
          .     .     .
          .     .     .
793       .     .     .     2CS
          .     .     .     .
          .     .     .     .
802       .     .     .     .     10ABCS
          .     .     .     .     V
          .     .     .     .     V
808       .     .     .     .     120
          .     .     .     .     .
          .     .     .     .     .
811       .     .     .     .     .     13CS
          .     .     .     .     .     V
          .     .     .     .     .     V
817       .     .     .     .     .     121
          .     .     .     .     .     .
          .     .     .     .     .     .
820       .     .     .     .     .     .     12BCS
          .     .     .     .     .     .     .
          .     .     .     .     .     .     .
826       .     .     .     .     .     122.............
          .     .     .     .     .     .
          .     .     .     .     .     .
831       .     .     .     .     123.............
          .     .     .     .     V
          .     .     .     .     V
834       .     .     .     .     124
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          .        .        .        .        .
          .        .        .        .        .
839       .        125.....................
          .        .
          .        .
842       .        .        PR1
          .        .        .
          .        .        .
850       .        .        .        TPC1
          .        .        .        .
          .        .        .        .
858       .        126.......................
          .        .
          .        .
863       3IN............
          V
          V
867       DIKE3
          .
          .
876       .        SUB7B
          .        .
          .        .
888       .        .        11A
          .        .        .
          .        .        .
894       .        8.1............
          .        V
          .        V
897       .        8B1 ***
          .        V
          .        V
903       .        8B1.2
          .        .
          .        .
911       .        .-------> 8B1.4
909       .        8B1.3
          .        V
          .        V
914       .        12R1
          .        .
          .        .
920       .        .        11B
          .        .        V
          .        .        V
926       .        .        12R ***
          .        .        V
          .        .        V
932       .        .        12R2
          .        .        .
          .        .        .
938       .        12R3............
          .        .
          .        .
943       .        .-------> 12R5
941       .        12R4
          .        V
          .        V
946       .        4B1
          .        .
          .        .
952       .        .        SUB16
          .        .        .
          .        .        .
958       .        .        .        SUB17
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          .     .     .     .
          .     .     .     .
964       .     .     .     .     SUB18
          .     .     .     .     .
          .     .     .     .     .
970       .     .   CP19A.......................
          .     .     V
          .     .     V
973       .     .   CP19B
          .     .     .
          .     .     .
976       .     .     .     SUB15
          .     .     .     .
          .     .     .     .
982       .     .   CP19C............
          .     .     V
          .     .     V
985       .     .   SUB19 ***
          .     .     .
          .     .     .
992       .     .     .     SUB20
          .     .     .     .
          .     .     .     .
998       .     .   CP21............
          .     .     V
          .     .     V
1001      .     .   SUB21 ***
          .     .     .
          .     .     .
1007      .     .     .     SUB22
          .     .     .     .
          .     .     .     .
1013      .     .     .     .     SUB23
          .     .     .     .     .
          .     .     .     .     .
1019      .     .     .     CP24............
          .     .     .     V
          .     .     .     V
1022      .     .     .     SUB24 ***
          .     .     .     .
          .     .     .     .
1028      .     .     .     .     SUB25
          .     .     .     .     .
          .     .     .     .     .
1034      .     .     .     CP26............
          .     .     .     V
          .     .     .     V
1037      .     .     .     SUB26 ***
          .     .     .     .
          .     .     .     .
1045      .     .     .     .-------> 26.2
1043      .     .     .     26.1
          .     .     .     V
          .     .     .     V
1048      .     .     .     21.1
          .     .     .     .
          .     .     .     .
1051      .     .   CP27............
          .     .     .
          .     .     .
1056      .     .     .     .<------- 26.2
1054      .     .     .     26.2
          .     .     .     V
          .     .     .     V
1057      .     .     .     SUB26A ***
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          .       .       .       .
          .       .       .       .
1063      .       .     27.1............
          .       .       V
          .       .       V
1066      .       .     27.2
          .       .       .
          .       .       .
1072      .       .       .     SUB27
          .       .       .       .
          .       .       .       .
1078      .       .     27.3............
          .       .       V
          .       .       V
1081      .       .     28A1
          .       .       .
          .       .       .
1087      .       .       .       28A
          .       .       .       .
          .       .       .       .
1093      .       .     28A2............
          .       .       V
          .       .       V
1096      .       .     4B2
          .       .       .
          .       .       .
1102      .     4B3............
          .       V
          .       V
1106      .     28B1
          .       .
          .       .
1112      .       .       28B
          .       .       .
          .       .       .
1123      .       .       .-------->   28.2
1118      .       .     28.1
          .       .       .
          .       .       .
1126      .     28B2............
          .       V
          .       V
1129      .     29A1
          .       .
          .       .
1135      .       .       29A
          .       .       .
          .       .       .
1142      .     29A2............
          .       V
          .       V
1145      .     29.1A
          .       .
          .       .
1151      .       .       29.1
          .       .       .
          .       .       .
1158      .     29.1B............
          .       .
          .       .
1163      .       .       .<-------   32A2
1161      .       .     32A2
          .       .       V
          .       .       V
1164      .       .     CNC6
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          .       .       .
          .       .       .
1173      .       .       .          .<-------   28.2
1170      .       .       .       28.2
          .       .       .        .
          .       .       .        .
1174      .       .     CNC7............
          .       .      V
          .       .      V
1177      .       .     CNC8
          .       .       .
          .       .       .
1183      .       .       .       CN4
          .       .       .        .
          .       .       .        .
1190      .       .     CNC9............
          .       .      V
          .       .      V
1194      .       .      33A ***
          .       .      V
          .       .      V
1202      .       .    33.1A ***
          .       .       .
          .       .       .
1213      .       .       .          .<-------   8B1.4
1211      .       .       .       8B1.4
          .       .       .        V
          .       .       .        V
1214      .       .       .        8B2 ***
          .       .       .        V
          .       .       .        V
1220      .       .       .       SUB9B ***
          .       .       .        V
          .       .       .        V
1226      .       .       .      SUB10B ***
          .       .       .        V
          .       .       .        V
1232      .       .       .       10.1B ***
          .       .       .        .
          .       .       .        .
1240      .       .       .        .          .<-------   12R5
1238      .       .       .        .       12R5
          .       .       .        .        V
          .       .       .        .        V
1241      .       .       .        .        13R ***
          .       .       .        .        V
          .       .       .        .        V
1247      .       .       .        .       SUB14 ***
          .       .       .        .        V
          .       .       .        .        V
1253      .       .       .        .       14.1 ***
          .       .       .        .        .
          .       .       .        .        .
1259      .     2IN.................................
          .      V
          .      V
1263      .    DIKE2
```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

1 ****

FLOOD HYDROGRAPH PACKAGE HEC-1 (IBM XT 512K VERSION) -FEB 1,1985
U.S. ARMY CORPS OF ENGINEERS, THE HYDROLOGIC ENGINEERING CENTER, 609 SECOND STREET, DAVIS, CA. 95616
****

UPPER INDIAN BEND WASH REGIONAL FLOOD CONTROL & DRAINAGE PLAN

MODEL MP5.24I -- SUB-BASIN SERIES 7B TO 53.1

THIS IS AN INTEGRATED MASTER PLAN MODEL WITH A NORTH-SOUTH INTERCEPTOR
CHANNEL IN-PLACE ALONG PIMA ROAD FROM POINT 3A TO 3K TO 3L.
ALL CORE NORTH-CORE SOUTH CHANNELS & DETENTION BASINS ARE IN-PLACE.
THE RAWHIDE WASH CHANNEL IS IN-PLACE ALONG ALIGNMENT 4A-4B-4D.
A NORTH-SOUTH INTERCEPTOR CHANNEL IS IN-PLACE ALONG SCOTTSDALE ROAD FROM
POINT 4C TO 4B.

FUTURE CONDITION LAND-USE

LOW-FLOW CULVERT DIVERSIONS ARE IN-PLACE

DET BASIN 53R HAS BEEN MODIFIED TO REFLECT 8/10/90 CHANGES BY
STANLEY CONSULTANTS & R. WARD

CN5 & 33A HAVE BEEN MODIFIED TO REFLECT DRAINAGE SPLIT ON MARLEY PARCEL

100% OF REATA PASS FAN IS DIVERTED WEST TO PIMA ROAD.

RESERVOIR ROUTING OPERATIONS ARE IN-PLACE FOR CAP DIKES 2 & 3.

THIS MODEL REFLECTS ALL D.A. ADJUSTMENTS MADE TO MODEL F3.24I AND FLOW
DIVERSIONS NEAR RAWHIDE WASH APEX & PINNACLE PEAK.
THE TPC GOLF COURSE AND ADJACENT RESIDENTIAL AREAS HAVE BEEN ADDED TO
THE CORE SOUTH AREA.

100-YR, 24-HR STORM, USING SCS TYPE IIA RAINFALL DISTRIBUTION
RAINFALL FROM NOAA ATLAS, USING 25 SQ MI AREAL REDUCTION FACTOR (.968)

FUTURE LAND-USE DENSITIES FROM OCT 1987 GENERAL PLAN, BRW PLANS, AND
THE TOMTO FOOTHILLS PLAN, ALL SCOTTSDALE RESIDENTIAL AREAS HAVE THE
PERCENT OF IMPERVIOUS COVER ADJUSTED FOR NAOS REQUIREMENTS.

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

 IT        HYDROGRAPH TIME DATA
             NMIN         5  MINUTES IN COMPUTATION INTERVAL
            IDATE    28APR90  STARTING DATE
            ITIME      0000  STARTING TIME
               NQ       289  NUMBER OF HYDROGRAPH ORDINATES
           NDDATE    29APR90  ENDING DATE
           NDTIME      0000  ENDING TIME

          COMPUTATION INTERVAL     .08 HOURS
             TOTAL TIME BASE   24.00 HOURS

      ENGLISH UNITS
```

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 5929. TO 17125.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.

THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 1046. TO 17125.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 644. TO 17125.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 5929. TO 17125.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 644. TO 17125.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 8692. TO 24217.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 1863. TO 19861.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 3010. TO 8694.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 4760. TO 13747.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 286. TO 15059.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 2383. TO 15059.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 3649. TO 9713.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 4553. TO 13523.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 3845. TO 13523.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 6597. TO 48171.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 13035. TO 48171.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 331. TO 48171.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 6597. TO 48171.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 3355. TO 13747.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

1

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

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT	30R	1914.	6.17	275.	84.	84.	1.31		
+	DIVERSION TO	30R2	323.	6.17	144.	51.	51.	1.31		
+	HYDROGRAPH AT	30R1	1591.	6.17	131.	33.	33.	1.31		
+	ROUTED TO	31.1	1319.	6.25	131.	33.	33.	1.31		
+								2.73	6.25	
+	HYDROGRAPH AT	31A	616.	6.08	63.	20.	20.	.41		
+	HYDROGRAPH AT	34R	977.	6.08	116.	36.	36.	.64		
+	ROUTED TO	31.3	964.	6.33	120.	37.	37.	.64		
+	3 COMBINED AT	31.2	2678.	6.25	314.	90.	90.	2.37		
+	DIVERSION TO	31A2	943.	6.25	111.	32.	32.	2.37		
+	HYDROGRAPH AT	31A1	1735.	6.25	203.	58.	58.	2.37		
+	ROUTED TO	36.2	1636.	6.33	203.	58.	58.	2.37		
+								2.74	6.33	
+	HYDROGRAPH AT	35N	946.	6.08	102.	31.	31.	.41		
+	DIVERSION TO	35N1	378.	6.08	41.	12.	12.	.41		
+	HYDROGRAPH AT	35N2	568.	6.08	61.	19.	19.	.41		
+	ROUTED TO	35L1	476.	6.17	61.	18.	18.	.41		
+	HYDROGRAPH AT	35L	685.	6.25	124.	39.	39.	.65		
+	2 COMBINED AT	35L2	1159.	6.25	185.	57.	57.	1.06		
+	HYDROGRAPH AT	36L1	1284.	6.33	247.	77.	77.	1.47		

	ROUTED TO								
+		36.3	1284.	6.33	246.	77.	77.	1.47	
+								2.37	6.33
	2 COMBINED AT								
+		36.4	2920.	6.33	449.	135.	135.	3.84	
	DIVERSION TO								
+		36.6	416.	6.33	64.	19.	19.	3.84	
	HYDROGRAPH AT								
+		36.5	2504.	6.33	385.	116.	116.	3.84	
	ROUTED TO								
+		36.7	2501.	6.33	385.	115.	115.	3.84	
+								3.51	6.33
	HYDROGRAPH AT								
+		35N1	378.	6.08	41.	12.	12.	.00	
	HYDROGRAPH AT								
+		35R	650.	6.25	121.	38.	38.	.45	
	HYDROGRAPH AT								
+		36R1	1028.	6.17	239.	75.	75.	1.12	
	2 COMBINED AT								
+		36.8	3451.	6.33	623.	190.	190.	4.96	
	DIVERSION TO								
+		36.10	273.	6.33	49.	15.	15.	4.96	
	HYDROGRAPH AT								
+		36.9	3179.	6.33	574.	175.	175.	4.96	
	ROUTED TO								
+		37.1	3071.	6.42	571.	175.	175.	4.96	
+								3.96	6.42
	HYDROGRAPH AT								
+		37B	212.	6.08	20.	6.	6.	.11	
	ROUTED TO								
+		37.2	188.	6.08	20.	6.	6.	.11	
+								.73	6.08
	2 COMBINED AT								
+		37.3	3127.	6.42	590.	181.	181.	5.07	
	DIVERSION TO								
+		37.5	532.	6.42	100.	31.	31.	5.07	
	HYDROGRAPH AT								
+		37.4	2595.	6.42	490.	150.	150.	5.07	
	ROUTED TO								
+		52.1	2491.	6.50	488.	150.	150.	5.07	
+								2.77	6.50
	HYDROGRAPH AT								
+		SUB39	4477.	6.08	489.	148.	148.	1.93	
	HYDROGRAPH AT								
+		SUB40	1343.	6.08	132.	40.	40.	.58	

	2 COMBINED AT						
+	CP41	5821.	6.08	622.	187.	187.	2.51
	HYDROGRAPH AT						
+	SUB41	6325.	6.17	775.	234.	234.	3.31
	HYDROGRAPH AT						
+	SUB42	1252.	6.08	126.	38.	38.	.58
	HYDROGRAPH AT						
+	SUB43	2512.	6.08	255.	77.	77.	1.07
	HYDROGRAPH AT						
+	SUB44	1951.	6.08	198.	60.	60.	.84
	2 COMBINED AT						
+	CP45	4463.	6.08	453.	137.	137.	1.91
	HYDROGRAPH AT						
+	SUB45	4602.	6.08	498.	150.	150.	2.11
	HYDROGRAPH AT						
+	SUB45A	425.	6.08	43.	13.	13.	.17
	HYDROGRAPH AT						
+	SUB46	2271.	6.08	230.	68.	68.	.93
	3 COMBINED AT						
+	CP47	7298.	6.08	771.	231.	231.	3.21
	HYDROGRAPH AT						
+	SUB47	7150.	6.17	870.	261.	261.	3.58
	3 COMBINED AT						
+	CP48	14513.	6.17	1769.	533.	533.	7.47
	HYDROGRAPH AT						
+	SUB48	14273.	6.17	1774.	535.	535.	7.52
	HYDROGRAPH AT						
+	SUB50	824.	6.08	81.	24.	24.	.36
	2 COMBINED AT						
+	CP51	14935.	6.17	1855.	560.	560.	7.88
	DIVERSION TO						
+	2003	0.	6.17	0.	0.	0.	7.88
	HYDROGRAPH AT						
+	2004	14935.	6.17	1855.	560.	560.	7.88
	HYDROGRAPH AT						
+	SUB49	713.	6.08	68.	21.	21.	.35
	2 COMBINED AT						
+	49.1	15505.	6.17	1923.	580.	580.	8.23
	HYDROGRAPH AT						
+	SUB51	15427.	6.33	2175.	657.	657.	9.25
	HYDROGRAPH AT						
+	52A	15753.	6.50	2352.	718.	718.	10.30
	2 COMBINED AT						
+	52.2	18244.	6.50	2840.	869.	869.	15.37

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      ROUTED TO
+                52A1   18160.  6.50    2831.    866.    866.   15.37
+                                                              9.53     6.50

      HYDROGRAPH AT
+                53A     554.  6.08      61.     19.     19.     .33

      2 COMBINED AT
+                53A1   18295.  6.50    2877.    885.    885.   15.70

      ROUTED TO
+                DB3.1  18206.  6.50    2876.    883.    883.   15.70
+                                                              9.55     6.50

      HYDROGRAPH AT
+                CN6     2124.  6.17     313.     96.     96.    1.37

      2 COMBINED AT
+                DB3    19207.  6.50    3174.    979.    979.   17.07

      ROUTED TO
+                53R     2127.  8.17    1969.    971.    971.   17.07
+                                                           1620.03     8.17

      DIVERSION TO
+                53RD    2127.   .08    1969.    971.    971.   17.07

      HYDROGRAPH AT
+                200        0.   .08       0.      0.      0.   17.07

      ROUTED TO
+                202        0.   .08       0.      0.      0.   17.07

      HYDROGRAPH AT
+                14CS     272.  6.08      38.     11.     11.     .11

      2 COMBINED AT
+                203      272.  6.08      38.     11.     11.   17.17

      ROUTED TO
+                204      251.  6.25      39.     12.     12.   17.17

      HYDROGRAPH AT
+                15ACS    166.  6.25      34.     10.     10.     .10

      HYDROGRAPH AT
+                15BCS    133.  6.33      33.     10.     10.     .09

      2 COMBINED AT
+                205      298.  6.25      66.     20.     20.     .19

      2 COMBINED AT
+                206      549.  6.25     106.     31.     31.   17.37

      HYDROGRAPH AT
+                201     2127.  8.17    1969.    971.    971.     .00

      ROUTED TO
+                207     2127.  8.17    1969.    970.    970.     .00

      HYDROGRAPH AT
+                21ACS    209.  6.17      36.     11.     11.     .10

      HYDROGRAPH AT
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+	21BCS	154.	6.08	26.	8.	8.	.08
	2 COMBINED AT						
+	208	362.	6.17	63.	19.	19.	.18
	ROUTED TO						
+	209	362.	6.17	63.	19.	19.	.18
	HYDROGRAPH AT						
+	17BCS	73.	6.08	10.	3.	3.	.03
	2 COMBINED AT						
+	210	429.	6.17	73.	22.	22.	.21
	HYDROGRAPH AT						
+	17ACS	101.	6.08	15.	4.	4.	.04
	2 COMBINED AT						
+	211	524.	6.17	88.	26.	26.	.25
	ROUTED TO						
+	212	520.	6.17	88.	26.	26.	.25
	HYDROGRAPH AT						
+	16BCS	146.	6.08	25.	7.	7.	.07
	2 COMBINED AT						
+	213	665.	6.17	113.	34.	34.	.32
	HYDROGRAPH AT						
+	16ACS	81.	6.08	12.	3.	3.	.03
	3 COMBINED AT						
+	214	2191.	7.75	2022.	1007.	1007.	.36
	ROUTED TO						
+	215	2191.	7.75	2022.	1006.	1006.	.36
	HYDROGRAPH AT						
+	19CS	63.	6.08	8.	2.	2.	.02
	ROUTED TO						
+	216	62.	6.08	8.	2.	2.	.02
	ROUTED TO						
+	217	59.	6.08	8.	2.	2.	.02
	HYDROGRAPH AT						
+	18CS	216.	6.08	32.	10.	10.	.09
	2 COMBINED AT						
+	218	275.	6.08	40.	12.	12.	.12
	2 COMBINED AT						
+	219	2213.	7.67	2038.	1018.	1018.	.47
	HYDROGRAPH AT						
+	20ACS	66.	6.08	9.	3.	3.	.03
	ROUTED TO						
+	220	64.	6.17	9.	3.	3.	.03
	HYDROGRAPH AT						
+	20BCS	158.	6.08	26.	8.	8.	.07

	2 COMBINED AT							
+	221	219.	6.17	35.	10.	10.	.10	
	HYDROGRAPH AT							
+	TPC2	1055.	6.08	106.	32.	32.	.41	
	4 COMBINED AT							
+	222	2927.	6.08	2219.	1092.	1092.	18.36	
	HYDROGRAPH AT							
+	30R2	323.	6.00	144.	51.	51.	.00	
	HYDROGRAPH AT							
+	31A2	943.	6.25	111.	32.	32.	.00	
	2 COMBINED AT							
+	31B1	1266.	6.25	255.	83.	83.	.00	
	HYDROGRAPH AT							
+	31B	1463.	6.42	420.	136.	136.	.99	
	HYDROGRAPH AT							
+	36.6	416.	6.33	64.	19.	19.	.00	
	HYDROGRAPH AT							
+	36L2	466.	6.42	96.	29.	29.	.17	
	2 COMBINED AT							
+	32.1	1929.	6.42	516.	166.	166.	1.16	
	HYDROGRAPH AT							
+	32A	2056.	6.67	669.	216.	216.	2.04	
	DIVERSION TO							
+	32A2	2056.	.08	669.	216.	216.	2.04	
	HYDROGRAPH AT							
+	32A1	0.	.08	0.	0.	0.	2.04	
	ROUTED TO							
+	CNC1	0.	.08	0.	0.	0.	2.04	
+							.00	6.33
	HYDROGRAPH AT							
+	36.10	273.	6.33	49.	15.	15.	.00	
	HYDROGRAPH AT							
+	37.5	532.	6.42	100.	31.	31.	.00	
	2 COMBINED AT							
+	37A1	789.	6.42	150.	46.	46.	.00	
	HYDROGRAPH AT							
+	37A	1222.	6.08	284.	88.	88.	.68	
	ROUTED TO							
+	CNC2	1139.	6.17	283.	88.	88.	.68	
+							2.51	6.17
	2 COMBINED AT							
+	CNC3	1139.	6.17	283.	88.	88.	2.71	
	ROUTED TO							
+	CNC4	945.	6.67	280.	87.	87.	2.71	
+							1.65	6.67

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      HYDROGRAPH AT
+                CN1   1060.  6.17    141.    43.    43.    .74

      2 COMBINED AT
+                CNC5  1624.  6.25    420.   131.   131.   3.45

      ROUTED TO
+                DB1.1 1635.  6.25    419.   131.   131.   3.45
+                                                          2.95     6.25

      HYDROGRAPH AT
+                CN2    272.  6.08     30.     9.     9.    .15

      HYDROGRAPH AT
+                CN3    899.  6.08     98.    30.    30.    .39

      3 COMBINED AT
+                DB1   2467.  6.17    546.   170.   170.   3.99

      ROUTED TO
+                38R-1  344.  8.17    324.   169.   169.   3.99
+                                                       1652.33     8.17

      ROUTED TO
+                DB2.1  344.  8.25    324.   168.   168.   3.99
+                                                          1.16     8.25

      HYDROGRAPH AT
+                CN5   1870.  6.08    217.    65.    65.    .70

      2 COMBINED AT
+                DB2   1999.  6.08    511.   233.   233.   4.69

      ROUTED TO
+                38R-2  695.  6.25    474.   233.   233.   4.69
+                                                       1610.62     6.25

      ROUTED TO
+                108    687.  6.33    474.   233.   233.   4.69

      HYDROGRAPH AT
+                60CS   104.  6.08     13.     4.     4.    .04

      ROUTED TO
+                109     98.  6.08     13.     4.     4.    .04

      HYDROGRAPH AT
+                4A-BCS  154.  6.08     21.     6.     6.    .06

      2 COMBINED AT
+                110    252.  6.08     34.    10.    10.    .10

      2 COMBINED AT
+                111    842.  6.25    506.   243.   243.   4.79

      ROUTED TO
+                112    834.  6.33    505.   243.   243.   4.79

      HYDROGRAPH AT
+                12ACS  121.  6.08     15.     5.     5.    .04

      ROUTED TO
+                113    116.  6.08     16.     5.     5.    .04
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	HYDROGRAPH AT						
+	11CS	92.	6.08	14.	4.	4.	.04
	2 COMBINED AT						
+	113A	208.	6.08	29.	9.	9.	.08
	ROUTED TO						
+	114	203.	6.08	29.	9.	9.	.08
	2 COMBINED AT						
+	115	985.	6.25	533.	252.	252.	4.87
	ROUTED TO						
+	116	981.	6.25	533.	251.	251.	4.87
	HYDROGRAPH AT						
+	3A-BCS	229.	6.33	58.	17.	17.	.17
	2 COMBINED AT						
+	118	1207.	6.25	589.	269.	269.	5.04
	ROUTED TO						
+	119	1200.	6.33	589.	269.	269.	5.04
	HYDROGRAPH AT						
+	1BCS	118.	6.08	15.	4.	4.	.04
	ROUTED TO						
+	119B	117.	6.08	15.	4.	4.	.04
	2 COMBINED AT						
+	119A	1272.	6.25	603.	273.	273.	5.08
	HYDROGRAPH AT						
+	1ACS	19.	6.08	3.	1.	1.	.01
	HYDROGRAPH AT						
+	2CS	29.	6.08	4.	1.	1.	.01
	HYDROGRAPH AT						
+	10ABCS	293.	6.08	50.	15.	15.	.14
	ROUTED TO						
+	120	292.	6.17	50.	15.	15.	.14
	HYDROGRAPH AT						
+	13CS	58.	6.08	7.	2.	2.	.02
	ROUTED TO						
+	121	56.	6.08	7.	2.	2.	.02
	HYDROGRAPH AT						
+	12BCS	44.	6.08	5.	2.	2.	.02
	2 COMBINED AT						
+	122	101.	6.08	13.	4.	4.	.04
	2 COMBINED AT						
+	123	383.	6.08	63.	19.	19.	.18
	ROUTED TO						
+	124	380.	6.17	63.	19.	19.	.18
	4 COMBINED AT						
+	125	1670.	6.17	670.	294.	294.	5.28

```
      HYDROGRAPH AT
+                PR1   605.  6.08    67.    20.    20.   .29

      HYDROGRAPH AT
+                TPC1  827.  6.08    83.    25.    25.   .32

      3 COMBINED AT
+                126  2981.  6.08   817.   339.   339.  5.89

      2 COMBINED AT
+                3IN  5908.  6.08  3024.  1430.  1430. 24.25

      ROUTED TO
+                DIKE3    0.   .08     0.     0.     0.  24.25
+                                                      1532.45    24.00

      HYDROGRAPH AT
+                SUB7B  426.  6.42    96.    30.    30.   .53

      HYDROGRAPH AT
+                11A    321.  6.17    50.    16.    16.   .32

      2 COMBINED AT
+                8.1    697.  6.25   146.    46.    46.   .85

      HYDROGRAPH AT
+                8B1   1026.  6.17   249.    79.    79.  1.48

      ROUTED TO
+                8B1.2  991.  6.33   248.    79.    79.  1.48
+                                                        3.10     6.33

      DIVERSION TO
+                8B1.4  241.  6.33    60.    19.    19.  1.48

      HYDROGRAPH AT
+                8B1.3  750.  6.33   188.    60.    60.  1.48

      ROUTED TO
+                12R1   667.  6.58   185.    59.    59.  1.48
+                                                        1.89     6.58

      HYDROGRAPH AT
+                11B    333.  6.17    42.    13.    13.   .25

      HYDROGRAPH AT
+                12R   1379.  6.17   283.    88.    88.  1.49

      ROUTED TO
+                12R2  1317.  6.25   281.    88.    88.  1.49
+                                                        2.83     6.25

      2 COMBINED AT
+                12R3  1793.  6.42   465.   147.   147.  2.97

      DIVERSION TO
+                12R5   408.  6.42   106.    33.    33.  2.97

      HYDROGRAPH AT
+                12R4  1386.  6.42   359.   114.   114.  2.97

      ROUTED TO
+                4B1   1373.  6.42   358.   113.   113.  2.97
+                                                        2.90     6.42
```

	HYDROGRAPH AT						
+	SUB16	2476.	6.08	317.	97.	97.	1.46
	HYDROGRAPH AT						
+	SUB17	2003.	6.08	257.	79.	79.	1.19
	HYDROGRAPH AT						
+	SUB18	2319.	6.08	269.	82.	82.	1.26
	3 COMBINED AT						
+	CP19A	6799.	6.08	843.	258.	258.	3.91
	ROUTED TO						
+	CP19B	6528.	6.17	843.	258.	258.	3.91
	HYDROGRAPH AT						
+	SUB15	1533.	6.17	275.	85.	85.	1.37
	2 COMBINED AT						
+	CP19C	8060.	6.17	1118.	343.	343.	5.28
	HYDROGRAPH AT						
+	SUB19	8079.	6.17	1159.	356.	356.	5.46
	HYDROGRAPH AT						
+	SUB20	1019.	6.08	123.	38.	38.	.57
	2 COMBINED AT						
+	CP21	9051.	6.17	1282.	393.	393.	6.03
	HYDROGRAPH AT						
+	SUB21	5879.	6.67	1908.	605.	605.	9.70
	HYDROGRAPH AT						
+	SUB22	2676.	6.08	303.	92.	92.	1.39
	HYDROGRAPH AT						
+	SUB23	733.	6.08	87.	26.	26.	.39
	2 COMBINED AT						
+	CP24	3409.	6.08	389.	119.	119.	1.78
	HYDROGRAPH AT						
+	SUB24	3684.	6.17	478.	146.	146.	2.27
	HYDROGRAPH AT						
+	SUB25	2506.	6.17	349.	106.	106.	1.52
	2 COMBINED AT						
+	CP26	6190.	6.17	826.	252.	252.	3.79
	HYDROGRAPH AT						
+	SUB26	6214.	6.17	866.	265.	265.	4.01
	DIVERSION TO						
+	26.2	3107.	6.17	433.	133.	133.	4.01
	HYDROGRAPH AT						
+	26.1	3107.	6.17	433.	133.	133.	4.01
	ROUTED TO						
+	21.1	2718.	6.33	427.	132.	132.	4.01
	2 COMBINED AT						

```
+                CP27    7564.   6.50     2335.     737.     737.    13.71

     HYDROGRAPH AT
+                26.2    3107.   6.17      433.     133.     133.      .00

     HYDROGRAPH AT
+              SUB26A    3255.   6.33      518.     160.     160.      .53

     2 COMBINED AT
+                27.1   10182.   6.42     2853.     897.     897.    14.24

     ROUTED TO
+                27.2   10148.   6.42     2846.     895.     895.    14.24
+                                                                     4.08     6.42

     HYDROGRAPH AT
+               SUB27    1146.   6.08      112.      35.      35.      .64

     2 COMBINED AT
+                27.3   10339.   6.42     2940.     930.     930.    14.87

     ROUTED TO
+                28A1   10252.   6.50     2932.     927.     927.    14.87
+                                                                     4.10     6.50

     HYDROGRAPH AT
+                 28A    1402.   6.08      148.      45.      45.      .67

     2 COMBINED AT
+                28A2   10481.   6.50     3057.     972.     972.    15.54

     ROUTED TO
+                 4B2   10478.   6.50     3056.     972.     972.    15.54
+                                                                     4.16     6.50

     2 COMBINED AT
+                 4B3   11844.   6.50     3413.    1085.    1085.    18.52

     ROUTED TO
+                28B1   11760.   6.58     3406.    1083.    1083.    18.52
+                                                                     4.45     6.58

     HYDROGRAPH AT
+                 28B    2205.   6.08      244.      74.      74.      .92

     DIVERSION TO
+                28.2     441.   6.08       49.      15.      15.      .92

     HYDROGRAPH AT
+                28.1    1764.   6.08      195.      59.      59.      .92

     2 COMBINED AT
+                28B2   12038.   6.58     3576.    1142.    1142.    19.44

     ROUTED TO
+                29A1   11170.   6.75     3534.    1132.    1132.    19.44
+                                                                     4.88     6.75

     HYDROGRAPH AT
+                 29A    3452.   6.08      406.     123.     123.     1.76

     2 COMBINED AT
+                29A2   11789.   6.75     3917.    1255.    1255.    21.20

     ROUTED TO
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+                29.1A   11612.  6.83    3899.   1250.   1250.   21.20
+                                                                5.00    6.83

  HYDROGRAPH AT
+                29.1    2758.   6.08    289.    88.     88.     1.39

  2 COMBINED AT
+                29.1B   11948.  6.75    4170.   1338.   1338.   22.59

  HYDROGRAPH AT
+                32A2    2056.   6.67    669.    216.    216.    .00

  ROUTED TO
+                CNC6    2048.   6.67    667.    215.    215.    .00
+                                                                3.55    6.67

  HYDROGRAPH AT
+                28.2    441.    6.08    49.     15.     15.     .00

  2 COMBINED AT
+                CNC7    2107.   6.67    712.    230.    230.    .00

  ROUTED TO
+                CNC8    2065.   6.75    706.    229.    229.    .00
+                                                                2.79    6.75

  HYDROGRAPH AT
+                CN4     1271.   6.08    139.    42.     42.     .55

  2 COMBINED AT
+                CNC9    2230.   6.75    840.    271.    271.    .55

  HYDROGRAPH AT
+                33A     2280.   6.92    933.    301.    301.    .93

  HYDROGRAPH AT
+                33.1A   2829.   6.17    1098.   354.    354.    1.64

  HYDROGRAPH AT
+                8B1.4   241.    6.33    60.     19.     19.     .00

  HYDROGRAPH AT
+                8B2     424.    6.17    103.    33.     33.     .23

  HYDROGRAPH AT
+                SUB9B   1029.   6.17    299.    94.     94.     1.10

  HYDROGRAPH AT
+                SUB10B  1528.   6.50    592.    187.    187.    2.54

  HYDROGRAPH AT
+                10.1B   1789.   6.58    765.    244.    244.    3.44

  HYDROGRAPH AT
+                12R5    408.    6.42    106.    33.     33.     .00

  HYDROGRAPH AT
+                13R     1762.   6.08    363.    113.    113.    1.07

  HYDROGRAPH AT
+                SUB14   2169.   6.42    699.    218.    218.    2.46

  HYDROGRAPH AT
+                14.1    2316.   6.58    836.    262.    262.    3.07
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4 COMBINED AT
+                2IN   18247.  6.75     6868.     2197.     2197.    30.74

ROUTED TO
+                DIKE2    0.   .08      0.        0.        0.     30.74
+                                                                   1539.14    24.00
```

SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION 53R

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1600.00	1625.00	1626.00
STORAGE	0.	1287.	1355.
OUTFLOW	0.	2438.	2500.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1620.03	.00	961.	2127.	.00	8.17	.00

SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION 38R-1

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1642.00	1657.00	1658.00
STORAGE	0.	317.	352.
OUTFLOW	0.	434.	450.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	MAXIMUM OVER TOP HOURS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1652.33	.00	165.	344.	.00	8.17	.00	

SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION 38R-2

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1600.00	1609.00	1610.00
STORAGE	0.	41.	51.
OUTFLOW	0.	490.	530.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1610.62	.62	57.	695.	.92	6.25	.00

SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION DIKE3

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1504.00	1541.00	1542.00
STORAGE	0.	6032.	6484.
OUTFLOW	0.	0.	290.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1532.45	.00	2836.	0.	.00	.00	.00

SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION DIKE2

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1514.00	1550.00	1550.20
STORAGE	0.	11834.	12000.
OUTFLOW	0.	0.	26.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	MAXIMUM OVER TOP HOURS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1539.14	.00	4357.	0.	.00	.00	.00	

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

FILE: MP8.24I

(100-Year, 24-Hour, SCS Type IIA Storm)

This model includes the Pima Road channel, the Rawhide Wash channel, the Scottsdale Road channel, the Deer Valley Road channels, the Core North system, the Core South system, and reservoir routing operations for CAP Dikes 2 and 3. Low-flow culvert diverts are activated. All of the Reata Pass flows are diverted to CAP Dike 4.

Same comment as Previous one

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

  1       ID      UPPER INDIAN BEND WASH REGIONAL FLOOD CONTROL & DRAINAGE PLAN
  2       ID
  3       ID
  4       ID      MODEL MP8.24I -- SUB-BASIN SERIES 7B TO 53.1
  5       ID
  6       ID      THIS IS AN INTEGRATED MASTER PLAN MODEL WITH A NORTH-SOUTH INTERCEPTOR
  7       ID      CHANNEL IN-PLACE ALONG PIMA ROAD FROM POINT 3A TO 3K TO 3L.
  8       ID      ALL CORE NORTH-CORE SOUTH CHANNELS & DETENTION BASINS ARE IN-PLACE.
  9       ID      THE RAWHIDE WASH CHANNEL IS IN-PLACE ALONG ALIGNMENT 4A-4B-4D.
 10       ID      A NORTH-SOUTH INTERCEPTOR CHANNEL IS IN-PLACE ALONG SCOTTSDALE ROAD FROM
 11       ID      POINT 4C TO 4B.
 12       ID
 13       ID      FUTURE CONDITION LAND-USE
 14       ID
 15       ID      LOW-FLOW CULVERT DIVERSIONS ARE ACTIVATED
 16       ID
 17       ID      DET BASIN 53R HAS BEEN MODIFIED TO REFLECT 8/10/90 CHANGES BY
 18       ID      STANLEY CONSULTANTS & R. WARD
 19       ID
 20       ID      CN5 & 33A HAVE BEEN MODIFIED TO REFLECT DRAINAGE SPLIT ON MARLEY PARCEL
 21       ID
 22       ID      100% OF REATA PASS FAN IS DIVERTED SOUTH TO CAP DIKE 4.
 23       ID
 24       ID      RESERVOIR ROUTING OPERATIONS ARE IN-PLACE FOR CAP DIKES 2 & 3.
 25       ID
 26       ID      THIS MODEL REFLECTS ALL D.A. ADJUSTMENTS MADE TO MODEL F3.24I AND FLOW
 27       ID      DIVERSIONS NEAR RAWHIDE WASH APEX & PINNACLE PEAK.
 28       ID      THE TPC GOLF COURSE AND ADJACENT RESIDENTIAL AREAS HAVE BEEN ADDED TO
 29       ID      THE CORE SOUTH AREA.
 30       ID
 31       ID      100-YR, 24-HR STORM, USING SCS TYPE IIA RAINFALL DISTRIBUTION
 32       ID      RAINFALL FROM NOAA ATLAS, USING 25 SQ MI AREAL REDUCTION FACTOR (.968)
 33       ID
 34       ID      FUTURE LAND-USE DENSITIES FROM OCT 1987 GENERAL PLAN, BRW PLANS, AND
 35       ID      THE TOMTO FOOTHILLS PLAN,   ALL SCOTTSDALE RESIDENTIAL AREAS HAVE THE
 36       ID      PERCENT OF IMPERVIOUS COVER ADJUSTED FOR NAOS REQUIREMENTS.
         *DIAGRAM
 37       IT      5 28APR90      0    300
 38       IO      5      0
 39       IN     30 28APR90      0

 40       KK     30R    SUB
 41       KM        RUNOFF FROM SUB-BASIN 30R
 42       BA  1.3105
 43       PB   4.25
 44       PC     0   .005   .009   .010   .013   .019   .021   .028   .032   .044
 45       PC  .057   .100   .660   .745   .776   .800   .816   .830   .840   .850
 46       PC  .861   .868   .878   .884   .891   .900   .905   .912   .919   .923
 47       PC  .930   .934   .939   .944   .950   .958   .961   .963   .969   .971
 48       PC  .974   .979   .981   .985   .989   .991   .993   .996  1.000
 49       LS          82    6.6
 50       UK    110  .0408    .20    100
 51       RK  10640  .0371    .045          TRAP     50    100
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  52      KK   30R1     DIV
  53      KM       DIVERT LOW-FLOWS TO EXISTING WASHS WEST OF PIMA ROAD ( SUB 31B)
  54      DT   30R2
  55      DI     0    679      1000
  56      DQ     0    323       400

  57      KK   31.1      CP
  58      KM       ROUTE NON-DIVERTED FLOW DOWN PIMA ROAD CHANNEL TO THE BOTTOM OF SUB 31A
  59      RS     1   FLOW      -1
  60      RC  .035   .035    .035   5600  .0194
  61      RX     0     8       9     21     61     73     74     82
  62      RY    10     6       6      0      0      6      6     10

  63      KK   31A     SUB
  64      KM       RUNOFF FROM SUB 31A
  65      BA  .4132
  66      LS           70    15.0
  67      UK   102  .0213    .10    100
  68      RK  2500  .0213    .045   .042   TRAP     8     2
  69      RK  5600  .0194    .035          TRAP    40     2

  70      KK   34R     SUB
  71      KM       RUNOFF FROM SUB 34R
  72      BA  .6421
  73      LS           77     9.9
  74      UK   110  .0408    .20    100
  75      RK  6800  .0644    .045          TRAP    50   100

  76      KK   31.3      CP
  77      KM       ROUTE SUB 34R TO CP 31.3
  78      RK  4500  .0243    .045          TRAP    15    30

  79      KK   31.2      CP
  80      KM       COMBINE SUB 31A, CP 31.1, & CP 31.3
  81      HC     3

  82      KK   31A1     DIV
  83      KM       DIVERT LOW-FLOWS TO EXISTING WASHS WEST OF PIMA ROAD (SUB 31B)
  84      DT   31A2
  85      DI     0   2840    4000
  86      DQ     0   1000    1200

  87      KK   36.2      CP
  88      KM       ROUTE NON-DIVERTED FLOW DOWN PIMA ROAD CHANNEL TO THE BOTTOM OF SUB 36L1
  89      RS     1   FLOW      -1
  90      RC  .035   .035    .035   3600  .0194
  91      RX     0     8       9     21     71     83     84     92
  92      RY    10     6       6      0      0      6      6     10
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  93      KK   35N    SUB
  94      KM      RUNOFF FROM SUB-BASIN 35N
  95      KM      THIS BASIN DRAINS TO A CBC AT THE EAST SIDE OF DESERT HIGHLANDS
  96      BA  .4068
  97      LS          82   31.8
  98      UK   265  .0381    .20    100
  99      RK  5200  .0269   .045          TRAP     25      4

 100      KK   35N2    DIV
 101      KM      DIVERT FLOW THROUGH BLOCK WALL OPENINGS AT EAST SIDE OF DESERT HIGHLANDS
 102      DT   35N1
 103      DI     0    100   1000
 104      DQ     0     40    400

 105      KK   35L1     CP
 106      KM      ROUTE DIV 35N2 TO CP 35L1
 107      RK  7500  .0367   .045          TRAP     50      5

 108      KK    35L    SUB
 109      KM      RUNOFF FROM SUB 35L
 110      BA  .6521
 111      LS          78   12.7
 112      UK   265  .0381    .20    100
 113      RK  9400  .0463   .045          TRAP     50    100

 114      KK   35L2     CP
 115      KM      COMBINE SUB 35L & CP 35L1
 116      HC     2

 117      KK   36L1    SUB
 118      KM      RUNOFF FROM SUB 36L1 & ROUTE CP 35L2
 119      BA  .4125
 120      LS          73    7.2
 121      UK   116  .0213    .10    100
 122      RK  4350  .0269   .045          TRAP     50    130    YES

 123      KK   36.3     CP
 124      KM      ROUTE SUB 36L1 TO CP 36.3
 125      RS     1   FLOW     -1
 126      RC  .035   .035   .035   2000  .0194
 127      RX     0     8     9     21    71    83    84    92
 128      RY    10     6     6      0     0     6     6    10

 129      KK   36.4     CP
 130      KM      COMBINE CP 36.2 & CP 36.3
 131      HC     2

 132      KK   36.5    DIV
 133      KM      DIVERT LOW-FLOWS TO EXISTING WASHS WEST OF PIMA ROAD (SUB 36L2)
 134      DT   36.6
 135      DI     0   4544   6000
 136      DQ     0    647    800
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  137     KK   36.7     CP
  138     KM       ROUTE NON-DIVERTED FLOW DOWN PIMA ROAD CHANNEL TO BOUNDARY OF SUB 36R1
  139     RS     1   FLOW     -1
  140     RC  .035   .035   .035   1850  .0194
  141     RX     0     8     9     21    71    83    84    92
  142     RY    10     6     6      0     0     6     6    10

  143     KK   35N1    RET
  144     KM       RETRIEVE DIVERTED FLOW FROM SUB 35N
  145     DR   35N1

  146     KK    35R    SUB
  147     KM       RUNOFF FROM SUB 35R & ROUTE RET 35N1
  148     BA  .4455
  149     LS          77   10.4
  150     UK   265  .0381   .20   100
  151     RK  7700  .0357  .045         TRAP    50   100   YES

  152     KK   36R1    SUB
  153     KM       RUNOFF FROM SUB 36R1 & ROUTE SUB 35R
  154     BA  .6736
  155     LS          72   19.5
  156     UK   116  .0213   .10   100
  157     RK  6500  .0331  .045         TRAP    50   130   YES

  158     KK   36.8     CP
  159     KM       COMBINE SUB 36R1 & CP 36.7
  160     KM       D.A. FOR SUB 36R1 HAS BEEN REDUCED TO REFLECT THE PIMA ROAD CHANNEL
  161     HC     2

  162     KK   36.9    DIV
  163     KM       DIVERT LOW-FLOWS TO EXISTING WASHS WEST OF PIMA ROAD (SUB 37A)
  164     DT  36.10
  165     DI     0   5581   6500
  166     DQ     0    441    500

  167     KK   37.1     CP
  168     KM       ROUTE NON-DIVERTED FLOW DOWN PIMA ROAD CHANNEL TO PINNACLE PEAK ROAD
  169     KM       THIS LOCATION TIES INTO THE CORE NORTH, PIMA ROAD CHANNEL.
  170     RS     1   FLOW     -1
  171     RC  .035   .035   .035   3950  .0194
  172     RX     0     8     9     21    71    83    84    92
  173     RY    10     6     6      0     0     6     6    10

  174     KK    37B    SUB
  175     KM       RUNOFF FROM SUB 37B
  176     BA  .1148
  177     LS          73   15.4
  178     UK    61  .0213   .10   100
  179     RK  1300  .0237  .045         TRAP    25     3
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  180     KK   37.2     CP
  181     KM       ROUTE SUB 37B DOWN PIMA ROAD CHANNEL TO PINNACLE PEAK ROAD
  182     RS     1   FLOW     -1
  183     RC   .035   .035   .035   1900  .0194
  184     RX     0     8     9     21    71    83    84    92
  185     RY    10     6     6     0     0     6     6    10

  186     KK   37.3     CP
  187     KM       COMBINE CP 37.1 & CP 37.2
  188     HC     2

  189     KK   37.4    DIV
  190     KM       DIVERT LOW-FLOWS TO EXISTING WASHS WEST OF PIMA ROAD (SUB37A)
  191     DT   37.5
  192     DI     0   5533   6500
  193     DQ     0    941    975

  194     KK   52.1     CP
  195     KM       ROUTE NON-DIVERTED FLOW DOWN CORE NORTH, PIMA ROAD CHANNEL
  196     RS     1   FLOW     -1
  197     RC   .035   .035   .035   4100  .0223
  198     RX     0     8     9     21    91   103   104   112
  199     RY    10     6     6     0     0     6     6    10
        *    ******************************************************************
        *
        *          INSERT SUB-BASINS 39 TO 53
        *
        *    ******************************************************************

  200     KK   SUB39
  201     KM       RUNOFF FROM SUB-BASIN 39
  202     BA  1.9302
  203     LS          85   23.4
  204     UK    330  .0433    .20    100
  205     RK  11240  .0253    .045         TRAP    30     3

  206     KK   SUB40
  207     KM       RUNOFF FROM SUB-BASIN 40
  208     BA   .5844
  209     LS          83    9.9
  210     UK    160  .0627    .20    100
  211     RK   7000  .0350    .045         TRAP    20     3

  212     KK   CP41
  213     KM       COMBINE HYDROGRAPHS SUB39 & SUB40
  214     HC     2

  215     KK   SUB41
  216     KM       RUNOFF FROM SUB-BASIN 41 & ROUTE CP 41
  217     BA   .7911
  218     LS          74   10.1
  219     UK    280  .2386    .20    100
  220     RK   9400  .0282    .045         TRAP    50     3    YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

221       KK  SUB42
222       KM      RUNOFF FROM SUB-BASIN 42
223       BA  .5844
224       LS          78   23.3
225       UK   280  .2386   .20    100
226       RK  8750  .0573   .045         TRAP    20     3

227       KK  SUB43
228       KM      RUNOFF FROM SUB-BASIN 43
229       BA 1.0665
230       LS          85   10.5
231       UK   260  .0515   .20    100
232       RK  7400  .0255   .045         TRAP    25     3

233       KK  SUB44
234       KM      RUNOFF FROM SUB-BASIN 44
235       BA  .8389
236       LS          85    8.1
237       UK   260  .0515   .20    100
238       RK  9840  .0622   .045         TRAP    25     3

239       KK   CP45
240       KM      COMBINE HYDROGRAPHS SUB43 & SUB44
241       HC     2

242       KK  SUB45
243       KM      RUNOFF FROM SUB-BASIN 45 & ROUTE CP 45
244       BA  .2037
245       LS          81   14.5
246       UK   125  .1166   .20    100
247       RK  3600  .0366   .045         TRAP    30     3    YES

248       KK SUB45A
249       KM      RUNOFF FROM SUB 45A
250       BA  .1720
251       LS          86    6.9
252       UK   275  .2200   .20    100
253       RK  5400  .0411   .045         TRAP    15     3

254       KK  SUB46
255       KM      RUNOFF FROM SUB-BASIN 46
256       BA  .9268
257       LS          86    3.7
258       UK   265  .4958   .20    100
259       RK  3300  .2271   .045   .111  TRAP    10     3
260       RK  7100  .0535   .045         TRAP    25     3

261       KK   CP47
262       KM      COMBINE HYDROGRAPHS SUB45, SUB45A, & SUB46
263       HC     3
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  264     KK  SUB47
  265     KM      RUNOFF FROM SUB-BASIN 47 & ROUTE CP 47
  266     BA  .3757
  267     LS          77    8.6
  268     UK   375  .1000    .20    100
  269     RK  9600  .0217   .045          TRAP     50      3    YES

  270     KK   CP48
  271     KM      COMBINE HYDROGRAPHS SUB41, SUB42, & SUB47
  272     HC     3

  273     KK  SUB48
  274     KM      RUNOFF FROM SUB-BASIN 48 & ROUTE CP 48
  275     BA  .0438
  276     LS          73    6.9
  277     UK   150  .0733    .20    100
  278     RK  1300  .0338   .045          TRAP     75      3    YES

  279     KK  SUB50
  280     KM      RUNOFF FROM SUB-BASIN 50
  281     BA  .3580
  282     LS          84    2.8
  283     UK   300  .3555    .20    100
  284     RK   730  .1506   .045   .036   TRAP     10      3
  285     RK  6400  .0453   .045          TRAP     25      3

  286     KK   CP51
  287     KM      COMBINE HYDROGRAPHS SUB 48 & SUB 50
  288     HC     2

  289     KK  2004    DIV
  290     KM      DIVERT FLOW TO SUB 2005
  291     KM      THIS DIVERT OCCURS AT A BRAIDED CHANNEL BIFURCATION LOCATED 1000 FEET
  292     KM      SOUTH OF THE EAST END OF PINNACLE PEAK ROAD.
  293     KM      THIS IS AN ACTIVE ALLUVIAL FAN APEX.
  294     DT  2003
  295     DI     0  15000
  296     DQ     0  15000

  297     KK  SUB49
  298     KM      RUNOFF FROM SUB-BASIN 49
  299     BA  .3528
  300     LS          79    6.9
  301     UK   135  .0758    .20    100
  302     RK  5400  .0370   .045          TRAP     30      3

  303     KK  49.1     CP
  304     KM      COMBINE SUB 49 & NON-DIVERTED FLOW FROM DIV 2004
  305     HC     2
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 306      KK  SUB51
 307      KM       RUNOFF FROM SUB-BASIN 51 & ROUTE CP 49.1
 308      BA  1.0201
 309      LS           72    12.8
 310      UK     94  .0213    .10    100
 311      RK   6400  .0329   .045          TRAP   1500      2    YES

 312      KK    52A     SUB
 313      KM       RUNOFF FROM SUB-BASIN 52A & ROUTE SUB 51
 314      BA  1.0474
 315      LS           71    17.7
 316      UK     76  .0213    .10    100
 317      RK   5800  .0300   .045          TRAP   2500      2    YES

 318      KK   52.2      CP
 319      KM       COMBINE SUB 52A & CP 52.1
 320      HC      2

 321      KK   52A1      CP
 322      KM       ROUTE RUNOFF FROM CP 52.2 DOWN PIMA ROAD CHANNEL TO COMBINE WITH
 323      KM       RUNOFF FROM SUB 53A.
 324      RS      1   FLOW     -1
 325      RC   .035   .035   .035   5300  .0150
 326      RX      0      8      9     21     91    103    104    112
 327      RY     10      6      6      0      0      6      6     10

 328      KK    53A     SUB
 329      KM       RUNOFF FROM SUB-BASIN 53A
 330      BA   .3329
 331      LS           74      18
 332      UK     67  .0213    .10    100
 333      RK   3900  .0196   .045          TRAP     50     50

 334      KK   53A1      CP
 335      KM       COMBINE SUB 53A & CP 52A1
 336      HC      2

 337      KK  DB3.1      CP
 338      KM       ROUTE CP 53A1 TO DETENTION BASIN No.3
 339      RS      1   FLOW     -1
 340      RC   .035   .035   .035   2200  .0150
 341      RX      0      8      9     21     91    103    104    112
 342      RY     10      6      6      0      0      6      6     10

 343      KK    CN6     SUB
 344      KM       RUNOFF FROM SUB CN6 (REVISED: 5/1/90)
 345      BA  1.3659
 346      LS           74    40.3
 347      UK    100  .0150    .15    100
 348      RK   1400  .0100   .018  .1921   TRAP     30      5
 349      RK   9000  .0070   .040          TRAP    100     20
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  350     KK    DB3     CP
  351     KM       COMBINE CP DB3.1 & SUB CN6
  352     KM       THIS IS THE TOTAL INFLOW TO DETENTION BASIN No.3
  353     HC     2

  354     KK    53R     DAM
  355     KM       PERFORM RESERVOIR ROUTING OPERATION FOR DETENTION BASIN No.3
  356     KM       USE SV/SE DATA PROVIDED BY STANLEY & ASSC.  THIS DATA HAS BEEN EXTENDED
  357     KM       ABOVE ELEV. 1620 BY R. WARD.  SQ/SE DATA IS BASED ON 2-4x10 & 1-4x5
  358     KM       BOX CULVERTS OPERATING UNDER INLET CONTROL.  CULVERT INVERTS ARE AT
  359     KM       ELEV. 1600
  360     RS     1   STOR
  361     SQ     0    210    382    575    775    912   1175   1375   1550   1700
  362     SQ  1850   2000   2125   2250   2375   2500
  363     SE  1600   1602   1603   1604   1605   1606   1608   1610   1612   1614
  364     SE  1616   1618   1620   1622   1624   1626
  365     SV     0   1.80   9.80  28.40     59   99.9  148.8  201.5  255.0  309.2
  366     SV 364.3  420.2  476.9  534.4  592.6  711.6  833.8  959.2 1219.6 1354.6
  367     SE  1600   1601   1602   1603   1604   1605   1606   1607   1608   1609
  368     SE  1610   1611   1612   1613   1614   1616   1618   1620   1624   1626
  369     SS  1625    100    2.9    1.5
  370     ST  1626    100    2.9    1.5
        * ************************************************************************
        *          ROUTE OUTFLOW FROM DETENTION BASIN No. 3 TO CORE SOUTH CHANNELS
        *
        *          A "CS" SUFFIX HAS BEEN ADDED TO THE ORIGINAL, SLA CORE SOUTH
        *          SUB-BASIN NUMBERS TO DISTINGUISH THEM FROM OTHER, UPSTREAM
        *          SUB-BASINS WITH THE SAME NUMBER.
        * ************************************************************************

  371     KK    200     CP
  372     KM       USE DIVERT ROUTINE TO MODEL DUAL OUTLETS FROM DETENTION BASIN #3 IN
  373     KM       CORE NORTH. THE WESTERN OUTLET TO THE HAYDEN ROAD CHANNEL IS A WEIR
  374     KM       OUTLET. THE EASTERN OUTLET IS A CONCRETE BOX CULVERT. THIS OPERATION
  375     KM       DIVERTS FLOW TO THE EASTERN OUTLET, WHICH IS A DESIGNATED AS CP 201.
  376     KM       DIVERT RATIOS WERE CHANGED ON 8/10/90 TO REFLECT A SINGLE OUTLET
  377     KM       NEAR THE EAST END OF THE DETENTION BASIN, PER STANLEY & ASSOCIATES
  378     DT    53RD
  379     DI     0    669    715   1858   3157
  380     DQ     0    669    715   1858   3157

  381     KK    202     CP
  382     KM       ROUTE CP 200 SOUTH ALONG HAYDEN ROAD TO CP 202.
  383     RK   2100 0.0137  0.018          TRAP    100      1

  384     KK    14CS    SUB
  385     KM       RUNOFF FROM SUB 14
  386     BA  0.1090
  387     LS           75     90
  388     UK   1133 0.0135   0.10     100
  389     RK   2400 0.0065  0.018          TRAP      8      1
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  390     KK    203     CP
  391     KM       COMBINE CP 202 WITH SUB 14. THIS WILL BE THE TOTAL CHANNEL DISCHARGE
  392     KM       LEAVING THE INTERSECTION OF HAYDEN RD AND UNION HILLS RD.
  393     HC      2

  394     KK    204     CP
  395     KM       ROUTE CP 203 T0 CP 204
  396     RK   3550 0.0130  0.018          TRAP    100      1

  397     KK  15ACS     SUB
  398     KM       RUNOFF FROM SUB 15A
  399     BA 0.0996
  400     LS           75     90
  401     UK   2170 0.0133   0.10    100
  402     RK   3550 0.0130  0.018          TRAP    100      1

  403     KK  15BCS     SUB
  404     KM       RUNOFF FROM SUB 15B
  405     BA 0.0944
  406     LS           75     90
  407     UK   2700 0.0130   0.10    100
  408     RK   1590 0.0038  0.018          TRAP      8      1

  409     KK    205     CP
  410     KM       COMBINE SUB 15A WITH 15B. THIS IS THE TOTAL RUNOFF FROM SUB 15.
  411     HC      2

  412     KK    206     CP
  413     KM       COMBINE CP 204 WITH CP 205. THIS IS THE TOTAL RUNOFF AT THE
  414     KM       INTERSECTION OF HAYDEN ROAD AND BELL ROAD.
  415     HC      2

  416     KK    201     CP
  417     KM       RETRIEVE DIVERTED OUTFLOW FROM EAST END OF DETENTION BASIN IN SUB 53
  418     DR   53RD

  419     KK    207     CP
  420     KM       ROUTE CP 201 TO CP 207
  421     RK   3040 0.0141  0.018          TRAP     40      1

  422     KK  21ACS     SUB
  423     KM       RUNOFF FROM SUB 21A
  424     BA 0.1041
  425     LS           75     90
  426     UK   1800 0.0164   0.10    100
  427     RK   2300 0.0070  0.018          TRAP      8      1

  428     KK  21BCS     SUB
  429     KM       RUNOFF FROM SUB 21B
  430     BA 0.0762
  431     LS           75     90
  432     UK   1900 0.0184   0.10    100
  433     RK   2320 0.0151  0.018          TRAP      8      1
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

434       KK    208     CP
435       KM       COMBINE SUB 21A WITH 21B. THIS IS THE TOTAL RUNOFF FROM SUB 21.
436       KM       CORE SOUTH
437       HC      2

438       KK    209     CP
439       KM       ROUTE CP 208 TO CP 209
440       RK   1600 0.0119  0.018          TRAP     8     1

441       KK  17BCS     SUB
442       KM       RUNOFF FROM SUB 17B
443       BA 0.0299
444       LS            75     90
445       UK   1400 0.0157   0.10    100
446       RK   1000 0.0100  0.018          TRAP     8     1

447       KK    210     CP
448       KM       COMBINE SUB 17B WITH CP 209. THIS IS THE PEAK DISCHARGE THROUGH THE
449       KM       CHANNEL ALONG THE SOUTH SIDE OF SUB 17.
450       HC      2

451       KK  17ACS     SUB
452       KM       RUNOFF FROM SUB 17A
453       BA 0.0423
454       LS            75     90
455       UK   1400 0.0157   0.10    100
456       RK   2150 0.0116  0.018          TRAP     8     1

457       KK    211     CP
458       KM       COMBINE SUB 17A WITH CP 210
459       HC      2

460       KK    212     CP
461       KM       ROUTE CP 211 TO CP 212
462       RK   1640 0.0052  0.018          TRAP    10     1

463       KK  16BCS     SUB
464       KM       RUNOFF FROM SUB 16B
465       BA 0.0722
466       LS            75     90
467       UK   1760 0.0159   0.10    100
468       RK   1640 0.0052  0.018          TRAP    10     1

469       KK    213     CP
470       KM       COMBINE SUB 16B WITH CP 212. THIS IS THE PEAK DISCHARGE THROUGH THE
471       KM       CHANNEL ALONG THE SOUTH SIDE OF SUB 16.
472       HC      2

473       KK  16ACS     SUB
474       KM       RUNOFF FROM SUB 16A
475       BA 0.0331
476       LS            75     90
477       UK   1300 0.0146   0.10    100
478       RK   2000 0.0110  0.018          TRAP     8     1
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

479       KK    214     CP
480       KM       COMBINE SUB 16A WITH CP 213, AND CP 207
481       HC      3

482       KK    215     CP
483       KM       ROUTE CP 214 TO CP 215 (BELL ROAD)
484       RK   1600  0.0131   0.018          TRAP     40      1

485       KK   19CS     SUB
486       KM       RUNOFF FROM SUB 19
487       BA  0.0225
488       LS            75      90
489       UK    680  0.0124    0.10     100
490       RK    920  0.0050   0.018          TRAP      8      1

491       KK    216     CP
492       KM       ROUTE SUB 19 TO CP 216
493       RK    980  0.0122   0.018          TRAP      8      1

494       KK    217     CP
495       KM       ROUTE CP 216 TO CP 217
496       RK    950  0.0042   0.018          TRAP      8      1

497       KK   18CS     SUB
498       KM       RUNOFF FROM SUB 18
499       BA  0.0932
500       LS            75      90
501       UK   1350  0.0137    0.10     100
502       RK   2040  0.0029   0.018          TRAP      8      1

503       KK    218     CP
504       KM       COMBINE CP 217 WITH SUB 18. THIS IS THE PEAK DISCHARGE THROUGH THE
505       KM       CHANNEL ALONG THE SOUTH SIDE OF SUB 18.
506       HC      2

507       KK    219     CP
508       KM       COMBINE CP 215 WITH CP 218. THIS IS THE PEAK DISCHARGE PASSING BELL
509       KM       ROAD AT THIS LOCATION.
510       HC      2

511       KK   20ACS     SUB
512       KM       RUNOFF FROM SUB 20A. THIS IS THE PEAK DISCHARGE THROUGH THE CHANNEL
513       KM       ALONG THE WEST SIDE OF SUB 20.
514       BA  0.0264
515       LS            75      90
516       UK   1300  0.0154    0.10     100
517       RK   1870  0.0112   0.018          TRAP      8      1

518       KK    220     CP
519       KM       ROUTE SUB 20A TO CP 220
520       RK    880  0.0011   0.018          TRAP      8      1
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

521       KK  20BCS     SUB
522       KM       RUNOFF FROM SUB 20B
523       BA  0.0744
524       LS           75      90
525       UK   1650  0.0158    0.10     100
526       RK    880  0.0011   0.018  0.0372    TRAP      8       1

527       KK    221      CP
528       KM       COMBINE SUB 20B WITH CP 220. THIS IS THE PEAK DISCHARGE PASSING BELL
529       KM       ROAD AT THIS LOCATION.
530       HC      2

531       KK   TPC2     SUB
532       KM       RUNOFF FROM THE TPC GOLF COURSE BETWEEN HAYDEN & PIMA ROADS.
533       KM       THE CURVE NUMBER HAS BEEN INCREASED FROM 74 TO 88 TO REFLECT AMC 3 THAT
534       KM       WILL RESULT FROM CONSTANT WATERING OF THE GOLF COURSE.
535       BA  .4138
536       LS           88
537       UK    150  .0100    .15     100
538       RK   1400  .0150   .035          TRAP     100      20

539       KK    222      CP
540       KM       COMBINE CP 206, CP 219, CP 221, & SUB TPC2
541       KM       THIS IS THE TOTAL INFLOW TO CAP DIKE No.3 FROM THE CORE SOUTH SYSTEM
542       KM       LOCATED BETWEEN HAYDEN & PIMA ROADS.
543       HC      4
          *          *************                          ****************
          *          ************* END OF CORE SOUTH CHANNEL SYSTEM  ****************
          *          *************                          ****************

544       KK   30R2     RET
545       KM       RETRIEVE LOW-FLOW DIVERTS FROM SUB 30R
546       DR   30R2

547       KK   31A2     RET
548       KM       RETRIEVE LOW-FLOW DIVERTS FROM SUB 31A
549       DR   31A2

550       KK   31B1      CP
551       KM       COMBINE LOW-FLOW DIVERTS, RET 30R2 & RET 31A2
552       HC      2

553       KK    31B     SUB
554       KM       RUNOFF FROM SUB-BASIN 31B & ROUTE CP 31B1
555       BA  .9898
556       LS           74    13.8
557       UK    102  .0213    .10     100
558       RK   8800  .0228   .045          TRAP      50     130     YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

559       KK   36.6     RET
560       KM        RETRIEVE LOW-FLOW DIVERT FROM SUB 36L1
561       DR   36.6

562       KK   36L2     SUB
563       KM        RUNOFF FROM SUB 36L2 & ROUTE LOW-FLOW DIVERTS (RET 36.6)
564       BA   .1736
565       LS            74    18.4
566       UK    116   .0213    .10     100
567       RK   3000   .0269    .045          TRAP     50     130     YES

568       KK   32.1      CP
569       KM        COMBINE SUB 31B & SUB 36L2
570       HC      2

571       KK    32A     SUB
572       KM        RUNOFF FROM SUB-BASIN 32A & ROUTE CP 32.1
573       BA   .8745
574       LS            74    20.0
575       UK     67   .0213    .10     100
576       RK   8000   .0214    .045          TRAP     50     130     YES

577       KK   32A1     DIV
578       KM        DIVERT FLOW AT HAYDEN ROAD INTXN WITH DEER VALLEY ROAD
579       DT   32A2
580       DI      0     100   10000
581       DQ      0     100   10000

582       KK   CNC1      CP
583       KM        ROUTE DIV 32A1 TO CP CNC1
584       RS      1    FLOW     -1
585       RC   .035    .035    .035    1950   .0050
586       RX      0       8       9      21      71      83      84      92
587       RY     10       6       6       0       0       6       6      10

588       KK   36.10     RET
589       KM        RETRIEVE LOW-FLOW DIVERT FROM SUB 36R1
590       DR   36.10

591       KK   37.5     RET
592       KM        RETRIEVE LOW-FLOW DIVERT FROM SUB 37B
593       DR   37.5

594       KK   37A1      CP
595       KM        COMBINE LOW-FLOW DIVERTS, RET 36.10 & RET 37.5
596       HC      2

597       KK    37A     SUB
598       KM        RUNOFF FROM SUB-BASIN 37A & ROUTE LOW-FLOW DIVERTS (CP 37A1)
599       BA   .6765
600       LS            74    24.8
601       UK     61   .0213    .10     100
602       RK   4800   .0237    .045          TRAP     50     130     YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

603       KK   CNC2      CP
604       KM        ROUTE SUB 37A TO CP CNC2
605       RS     1    FLOW     -1
606       RC   .035    .035    .035    3000   .0125
607       RX     0      8       9      21     71     83     84     92
608       RY    10      6       6       0      0      6      6     10

609       KK   CNC3      CP
610       KM        COMBINE CP CNC1 & CP CNC2
611       HC     2

612       KK   CNC4      CP
613       KM        ROUTE CP CNC3 THROUGH GOLF COURSE TO CP CNC4
614       KM        BW=100',  Z=20:1
615       RS     1    FLOW     -1
616       RC   .035    .035    .035    4200   .0070
617       RX     0     20      21     201    301    481    482    502
618       RY    10      9       9       0      0      9      9     10

619       KK    CN1     SUB
620       KM        RUNOFF FROM SUB CN1
621       KM        COLLECTOR CHANNEL HAS BEEN ADDED TO SIMULATE STREET FLOW
622       KM        THIS SAME COLLECTOR CHANNEL IS USED FOR ALL CORE NORTH SUB-BASINS
623       BA   .7361
624       LS            74    22.8
625       UK    100   .0150    .15    100
626       RK   1400   .0100    .018   .147   TRAP    30     5
627       RK   6000   .0070    .040          TRAP   100    20

628       KK   CNC5      CP
629       KM        COMBINE CP CNC4 & SUB CN1
630       HC     2

631       KK  DB1.1      CP
632       KM        ROUTE CP CNC5 TO DETENTION BASIN No.1 LOCATED AT THE INTXN OF HAYDEN
633       KM        ROAD & THOMPSON PEAK PARKWAY.
634       RS     1    FLOW     -1
635       RC   .035    .035    .035    1200   .0150
636       RX     0      8       9      21     71     83     84     92
637       RY    10      6       6       0      0      6      6     10

638       KK    CN2     SUB
639       KM        RUNOFF FROM SUB CN2 (REVISED: 5/1/90)
640       BA   .1507
641       LS            74    28.1
642       UK    100   .0150    .15    100
643       RK   1000   .0100    .018   .111   TRAP    30     5
644       RK   5000   .0150    .045          TRAP    25     2
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

645       KK    CN3     SUB
646       KM        RUNOFF FROM SUB CN3
647       BA   .3924
648       LS            74    47.7
649       UK    100  .0150    .15    100
650       RK   1400  .0100   .018   .078   TRAP     30      5
651       RK   3500  .0100   .035          TRAP     25      2

652       KK    DB1     CP
653       KM        COMBINE CP DB1.1, SUB CN2, & SUB CN3
654       KM        THIS IS THE TOTAL FLOW INTO DETENTION BASIN No.1
655       HC      3

656       KK   38R-1     DAM
657       KM        PERFORM RESERVOIR ROUTING OPERATION FOR DETENTION BASIN No.1
658       KM        USE RESERVOIR DATA PROVIDED BY CARTER & ASSC.
659       RS      1    STOR
660       SQ      0     23     64    115    156    197    231    262    289    313
661       SQ    337    358    378    398    416    434    450
662       SE   1642   1643   1644   1645   1646   1647   1648   1649   1650   1651
663       SE   1652   1653   1654   1655   1656   1657   1658
664       SV      0    .77    4.3   11.1   23.1   40.1   60.4     81    103    127
665       SV  155.5    184    213    248    280    317    352
666       SE   1642   1643   1644   1645   1646   1647   1648   1649   1650   1651
667       SE   1652   1653   1654   1655   1656   1657   1658
668       SS   1657
669       ST   1658    100    2.9    1.5

670       KK   DB2.1     CP
671       KM        ROUTE OUTFLOW FROM DETENTION BASIN No.1 TO DETENTION BASIN No.2
672       RS      1    FLOW     -1
673       RC   .035    .035   .035   2500  .0150
674       RX      0      8      9     21     71     83     84     92
675       RY     10      6      6      0      0      6      6     10

676       KK    CN5     SUB
677       KM        RUNOFF FROM SUB CN5
678       KM        D.A. MODIFIED TO REFLECT SPLIT IN CORRIGAN-MARLEY PARCEL
679       BA   .6980
680       LS            74    72.8
681       UK    100  .0150    .15    100
682       RK   1400  .0100   .018   .119   TRAP     30      5
683       RK   2500  .0150   .035          TRAP     50      2

684       KK    DB2     CP
685       KM        COMBINE CP DB2.1 & SUB CN5
686       KM        THIS IS THE TOTAL INFLOW TO DETENTION BASIN No.2
687       HC      2
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

688       KK  38R-2    DAM
689       KM       PERFORM RESERVOIR ROUTING OPERATION FOR DETENTION BASIN No.2
690       KM       USE RESERVOIR DATA PROVIDED BY CARTER & ASSC.
691       RS     1   STOR
692       SQ     0    30    85   146   220   289   338   395   445   490
693       SQ   530
694       SE  1600  1601  1602  1603  1604  1605  1606  1607  1608  1609
695       SE  1610
696       SV     0   .12   1.0   3.2   6.9  11.8  17.7  24.7  32.6  41.4
697       SV  51.1
698       SE  1600  1601  1602  1603  1604  1605  1606  1607  1608  1609
699       SE  1610
700       SS  1609
701       ST  1610   100   2.9   1.5
          *   ***********************************************************************
          *          ROUTE OUTFLOW FROM 38R-2 THROUGH CORE SOUTH CHANNEL SYSTEM.
          *
          *          A "CS" SUFFIX HAS BEEN ADDED TO THE ORIGINAL, SLA CORE SOUTH
          *          SUB-BASIN NUMBERS TO DISTINGUISH THEM FROM OTHER, UPSTREAM
          *          SUB-BASINS WITH THE SAME NUMBER.
          *   ***********************************************************************

702       KK   108    CP
703       KM       ROUTE OUTFLOW FROM DETENTION BASIN No.2 TO CP 108
704       RK  1600 0.0144  0.018          TRAP    50     1

705       KK   60CS   SUB
706       KM       RUNOFF FROM SUB 60
707       BA  .0386
708       LS          75    90
709       UK   830 0.0139   0.10   100
710       RK  1300 0.0035  0.018          TRAP     8     1

711       KK   109    CP
712       KM       ROUTE SUB 60CS TO CP 109
713       RK  1640 0.0055  0.018          TRAP     8     1

714       KK 4A-BCS   SUB
715       KM       RUNOFF FROM SUB 4A AND 4B
716       BA 0.0590
717       LS          75    90
718       UK  1053 0.0138   0.10   100
719       RK  1640 0.0055  0.018          TRAP     8     1

720       KK   110    CP
721       KM       COMBINE CP 109 AND SUB 4A-4B.
722       KM       THIS IS THE TOTAL CONTRIBUTION FROM THE CHANNEL ALONG THE SOUTH
723       KM       SIDE OF SUB 4A-4B.
724       HC     2
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  725     KK    111      CP
  726     KM        COMBINE CP 108 AND CP 110
  727     HC      2

  728     KK    112      CP
  729     KM        ROUTE CP 111 TO CP 112
  730     RK   1920  0.0115   0.018          TRAP     50      1

  731     KK  12ACS     SUB
  732     KM        RUNOFF FROM SUB 12A
  733     BA  0.0445
  734     LS            75      90
  735     UK    980  0.0143    0.10     100
  736     RK   1250  0.0028   0.018          TRAP      8      1

  737     KK    113      CP
  738     KM        ROUTE SUB 12A TO CP 113
  739     RK    690  0.0029   0.018          TRAP      8      1

  740     KK   11CS     SUB
  741     KM        RUNOFF FROM SUB 11
  742     BA  0.0396
  743     LS            75      90
  744     UK   1450  0.0148    0.10     100
  745     RK    690  0.0029   0.018          TRAP      8      1

  746     KK   113A      CP
  747     KM        COMBINE SUB 11CS WITH CP 113. THIS IS THE PEAK DISCHARGE THAT WILL
  748     KM        FLOW THROUGH THE CHANNEL ALONG THE SOUTH SIDE OF SUB 11 IN CORE SOUTH.
  749     HC      2

  750     KK    114      CP
  751     KM        ROUTE CP 113A TO CP 114
  752     RK    330  0.0029   0.018          TRAP      8      1

  753     KK    115      CP
  754     KM        COMBINE CP 112 WITH CP 114
  755     HC      2

  756     KK    116      CP
  757     KM        ROUTE CP 115 TO CP 116
  758     RK   1080  0.0106   0.018          TRAP     50      1

  759     KK  3A-BCS    SUB
  760     KM        RUNOFF FROM SUB 3A-3B
  761     BA  0.1676
  762     LS            75      90
  763     UK   2800  0.0129    0.10     100
  764     RK   1760  0.0114   0.018          TRAP     50      1
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

765       KK    118      CP
766       KM       COMBINE CP 116, AND SUB 3A-B
767       HC      2

768       KK    119      CP
769       KM       ROUTE CP 118 TO CP 119
770       RK   1150 0.0099  0.018          TRAP     50      1

771       KK   1BCS     SUB
772       KM       RUNOFF FROM SUB 1B
773       BA 0.0427
774       LS            75      90
775       UK    790 0.0149   0.10     100
776       RK    910 0.0099  0.018          TRAP     50      1

777       KK   119B      CP
778       KM       ROUTE SUB 1B TO CP 119B
779       RK    280 0.0099  0.018          TRAP     50      1

780       KK   119A      CP
781       KM       COMBINE CP 119 AND CP 119B
782       KM       THIS IS THE TERMINUS OF THE CHANNEL ALONG THE WEST SIDE OF PARCEL #1.
783       KM       WATER WILL ENTER THE CAP DETENTION BASIN AT THIS POINT.
784       HC      2

785       KK   1ACS     SUB
786       KM       RUNOFF FROM SUB 1A
787       KM       RUNOFF FROM THIS PARCEL WILL FLOW DIRECTLY SOUTH INTO THE CAP
788       KM       DETENTION BASIN.
789       BA 0.0073
790       LS            75      90
791       UK   1123 0.0129   0.10     100
792       RK      1 0.0010  0.018          TRAP      8      1

793       KK    2CS     SUB
794       KM       RUNOFF FROM SUB 2.
795       KM       RUNOFF FROM THIS SUB-BASIN WILL FLOW DIRECTLY TO THE SOUTH, BOTH
796       KM       THROUGH AND ALONG THE EAST SIDE OF SUB 1. NO CHANNEL IS PROVIDED
797       KM       FOR THIS SMALL BASIN SINCE IT WILL FLOW INTO THE CAP DETENTION BASIN.
798       BA 0.0105
799       LS            75      90
800       UK    830 0.0108   0.10     100
801       RK      1 0.0014  0.018          TRAP      8      1

802       KK 10ABCS     SUB
803       KM       RUNOFF FROM SUB 10A AND 10B
804       BA 0.1447
805       LS            75      90
806       UK   1660 0.0142   0.10     100
807       RK   1530 0.0026  0.018 0.0724   TRAP      8      1
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  808     KK    120      CP
  809     KM       ROUTE SUB 10A-B TO CP 120
  810     RK    860  0.0140   0.018          TRAP      8      1

  811     KK   13CS     SUB
  812     KM       RUNOFF FROM SUB 13
  813     BA  0.0204
  814     LS            75      90
  815     UK    650  0.0129    0.10     100
  816     RK    920  0.0022   0.018          TRAP      8      1

  817     KK    121      CP
  818     KM       ROUTE SUB 13 TO CP 121
  819     RK    850  0.0041   0.018          TRAP      8      1

  820     KK  12BCS     SUB
  821     KM       RUNOFF FROM SUB 12B
  822     BA  0.0157
  823     LS            75      90
  824     UK    645  0.0122    0.10     100
  825     RK    850  0.0041   0.018          TRAP      8      1

  826     KK    122      CP
  827     KM       COMBINE CP 121 AND SUB 12B
  828     KM       THIS IS THE PEAK DISCHARGE THROUGH THE CHANNEL ALONG THE SOUTH
  829     KM       BOUNDARY OF SUB 12B.
  830     HC      2

  831     KK    123      CP
  832     KM       COMBINE CP 120 AND CP 122
  833     HC      2

  834     KK    124      CP
  835     KM       ROUTE CP 123 TO CP 124.
  836     KM       THIS IS THE PEAK DISCHARGE (AT BELL ROAD) INTO THE CAP DETENTION BASIN
  837     KM       FROM THE CHANNEL LOCATED APPROXIMATELY 1/3 MILE WEST OF HAYDEN ROAD.
  838     RK   3000  0.0130   0.018          TRAP     10      1

  839     KK    125      CP
  840     KM       COMBINE CP 119A, SUB 1A, SUB 2, & CP 124
  841     HC      4

  842     KK    PR1     SUB
  843     KM       RUNOFF FROM RESIDENTIAL & COMMERCIAL AREAS NEAR PRINCESS RESORT.
  844     KM       THIS AREA IS LOCATED ALONG THE NORTH SIDE OF THE THE TPC GOLF COURSE,
  845     KM       BETWEEN SCOTTSDALE & HAYDEN ROADS.
  846     BA  .2878
  847     LS            74      40
  848     UK    150   .0100     .15     100
  849     RK   3000   .0150    .035          TRAP     50      2
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  850     KK   TPC1     SUB
  851     KM       RUNOFF FROM THE TPC GOLF COURSE BETWEEN SCOTTSDALE & HAYDEN ROADS.
  852     KM       THE CURVE NUMBER HAS BEEN INCREASED FROM 74 TO 88 TO REFLECT AMC 3 THAT
  853     KM       WILL RESULT FROM CONSTANT WATERING OF THE GOLF COURSE.
  854     BA  .3246
  855     LS          88
  856     UK   150  .0100    .15    100
  857     RK  1400  .0150    .035          TRAP    100     20

  858     KK   126     CP
  859     KM       COMBINE CP 125, SUB PR1, & TPC1
  860     KM       THIS IS THE TOTAL INFLOW TO CAP DIKE No.3 FROM THE CORE SOUTH SYSTEM
  861     KM       LOCATED BETWEEN SCOTTSDALE & HAYDEN ROADS.
  862     HC     3
        *    *************                          ************************
        *    ************* END OF CORE SOUTH CHANNEL SYSTEM ************************

  863     KK   3IN     CP
  864     KM       COMBINE CP 126 & CP 222
  865     KM       THIS IS THE TOTAL INFLOW TO CAP DIKE No.3
  866     HC     2

  867     KK  DIKE3     DAM
  868     KM       ROUTE CP 3IN THROUGH CAP DIKE NO.3
  869     RS     1   STOR
  870     SV     0     2     7    15    27    43    68   125   243   447
  871     SV   749  1130  1586  2112  2695  3328  4001  4757  5580  6484
  872     SE  1504  1506  1508  1510  1512  1514  1516  1518  1520  1522
  873     SE  1524  1526  1528  1530  1532  1534  1536  1538  1540  1542
  874     SS  1541   100   2.9   1.5
  875     ST  1542   100   2.9   1.5
        *    ******************                                  ***************
        *    ****************** BEGIN DRAINAGE AREA FOR CAP DIKE No.2
        *    ******************                                  ***************

  876     KK  SUB7B
  877     KM       RUNOFF FROM SUB-BASIN 7B
  878     BA  .5334
  879     PB  4.25
  880     PC     0  .005  .009  .010  .013  .019  .021  .028  .032  .044
  881     PC  .057  .100  .660  .745  .776  .800  .816  .830  .840  .850
  882     PC  .861  .868  .878  .884  .891  .900  .905  .912  .919  .923
  883     PC  .930  .934  .939  .944  .950  .958  .961  .963  .969  .971
  884     PC  .974  .979  .981  .985  .989  .991  .993  .996 1.000
  885     LS          78   8.2
  886     UK   255  .0262    .20    100
  887     RK 12200  .0197    .045          TRAP     40     20

  888     KK   11A     SUB
  889     KM       RUNOFF FROM SUB 11A
  890     BA  .3171
  891     LS          74   7.9
  892     UK   150  .0425    .20    100
  893     RK  6200  .0226    .045          TRAP     30     50
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

894       KK    8.1      CP
895       KM       COMBINE SUB7B & SUB 11A
896       HC      2

897       KK    8B1     SUB
898       KM       RUNOFF FROM SUB 8B1 & ROUTE CP 8.1
899       BA   .6306
900       LS            74    9.9
901       UK    116  .0213    .10     100
902       RK   5300  .0196   .045          TRAP     30    100    YES

903       KK  8B1.2      CP
904       KM       ROUTE SUB 8B1 DOWN SCOTTSDALE ROAD CHANNEL TO CP 8B1.2
905       RS      1   FLOW     -1
906       RC   .035   .035   .035   3400  .0171
907       RX      0     8     9     21    46    58    59    67
908       RY     10     6     6      0     0     6     6    10

909       KK  8B1.3     DIV
910       KM       DIVERT LOW-FLOWS TO EXISTING WASHS WEST OF SCOTTSDALE ROAD (SUB 8B2)
911       DT  8B1.4
912       DI      0  1088   2000
913       DQ      0   265    300

914       KK   12R1      CP
915       KM       ROUTE NON-DIVERTED FLOW DOWN SCOTTSDALE ROAD CHANNEL TO CP 12R1
916       RS      1   FLOW     -1
917       RC   .035   .035   .035   6500  .0171
918       RX      0     8     9     21    61    73    74    82
919       RY     10     6     6      0     0     6     6    10

920       KK    11B     SUB
921       KM       RUNOFF FROM SUB-BASIN 11B
922       BA   .2547
923       LS            74   11.9
924       UK    150  .0425    .20     100
925       RK   4700  .0213   .045          TRAP     30     50

926       KK    12R     SUB
927       KM       RUNOFF FROM SUB 12R & ROUTE SUB 11B
928       BA  1.2375
929       LS            74   22.3
930       UK     95  .0213    .10     100
931       RK   9900  .0214   .045          TRAP     50    100    YES

932       KK   12R2      CP
933       KM       ROUTE SUB 12R DOWN SCOTTSDALE ROAD CHANNEL TO CP 12R2
934       RS      1   FLOW     -1
935       RC   .035   .035   .035   3600  .0171
936       RX      0     8     9     21    61    73    74    82
937       RY     10     6     6      0     0     6     6    10
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

938       KK   12R3      CP
939       KM        COMBINE CP 12R1 & CP 12R2
940       HC      2

941       KK   12R4     DIV
942       KM        DIVERT LOW-FLOWS TO WEST SIDE OF SCOTTSDALE ROAD (SUB 13R)
943       DT   12R5
944       DI     0   2199   3000
945       DQ     0    500    550

946       KK    4B1      CP
947       KM        ROUTE NON-DIVERTED FLOW FROM DIV 12R4 TO CP 4B1
948       RS     1   FLOW     -1
949       RC  .035   .035   .035   3150  .0171
950       RX     0      8      9     21     61     73     74     82
951       RY    10      6      6      0      0      6      6     10

952       KK  SUB16
953       KM        RUNOFF FROM SUB-BASIN 16
954       BA  1.4570
955       LS            83    9.8
956       UK    217  .0581    .20    100
957       RK  14800  .0216   .045          TRAP     25      3

958       KK  SUB17
959       KM        RUNOFF FROM SUB-BASIN 17
960       BA  1.1851
961       LS            83    9.8
962       UK    285  .0421    .20    100
963       RK  12200  .0254   .045          TRAP     25      3

964       KK  SUB18
965       KM        RUNOFF FROM SUB-BASIN 18
966       BA  1.2641
967       LS            83    6.5
968       UK    285  .0421    .20    100
969       RK  10840  .0259   .045          TRAP     25      3

970       KK  CP19A
971       KM        COMBINE HYDROGRAPHS SUB16, SUB17, & SUB18
972       HC      3

973       KK  CP19B
974       KM        ROUTE CP19A TO CP19B
975       RK   1100  .0155  0.045          TRAP     35      3

976       KK  SUB15
977       KM        RUNOFF FROM SUB-BASIN 15
978       BA  1.3702
979       LS            82    5.4
980       UK    217  .0581    .20    100
981       RK  21200  .0236   .045          TRAP     25      3
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

982       KK  CP19C
983       KM      COMBINE HYDROGRAPHS SUB15 & CP19B
984       HC     2

985       KK  SUB19
986       KM      RUNOFF FROM SUB-BASIN 19 & ROUTE CP 19C
987       BA  .1872
988       LS          84    7.2
989       UK    275  .0800    .20    100
990       RK   3730  .0352   .045   .160   TRAP    15     3
991       RK   1800  .0200   .045          TRAP    50    30    YES

992       KK  SUB20
993       KM      RUNOFF FROM SUB-BASIN 20
994       BA  .5698
995       LS          84    3.6
996       UK    300  .0750    .20    100
997       RK   9640  .0197   .045          TRAP    15     3

998       KK  CP21
999       KM      COMBINE HYDROGRAPHS SUB19 & SUB20
1000      HC     2

1001      KK  SUB21
1002      KM      RUNOFF FROM SUB-BASIN 21 & ROUTE CP 21
1003      BA  3.6659
1004      LS          80    6.4
1005      UK    297  .0558    .20    100
1006      RK  27600  .0196   .045          TRAP    50    30    YES

1007      KK  SUB22
1008      KM      RUNOFF FROM SUB-BASIN 22
1009      BA  1.3860
1010      LS          84    5.1
1011      UK    225  .0590    .20    100
1012      RK  13000  .0238   .045          TRAP    25     3

1013      KK  SUB23
1014      KM      RUNOFF FROM SUB-BASIN 23
1015      BA  .3945
1016      LS          84    6.3
1017      UK    225  .0590    .20    100
1018      RK  10200  .0304   .045          TRAP    20     3

1019      KK  CP24
1020      KM      COMBINE HYDROGRAPHS SUB22 & SUB23
1021      HC     2

1022      KK  SUB24
1023      KM      RUNOFF FROM SUB-BASIN 24 & ROUTE CP 24
1024      BA  .4907
1025      LS          77    6.8
1026      UK    295  .0438    .20    100
1027      RK   6800  .0257   .045          TRAP    15     3    YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1028      KK  SUB25
1029      KM      RUNOFF FROM SUB-BASIN 25
1030      BA  1.5166
1031      LS          85    9.0
1032      UK    295  .0438    .20    100
1033      RK  16700  .0302   .045          TRAP     25      3

1034      KK   CP26
1035      KM      COMBINE HYDROGRAPHS SUB24 & SUB25
1036      HC      2

1037      KK  SUB26
1038      KM      RUNOFF FROM SUB-BASIN 26 & ROUTE CP 26
1039      BA  .2231
1040      LS          78    6.9
1041      UK    200  .0250    .20    100
1042      RK   1400  .0217   .045          TRAP     60      7    YES

1043      KK   26.1    DIV
1044      KM      DIVERT FLOW FROM SUB 26 TO SUB 26A
1045      DT   26.2
1046      DI      0    500   1000  10000
1047      DQ      0    250    500   5000

1048      KK   21.1     CP
1049      KM      ROUTE DIV 26.1 TO OUTLET OF SUB 21
1050      RK  10600  .0263   .045          TRAP     35     10

1051      KK   CP27
1052      KM      COMBINE SUB 21 & CP 21.1
1053      HC      2

1054      KK   26.2    RET
1055      KM      RETRIEVE DIVERTED FLOW FROM CP 26
1056      DR   26.2

1057      KK  SUB26A
1058      KM      RUNOFF FROM SUB 26A & ROUTE RET 26.2
1059      BA  .5251
1060      LS          74   14.5
1061      UK    200  .0250    .20    100
1062      RK  10000  .0263   .045          TRAP     35     10    YES

1063      KK   27.1     CP
1064      KM      COMBINE CP 27 & SUB 26A
1065      HC      2

1066      KK   27.2     CP
1067      KM      ROUTE CP 27.1 THROUGH NEW CHANNEL TO CP 27.2
1068      RS      1   FLOW     -1
1069      RC   .035   .035   .035   3150  .0227
1070      RX      0     8     9     21   171   183   184   192
1071      RY     10     6     6      0     0     6     6    10
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1072        KK  SUB27
1073        KM      RUNOFF FROM SUB-BASIN 27
1074        BA  .6385
1075        LS          73   16.3
1076        UK   159  .0213   .10    100
1077        RK  3200  .0227   .035         TRAP    150     2

1078        KK  27.3     CP
1079        KM      COMBINE CP 27.2 & SUB 27
1080        HC     2

1081        KK  28A1     CP
1082        KM      ROUTE CP 27.3 THROUGH NEW CHANNEL TO PINNACLE PEAK ROAD
1083        RS     1   FLOW     -1
1084        RC  .035   .035   .035   4150  .0227
1085        RX     0     8     9    21   171   183   184   192
1086        RY    10     6     6     0     0     6     6    10

1087        KK   28A    SUB
1088        KM      RUNOFF FROM SUB-BASIN 28A
1089        BA  .6708
1090        LS          73   35.0
1091        UK    96  .0213   .10    100
1092        RK  4150  .0227   .035         TRAP    150     2

1093        KK  28A2     CP
1094        KM      COMBINE SUB 28A & CP 28A1
1095        HC     2

1096        KK   4B2     CP
1097        KM      ROUTE CP 28A2 TO CP 4B2
1098        RS     1   FLOW     -1
1099        RC  .035   .035   .035   1300  .0227
1100        RX     0     8     9    21   171   183   184   192
1101        RY    10     6     6     0     0     6     6    10

1102        KK   4B3     CP
1103        KM      COMBINE CP 4B1 & CP 4B2
1104        KM      THIS IS THE COMBINED FLOW AT RAWHIDE FROM CHANNELS 4C-4B & 4A-4B.
1105        HC     2

1106        KK  28B1     CP
1107        KM      ROUTE CP 4B3 DOWN SCOTTSDALE ROAD CHANNEL TO CP 28B1
1108        RS     1   FLOW     -1
1109        RC  .035   .035   .035   3300  .0227
1110        RX     0     8     9    21   171   183   184   192
1111        RY    10     6     6     0     0     6     6    10

1112        KK   28B    SUB
1113        KM      RUNOFF FROM SUB 28B
1114        BA  .9182
1115        LS          74   53.3
1116        UK    96  .0213   .10    100
1117        RK  4750  .0227   .035         TRAP    150     2
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1118      KK   28.1    DIV
1119      KM       DIVERT FLOW TO SIMULATE RUNOFF FROM SUB 28B THAT IS INTERCEPTED BY THE
1120      KM       CORE NORTH CHANNEL AT THE INTXN OF SCOTTSDALE & DEER VALLEY ROADS.
1121      KM       DIVERT RATIO IS BASED ON THE PERCENTAGE OF THE DOWNSTREAM BOUNDARY OF
1122      KM       SUB 28 THAT IS INTERCEPTED BY THE CORE NORTH CHANNEL.
1123      DT   28.2
1124      DI     0    100   10000
1125      DQ     0     20    2000

1126      KK   28B2     CP
1127      KM       COMBINE NON-DIVERTED FLOW FROM SUB 28B WITH CP 28B1
1128      HC     2

1129      KK   29A1     CP
1130      KM       ROUTE CP 28B2 DOWN RAWHIDE WASH CHANNEL TO CP 29A1
1131      RS     1   FLOW     -1
1132      RC   .035   .035   .035  10200  .0150
1133      RX     0     8     9     21    171    183    184    192
1134      RY    10     6     6      0      0      6      6     10

1135      KK    29A    SUB
1136      KM       RUNOFF FROM SUB 29A
1137      BA  1.7630
1138      LS            74   40.6
1139      UK    88  .0213    .10    100
1140      RK  2500  .0100   .035    .34   TRAP    25     2
1141      RK 10200  .0150   .035          TRAP   150     2

1142      KK   29A2     CP
1143      KM       COMBINE SUB 29A & CP 29A1
1144      HC     2

1145      KK  29.1A     CP
1146      KM       ROUTE CP 29A2 DOWN RAWHIDE WASH CHANNEL TO CAP DIKE No.2
1147      RS     1   FLOW     -1
1148      RC   .035   .035   .035   5500  .0150
1149      RX     0     8     9     21    171    183    184    192
1150      RY    10     6     6      0      0      6      6     10

1151      KK    29.1    SUB
1152      KM       RUNOFF FROM SUB 29.1
1153      BA  1.3896
1154      LS            74   28.6
1155      UK    88  .0213    .10    100
1156      RK  2500  .0100   .035    .26   TRAP    25     2
1157      RK  5500  .0150   .035          TRAP   150     2

1158      KK  29.1B     CP
1159      KM       COMBINE SUB 29.1 & CP 29.1A
1160      HC     2
```

1

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

1161      KK   32A2     RET
1162      KM       RETRIEVE DIVERTED FLOW FROM SUB 32A
1163      DR   32A2

1164      KK   CNC6     CP
1165      KM       ROUTE RET 32A2 TO THE INTXN OF SCOTTSDALE & DEER VALLEY ROADS
1166      RS     1   FLOW     -1
1167      RC   .035   .035   .035   2650   .0125
1168      RX     0     8     9     21     71     83     84     92
1169      RY    10     6     6      0      0      6      6     10

1170      KK   28.2     RET
1171      KM       RETRIEVE PORTION OF RUNOFF FROM SUB 28 THAT MAY FLOW TO THE
1172      KM       SCOTTSDALE ROAD-DEER VALLEY ROAD INTXN
1173      DR   28.2

1174      KK   CNC7     CP
1175      KM       COMBINE CP CNC6 & RET 28.2
1176      HC     2

1177      KK   CNC8     CP
1178      KM       ROUTE CP CNC7 DOWN SCOTTSDALE ROAD CHANNEL TO BEARDSLEY ROAD
1179      RS     1   FLOW     -1
1180      RC   .035   .035   .035   5400   .0150
1181      RX     0     8     9     21     91    103    104    112
1182      RY    10     6     6      0      0      6      6     10

1183      KK    CN4     SUB
1184      KM       RUNOFF FROM SUB CN4
1185      BA   .5546
1186      LS           74    48.9
1187      UK    100   .0150    .15    100
1188      RK   1400   .0100    .018   .111   TRAP    30     5
1189      RK   5400   .0150    .035          TRAP    75     2

1190      KK   CNC9     CP
1191      KM       COMBINE SUB CN4 & CP CNC8
1192      KM       THIS FLOW IS ASSUMED TO SHEETFLOW ACROSS SCOTTSDALE ROAD
1193      HC     2

1194      KK    33A     SUB
1195      KM       RUNOFF FROM SUB-BASIN 33A & ROUTE CNC9
1196      KM       DRAINAGE AREA REVISED ON 8/10/90 TO REFLECT DELETION OF 0.1040 SQ MI
1197      KM       FROM CORRIGAN-MARLEY PARCEL.  NO OTHER PARAMETERS WERE CHANGED.
1198      BA   .3738
1199      LS           74    57.7
1200      UK     89  .0213    .10    100
1201      RK   4000   .0161    .045          TRAP    50    50    YES
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1

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

1202      KK  33.1A    SUB
1203      KM       RUNOFF FROM SUB 33.1A & ROUTE SUB 33A
1204      KM       THE OUTER LOOP IS NOT ASSUMED TO BE IN-PLACE FOR THE PURPOSE OF
1205      KM       ROUTING FLOWS FROM SUB 33A TO SUB 33.1A.  IF THE OUTER LOOP WERE
1206      KM       IN-PLACE, THE CHANNEL SIDE-SLOPES WOULD BE 2:1 RATHER THAN 50:1.
1207      BA  .7109
1208      LS          74   48.2
1209      UK    89  .0213    .10    100
1210      RK  6700  .0116    .045         TRAP    50    50    YES

1211      KK  8B1.4    RET
1212      KM       RETRIEVE LOW-FLOW DIVERT FROM SUB 8B1
1213      DR  8B1.4

1214      KK   8B2    SUB
1215      KM       RUNOFF FROM SUB 8B2 & ROUTE LOW-FLOW DIVERT FROM SUB 8B1
1216      BA  .2260
1217      LS          74   20.4
1218      UK   116  .0213    .10    100
1219      RK  4500  .0196    .045         TRAP    30    30    YES

1220      KK  SUB9B
1221      KM       RUNOFF FROM SUB-BASIN 9B & ROUTE SUB 8B2
1222      BA  .8767
1223      LS          74   37.6
1224      UK    95  .0213    .10    100
1225      RK 10400  .0192    .045         TRAP    30   130    YES

1226      KK SUB10B
1227      KM       RUNOFF FROM SUB-BASIN 10B ROUTE SUB 9B
1228      BA 1.4377
1229      LS          74    31
1230      UK   107  .0213    .10    100
1231      RK 11000  .0136    .045         TRAP    30   175    YES

1232      KK  10.1B    SUB
1233      KM       RUNOFF FROM SUB 10.1B & ROUTE SUB 10B
1234      BA  .8989
1235      LS          74   28.2
1236      UK   107  .0213    .10    100
1237      RK  6000  .0106    .045         TRAP    30   190    YES

1238      KK   12R5    RET
1239      KM       RETRIEVE LOW-FLOW DIVERT FROM SUB 12R
1240      DR   12R5

1241      KK    13R    SUB
1242      KM       RUNOFF FROM SUB 13R & ROUTE LOW-FLOW DIVERT FROM SUB 12R
1243      BA 1.0668
1244      LS          74   44.0
1245      UK    86  .0213    .10    100
1246      RK  9200  .0192    .045         TRAP    30    50    YES
```

1

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

1247        KK  SUB14
1248        KM       RUNOFF FROM SUB-BASIN 14 & ROUTE SUB 13
1249        BA  1.3910
1250        LS            74    46.7
1251        UK    101   .0213    .10    100
1252        RK   11200  .0142   .045          TRAP     50    150    YES

1253        KK    14.1    SUB
1254        KM       RUNOFF FROM SUB 14.1 & ROUTE SUB 14
1255        BA   .6112
1256        LS            74    43.8
1257        UK    101   .0213    .10    100
1258        RK    5800  .0112   .045          TRAP     50    160    YES

1259        KK    2IN     CP
1260        KM       COMBINE SUB 10.1B, SUB 14.1, CP 29.1B, & SUB 33.1
1261        KM       THIS IS THE TOTAL INFLOW TO CAP DIKE No.2
1262        HC     4

1263        KK   DIKE2     DAM
1264        KM       ROUTE CP 2IN THROUGH CAP DIKE No.2
1265        RS     1    STOR
1266        SV     0     2    48    169    342    546    775   1031   1332   1732
1267        SV  2273  2958  3796   4783   5904   7170   8578  10131  11834  12000
1268        SE  1514  1516  1518   1520   1522   1524   1526   1528   1530   1532
1269        SE  1534  1536  1538   1540   1542   1544   1546   1548   1550  1550.2
1270        SS  1550   100   2.9    1.5
1271        ST 1550.2  100   2.9    1.5
1272        ZZ
```

1

SCHEMATIC DIAGRAM OF STREAM NETWORK

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

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

 40       30R
           .
           .
 54         .------->   30R2
 52      30R1
          V
          V
 57      31.1
           .
           .
 63        .       31A
           .        .
           .        .
 70        .        .      34R
           .        .       V
           .        .       V
 76        .        .      31.3
           .        .        .
           .        .        .
 79      31.2.......................
           .
           .
 84         .------->   31A2
 82      31A1
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          V
          V
87      36.2
          .
          .
93        .       35N
          .        .
          .        .
102       .         .-------->   35N1
100       .       35N2
          .        V
          .        V
105       .       35L1
          .        .
          .        .
108       .         .       35L
          .        .         .
          .        .         .
114       .       35L2............
          .        V
          .        V
117       .       36L1 ***
          .        V
          .        V
123       .       36.3
          .        .
          .        .
129     36.4............
          .
          .
134       .-------->   36.6
132     36.5
          V
          V
137     36.7
          .
          .
145       .         .<-------   35N1
143       .       35N1
          .        V
          .        V
146       .       35R ***
          .        V
          .        V
152       .       36R1 ***
          .        .
          .        .
158     36.8............
          .
          .
164       .-------->   36.10
162     36.9
          V
          V
167     37.1
          .
          .
174       .       37B
          .        V
          .        V
180       .       37.2
          .        .
          .        .
186     37.3............
          .
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        .
191     .------->  37.5
189   37.4
       V
       V
194   52.1
        .
        .
200     .   SUB39
        .     .
        .     .
206     .     .     SUB40
        .     .       .
        .     .       .
212     .   CP41............
        .     V
        .     V
215     .   SUB41 ***
        .     .
        .     .
221     .     .     SUB42
        .     .       .
        .     .       .
227     .     .       .     SUB43
        .     .       .       .
        .     .       .       .
233     .     .       .       .     SUB44
        .     .       .       .       .
        .     .       .       .       .
239     .     .       .     CP45............
        .     .       .      V
        .     .       .      V
242     .     .       .     SUB45 ***
        .     .       .       .
        .     .       .       .
248     .     .       .       .     SUB45A
        .     .       .       .       .
        .     .       .       .       .
254     .     .       .       .       .     SUB46
        .     .       .       .       .       .
        .     .       .       .       .       .
261     .     .       .     CP47........................
        .     .       .      V
        .     .       .      V
264     .     .       .     SUB47 ***
        .     .       .       .
        .     .       .       .
270     .   CP48........................
        .     V
        .     V
273     .   SUB48 ***
        .     .
        .     .
279     .     .     SUB50
        .     .       .
        .     .       .
286     .   CP51............
        .     .
        .     .
294     .     .------->  2003
289     .   2004
        .     .
        .     .
297     .     .     SUB49
        .     .       .
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          .          .          .
303       .       49.1............
          .          V
          .          V
306       .       SUB51 ***
          .          V
          .          V
312       .       52A ***
          .          .
          .          .
318     52.2............
         V
         V
321     52A1
         .
         .
328       .       53A
          .          .
          .          .
334     53A1............
         V
         V
337     DB3.1
         .
         .
343       .       CN6
          .          .
          .          .
350     DB3............
         V
         V
354     53R
         .
         .
378       .-------->    53RD
371     200
         V
         V
381     202
         .
         .
384       .       14CS
          .          .
          .          .
390     203............
         V
         V
394     204
         .
         .
397       .       15ACS
          .          .
          .          .
403       .          .       15BCS
          .          .          .
          .          .          .
409       .       205............
          .          .
          .          .
412     206............
         .
         .
418       .          .<-------    53RD
416       .       201
          .          V
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. V
419 . 207
. .
. .
422 . . 21ACS
. . .
. . .
428 . . . 21BCS
. . . .
. . . .
434 . . 208.....
. . V
. . V
438 . . 209
. . .
. . .
441 . . . 17BCS
. . . .
. . . .
447 . . 210.....
. . .
. . .
451 . . . 17ACS
. . . .
. . . .
457 . . 211.....
. . V
. . V
460 . . 212
. . .
. . .
463 . . . 16BCS
. . . .
. . . .
469 . . 213.....
. . .
. . .
473 . . . 16ACS
. . . .
. . . .
479 . 214.....
. V
. V
482 . 215
. .
. .
485 . . 19CS
. . V
. . V
491 . . 216
. . V
. . V
494 . . 217
. . .
. . .
497 . . . 18CS
. . . .
. . . .
503 . . 218.....
. . .
. . .
507 . 219.....
. .
. .
511 . . 20ACS

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          .        .        V
          .        .        V
518       .        .        220
          .        .        .
          .        .        .
521       .        .        .        20BCS
          .        .        .        .
          .        .        .        .
527       .        .        221............
          .        .        .
          .        .        .
531       .        .        .        TPC2
          .        .        .        .
          .        .        .        .
539       222.....................................
          .
          .
546       .        .<-------   30R2
544       .        30R2
          .        .
          .        .
549       .        .        .<-------   31A2
547       .        .        31A2
          .        .        .
          .        .        .
550       .        31B1............
          .        V
          .        V
553       .        31B ***
          .        .
          .        .
561       .        .        .<-------   36.6
559       .        .        36.6
          .        .        V
          .        .        V
562       .        .        36L2 ***
          .        .        .
          .        .        .
568       .        32.1............
          .        V
          .        V
571       .        32A ***
          .        .
          .        .
579       .        .------->   32A2
577       .        32A1
          .        V
          .        V
582       .        CNC1
          .        .
          .        .
590       .        .        .<-------   36.10
588       .        .        36.10
          .        .        .
          .        .        .
593       .        .        .        .<-------   37.5
591       .        .        .        37.5
          .        .        .        .
          .        .        .        .
594       .        .        37A1............
          .        .        V
          .        .        V
597       .        .        37A ***
          .        .        V
          .        .        V
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603     .     .     CNC2
        .     .     .
        .     .     .
609     .     CNC3............
        .     V
        .     V
612     .     CNC4
        .     .
        .     .
619     .     .     CN1
        .     .     .
        .     .     .
628     .     CNC5............
        .     V
        .     V
631     .     DB1.1
        .     .
        .     .
638     .     .     CN2
        .     .     .
        .     .     .
645     .     .     .     CN3
        .     .     .     .
        .     .     .     .
652     .     DB1........................
        .     V
        .     V
656     .     38R-1
        .     V
        .     V
670     .     DB2.1
        .     .
        .     .
676     .     .     CN5
        .     .     .
        .     .     .
684     .     DB2............
        .     V
        .     V
688     .     38R-2
        .     V
        .     V
702     .     108
        .     .
        .     .
705     .     .     60CS
        .     .     V
        .     .     V
711     .     .     109
        .     .     .
        .     .     .
714     .     .     .     4A-BCS
        .     .     .     .
        .     .     .     .
720     .     .     110............
        .     .     .
        .     .     .
725     .     111............
        .     V
        .     V
728     .     112
        .     .
        .     .
731     .     .     12ACS
        .     .     V
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        .       .       V
737     .       .       113
        .       .       .
        .       .       .
740     .       .       .       11CS
        .       .       .       .
        .       .       .       .
746     .       .       113A............
        .       .       V
        .       .       V
750     .       .       114
        .       .       .
        .       .       .
753     .       115............
        .       V
        .       V
756     .       116
        .       .
        .       .
759     .       .       3A-BCS
        .       .       .
        .       .       .
765     .       118............
        .       V
        .       V
768     .       119
        .       .
        .       .
771     .       .       1BCS
        .       .       V
        .       .       V
777     .       .       119B
        .       .       .
        .       .       .
780     .       119A............
        .       .
        .       .
785     .       .       1ACS
        .       .       .
        .       .       .
793     .       .       .       2CS
        .       .       .       .
        .       .       .       .
802     .       .       .       .       10ABCS
        .       .       .       .       V
        .       .       .       .       V
808     .       .       .       .       120
        .       .       .       .       .
        .       .       .       .       .
811     .       .       .       .       .       13CS
        .       .       .       .       .       V
        .       .       .       .       .       V
817     .       .       .       .       .       121
        .       .       .       .       .       .
        .       .       .       .       .       .
820     .       .       .       .       .       .       12BCS
        .       .       .       .       .       .       .
        .       .       .       .       .       .       .
826     .       .       .       .       .       122............
        .       .       .       .       .       .
        .       .       .       .       .       .
831     .       .       .       .       123............
        .       .       .       .       V
        .       .       .       .       V
834     .       .       .       .       124
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        .       .       .       .       .
        .       .       .       .       .
839     .       125.................................
        .       .
        .       .
842     .       .       PR1
        .       .       .
        .       .       .
850     .       .       .       TPC1
        .       .       .       .
        .       .       .       .
858     .       126.......................
        .       .
        .       .
863     3IN............
        V
        V
867     DIKE3
        .
        .
876     .       SUB7B
        .       .
        .       .
888     .       .       11A
        .       .       .
        .       .       .
894     .       8.1............
        .       V
        .       V
897     .       8B1 ***
        .       V
        .       V
903     .       8B1.2
        .       .
        .       .
911     .       .-------->  8B1.4
909     .       8B1.3
        .       V
        .       V
914     .       12R1
        .       .
        .       .
920     .       .       11B
        .       .       V
        .       .       V
926     .       .       12R ***
        .       .       V
        .       .       V
932     .       .       12R2
        .       .       .
        .       .       .
938     .       12R3............
        .       .
        .       .
943     .       .-------->  12R5
941     .       12R4
        .       V
        .       V
946     .       4B1
        .       .
        .       .
952     .       .       SUB16
        .       .       .
        .       .       .
958     .       .       .       SUB17
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          .    .    .    .
          .    .    .    .
964       .    .    .    .    SUB18
          .    .    .    .    .
          .    .    .    .    .
970       .    .    CP19A.......................
          .    .    V
          .    .    V
973       .    .    CP19B
          .    .    .
          .    .    .
976       .    .    .    SUB15
          .    .    .    .
          .    .    .    .
982       .    .    CP19C............
          .    .    V
          .    .    V
985       .    .    SUB19 ***
          .    .    .
          .    .    .
992       .    .    .    SUB20
          .    .    .    .
          .    .    .    .
998       .    .    CP21............
          .    .    V
          .    .    V
1001      .    .    SUB21 ***
          .    .    .
          .    .    .
1007      .    .    .    SUB22
          .    .    .    .
          .    .    .    .
1013      .    .    .    .    SUB23
          .    .    .    .    .
          .    .    .    .    .
1019      .    .    .    CP24............
          .    .    .    V
          .    .    .    V
1022      .    .    .    SUB24 ***
          .    .    .    .
          .    .    .    .
1028      .    .    .    .    SUB25
          .    .    .    .    .
          .    .    .    .    .
1034      .    .    .    CP26............
          .    .    .    V
          .    .    .    V
1037      .    .    .    SUB26 ***
          .    .    .    .
          .    .    .    .
1045      .    .    .    .-------> 26.2
1043      .    .    .    26.1
          .    .    .    V
          .    .    .    V
1048      .    .    .    21.1
          .    .    .    .
          .    .    .    .
1051      .    .    CP27............
          .    .    .
          .    .    .
1056      .    .    .    .<------- 26.2
1054      .    .    .    26.2
          .    .    .    V
          .    .    .    V
1057      .    .    .    SUB26A ***
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          .       .       .       .
          .       .       .       .
1063      .       .     27.1............
          .       .       V
          .       .       V
1066      .       .     27.2
          .       .       .
          .       .       .
1072      .       .       .     SUB27
          .       .       .       .
          .       .       .       .
1078      .       .     27.3............
          .       .       V
          .       .       V
1081      .       .     28A1
          .       .       .
          .       .       .
1087      .       .       .     28A
          .       .       .       .
          .       .       .       .
1093      .       .     28A2............
          .       .       V
          .       .       V
1096      .       .     4B2
          .       .       .
          .       .       .
1102      .     4B3............
          .     V
          .     V
1106      .     28B1
          .       .
          .       .
1112      .       .     28B
          .       .       .
          .       .       .
1123      .       .       .-------> 28.2
1118      .       .     28.1
          .       .       .
          .       .       .
1126      .     28B2............
          .     V
          .     V
1129      .     29A1
          .       .
          .       .
1135      .       .     29A
          .       .       .
          .       .       .
1142      .     29A2............
          .     V
          .     V
1145      .     29.1A
          .       .
          .       .
1151      .       .     29.1
          .       .       .
          .       .       .
1158      .     29.1B............
          .       .
          .       .
1163      .       .       .<------- 32A2
1161      .       .     32A2
          .       .       V
          .       .       V
1164      .       .     CNC6
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                .       .       .
                .       .       .
1173            .       .       .         .<-------   28.2
1170            .       .       .       28.2
                .       .       .         .
                .       .       .         .
1174            .       .     CNC7............
                .       .       V
                .       .       V
1177            .       .     CNC8
                .       .       .
                .       .       .
1183            .       .       .       CN4
                .       .       .         .
                .       .       .         .
1190            .       .     CNC9............
                .       .       V
                .       .       V
1194            .       .       33A ***
                .       .       V
                .       .       V
1202            .       .     33.1A ***
                .       .       .
                .       .       .
1213            .       .       .         .<-------   8B1.4
1211            .       .       .       8B1.4
                .       .       .         V
                .       .       .         V
1214            .       .       .         8B2 ***
                .       .       .         V
                .       .       .         V
1220            .       .       .       SUB9B ***
                .       .       .         V
                .       .       .         V
1226            .       .       .       SUB10B ***
                .       .       .         V
                .       .       .         V
1232            .       .       .       10.1B ***
                .       .       .         .
                .       .       .         .
1240            .       .       .         .         .<-------   12R5
1238            .       .       .         .       12R5
                .       .       .         .         V
                .       .       .         .         V
1241            .       .       .         .         13R ***
                .       .       .         .         V
                .       .       .         .         V
1247            .       .       .         .       SUB14 ***
                .       .       .         .         V
                .       .       .         .         V
1253            .       .       .         .       14.1 ***
                .       .       .         .         .
                .       .       .         .         .
1259            .     2IN...................................
                .       V
                .       V
1263            .     DIKE2
```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

1 ****

FLOOD HYDROGRAPH PACKAGE HEC-1 (IBM XT 512K VERSION) -FEB 1,1985

U.S. ARMY CORPS OF ENGINEERS, THE HYDROLOGIC ENGINEERING CENTER, 609 SECOND STREET, DAVIS, CA. 95616

****

UPPER INDIAN BEND WASH REGIONAL FLOOD CONTROL & DRAINAGE PLAN

MODEL MP8.24I -- SUB-BASIN SERIES 7B TO 53.1

THIS IS AN INTEGRATED MASTER PLAN MODEL WITH A NORTH-SOUTH INTERCEPTOR CHANNEL IN-PLACE ALONG PIMA ROAD FROM POINT 3A TO 3K TO 3L.
ALL CORE NORTH-CORE SOUTH CHANNELS & DETENTION BASINS ARE IN-PLACE.
THE RAWHIDE WASH CHANNEL IS IN-PLACE ALONG ALIGNMENT 4A-4B-4D.
A NORTH-SOUTH INTERCEPTOR CHANNEL IS IN-PLACE ALONG SCOTTSDALE ROAD FROM POINT 4C TO 4B.

FUTURE CONDITION LAND-USE

LOW-FLOW CULVERT DIVERSIONS ARE ACTIVATED

DET BASIN 53R HAS BEEN MODIFIED TO REFLECT 8/10/90 CHANGES BY STANLEY CONSULTANTS & R. WARD

CN5 & 33A HAVE BEEN MODIFIED TO REFLECT DRAINAGE SPLIT ON MARLEY PARCEL

100% OF REATA PASS FAN IS DIVERTED SOUTH TO CAP DIKE 4.

RESERVOIR ROUTING OPERATIONS ARE IN-PLACE FOR CAP DIKES 2 & 3.

THIS MODEL REFLECTS ALL D.A. ADJUSTMENTS MADE TO MODEL F3.24I AND FLOW DIVERSIONS NEAR RAWHIDE WASH APEX & PINNACLE PEAK.
THE TPC GOLF COURSE AND ADJACENT RESIDENTIAL AREAS HAVE BEEN ADDED TO THE CORE SOUTH AREA.

100-YR, 24-HR STORM, USING SCS TYPE IIA RAINFALL DISTRIBUTION
RAINFALL FROM NOAA ATLAS, USING 25 SQ MI AREAL REDUCTION FACTOR (.968)

FUTURE LAND-USE DENSITIES FROM OCT 1987 GENERAL PLAN, BRW PLANS, AND THE TOMTO FOOTHILLS PLAN, ALL SCOTTSDALE RESIDENTIAL AREAS HAVE THE PERCENT OF IMPERVIOUS COVER ADJUSTED FOR NAOS REQUIREMENTS.

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

  IT       HYDROGRAPH TIME DATA
             NMIN         5  MINUTES IN COMPUTATION INTERVAL
            IDATE    28APR90  STARTING DATE
            ITIME       0000  STARTING TIME
               NQ        300  NUMBER OF HYDROGRAPH ORDINATES
           NDDATE    29APR90  ENDING DATE
           NDTIME       0055  ENDING TIME

          COMPUTATION INTERVAL     .08 HOURS
             TOTAL TIME BASE   24.92 HOURS

      ENGLISH UNITS
```

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 5929. TO 17125.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 1046. TO 17125.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 644. TO 17125.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

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*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 644. TO 17125.
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THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 8692. TO 24217.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 1863. TO 19861.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 3010. TO 8694.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 4760. TO 13747.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 286. TO 15059.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 2383. TO 15059.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 3649. TO 9713.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 4553. TO 13523.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 3845. TO 13523.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 6597. TO 48171.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 13035. TO 48171.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 331. TO 48171.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 6597. TO 48171.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 3355. TO 13747.

THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS. THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

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	AREA	BASIN STAGE	MAXIMUM MAX STAGE	TIME OF
+	HYDROGRAPH AT	30R	1914.	6.17	275.	85.	82.	1.31			
+	DIVERSION TO	30R2	323.	6.17	144.	52.	50.	1.31			
+	HYDROGRAPH AT	30R1	1591.	6.17	131.	33.	32.	1.31			
+	ROUTED TO	31.1	1319.	6.25	131.	33.	32.	1.31			
+								2.73	6.25		
+	HYDROGRAPH AT	31A	616.	6.08	63.	20.	19.	.41			
+	HYDROGRAPH AT	34R	977.	6.08	116.	36.	35.	.64			
+	ROUTED TO	31.3	964.	6.33	120.	37.	36.	.64			
+	3 COMBINED AT	31.2	2678.	6.25	314.	90.	87.	2.37			
+	DIVERSION TO	31A2	943.	6.25	111.	32.	31.	2.37			
+	HYDROGRAPH AT	31A1	1735.	6.25	203.	58.	56.	2.37			
+	ROUTED TO	36.2	1636.	6.33	203.	58.	56.	2.37			
+								2.74	6.33		
+	HYDROGRAPH AT	35N	946.	6.08	102.	31.	30.	.41			
+	DIVERSION TO	35N1	378.	6.08	41.	12.	12.	.41			
+	HYDROGRAPH AT	35N2	568.	6.08	61.	19.	18.	.41			
+	ROUTED TO	35L1	476.	6.17	61.	18.	18.	.41			
+	HYDROGRAPH AT	35L	685.	6.25	124.	39.	37.	.65			
+	2 COMBINED AT	35L2	1159.	6.25	185.	57.	55.	1.06			
+	HYDROGRAPH AT	36L1	1284.	6.33	247.	78.	75.	1.47			

	ROUTED TO								
+		36.3	1284.	6.33	246.	77.	75.	1.47	
+								2.37	6.33
	2 COMBINED AT								
+		36.4	2920.	6.33	449.	136.	131.	3.84	
	DIVERSION TO								
+		36.6	416.	6.33	64.	19.	19.	3.84	
	HYDROGRAPH AT								
+		36.5	2504.	6.33	385.	116.	112.	3.84	
	ROUTED TO								
+		36.7	2501.	6.33	385.	116.	112.	3.84	
+								3.51	6.33
	HYDROGRAPH AT								
+		35N1	378.	6.08	41.	12.	12.	.00	
	HYDROGRAPH AT								
+		35R	650.	6.25	121.	38.	37.	.45	
	HYDROGRAPH AT								
+		36R1	1028.	6.17	239.	76.	73.	1.12	
	2 COMBINED AT								
+		36.8	3451.	6.33	623.	192.	185.	4.96	
	DIVERSION TO								
+		36.10	273.	6.33	49.	15.	15.	4.96	
	HYDROGRAPH AT								
+		36.9	3179.	6.33	574.	177.	170.	4.96	
	ROUTED TO								
+		37.1	3071.	6.42	571.	176.	170.	4.96	
+								3.96	6.42
	HYDROGRAPH AT								
+		37B	212.	6.08	20.	6.	6.	.11	
	ROUTED TO								
+		37.2	188.	6.08	20.	6.	6.	.11	
+								.73	6.08
	2 COMBINED AT								
+		37.3	3127.	6.42	590.	183.	176.	5.07	
	DIVERSION TO								
+		37.5	532.	6.42	100.	31.	30.	5.07	
	HYDROGRAPH AT								
+		37.4	2595.	6.42	490.	152.	146.	5.07	
	ROUTED TO								
+		52.1	2491.	6.50	488.	151.	146.	5.07	
+								2.77	6.50
	HYDROGRAPH AT								
+		SUB39	4477.	6.08	489.	149.	143.	1.93	
	HYDROGRAPH AT								
+		SUB40	1343.	6.08	132.	40.	39.	.58	

	2 COMBINED AT						
+	CP41	5821.	6.08	622.	189.	182.	2.51
	HYDROGRAPH AT						
+	SUB41	6325.	6.17	775.	236.	227.	3.31
	HYDROGRAPH AT						
+	SUB42	1252.	6.08	126.	39.	37.	.58
	HYDROGRAPH AT						
+	SUB43	2512.	6.08	255.	77.	75.	1.07
	HYDROGRAPH AT						
+	SUB44	1951.	6.08	198.	60.	58.	.84
	2 COMBINED AT						
+	CP45	4463.	6.08	453.	138.	132.	1.91
	HYDROGRAPH AT						
+	SUB45	4602.	6.08	498.	151.	146.	2.11
	HYDROGRAPH AT						
+	SUB45A	425.	6.08	43.	13.	12.	.17
	HYDROGRAPH AT						
+	SUB46	2271.	6.08	230.	69.	66.	.93
	3 COMBINED AT						
+	CP47	7298.	6.08	771.	233.	224.	3.21
	HYDROGRAPH AT						
+	SUB47	7150.	6.17	870.	263.	253.	3.58
	3 COMBINED AT						
+	CP48	14513.	6.17	1769.	537.	517.	7.47
	HYDROGRAPH AT						
+	SUB48	14273.	6.17	1774.	539.	519.	7.52
	HYDROGRAPH AT						
+	SUB50	824.	6.08	81.	25.	24.	.36
	2 COMBINED AT						
+	CP51	14935.	6.17	1855.	563.	543.	7.88
	DIVERSION TO						
+	2003	14935.	.08	1855.	563.	543.	7.88
	HYDROGRAPH AT						
+	2004	0.	.08	0.	0.	0.	7.88
	HYDROGRAPH AT						
+	SUB49	713.	6.08	68.	21.	20.	.35
	2 COMBINED AT						
+	49.1	713.	6.08	68.	21.	20.	8.23
	HYDROGRAPH AT						
+	SUB51	1064.	6.25	224.	72.	69.	9.25
	HYDROGRAPH AT						
+	52A	1194.	6.58	381.	125.	121.	10.30
	2 COMBINED AT						
+	52.2	3669.	6.50	868.	276.	266.	15.37

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      ROUTED TO
+                52A1   3521.  6.58    862.    275.    265.   15.37
+                                                             3.83     6.58

      HYDROGRAPH AT
+                53A    554.  6.08     61.     19.     18.     .33

      2 COMBINED AT
+                53A1   3644.  6.58    918.    294.    284.   15.70

      ROUTED TO
+                DB3.1  3608.  6.58    916.    294.    283.   15.70
+                                                             3.88     6.58

      HYDROGRAPH AT
+                CN6    2124.  6.17    313.     97.     93.    1.37

      2 COMBINED AT
+                DB3    4455.  6.58   1225.    390.    376.   17.07

      ROUTED TO
+                53R    1242.  7.83   1041.    390.    375.   17.07
+                                                          1608.67     7.83

      DIVERSION TO
+                53RD   1242.   .08   1041.    390.    375.   17.07

      HYDROGRAPH AT
+                200       0.   .08      0.      0.      0.   17.07

      ROUTED TO
+                202       0.   .08      0.      0.      0.   17.07

      HYDROGRAPH AT
+                14CS    272.  6.08     38.     11.     11.     .11

      2 COMBINED AT
+                203     272.  6.08     38.     11.     11.   17.17

      ROUTED TO
+                204     251.  6.25     39.     12.     11.   17.17

      HYDROGRAPH AT
+                15ACS   166.  6.25     34.     10.     10.     .10

      HYDROGRAPH AT
+                15BCS   133.  6.33     33.     10.      9.     .09

      2 COMBINED AT
+                205     298.  6.25     66.     20.     19.     .19

      2 COMBINED AT
+                206     549.  6.25    106.     32.     30.   17.37

      HYDROGRAPH AT
+                201    1242.  7.83   1041.    390.    375.     .00

      ROUTED TO
+                207    1242.  7.83   1041.    389.    375.     .00

      HYDROGRAPH AT
+                21ACS   209.  6.17     36.     11.     10.     .10

      HYDROGRAPH AT
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+	21BCS	154.	6.08	26.	8.	8.	.08
	2 COMBINED AT						
+	208	362.	6.17	63.	19.	18.	.18
	ROUTED TO						
+	209	362.	6.17	63.	19.	18.	.18
	HYDROGRAPH AT						
+	17BCS	73.	6.08	10.	3.	3.	.03
	2 COMBINED AT						
+	210	429.	6.17	73.	22.	21.	.21
	HYDROGRAPH AT						
+	17ACS	101.	6.08	15.	4.	4.	.04
	2 COMBINED AT						
+	211	524.	6.17	88.	26.	25.	.25
	ROUTED TO						
+	212	520.	6.17	88.	26.	25.	.25
	HYDROGRAPH AT						
+	16BCS	146.	6.08	25.	8.	7.	.07
	2 COMBINED AT						
+	213	665.	6.17	113.	34.	33.	.32
	HYDROGRAPH AT						
+	16ACS	81.	6.08	12.	3.	3.	.03
	3 COMBINED AT						
+	214	1327.	7.33	1133.	427.	411.	.36
	ROUTED TO						
+	215	1327.	7.42	1132.	426.	411.	.36
	HYDROGRAPH AT						
+	19CS	63.	6.08	8.	2.	2.	.02
	ROUTED TO						
+	216	62.	6.08	8.	2.	2.	.02
	ROUTED TO						
+	217	59.	6.08	8.	2.	2.	.02
	HYDROGRAPH AT						
+	18CS	216.	6.08	32.	10.	9.	.09
	2 COMBINED AT						
+	218	275.	6.08	40.	12.	12.	.12
	2 COMBINED AT						
+	219	1429.	6.25	1166.	438.	422.	.47
	HYDROGRAPH AT						
+	20ACS	66.	6.08	9.	3.	3.	.03
	ROUTED TO						
+	220	64.	6.17	9.	3.	3.	.03
	HYDROGRAPH AT						
+	20BCS	158.	6.08	26.	8.	7.	.07

```
      2 COMBINED AT
+                221    219.  6.17     35.    11.    10.    .10

      HYDROGRAPH AT
+                TPC2   1055.  6.08    106.    32.    31.    .41

      4 COMBINED AT
+                222    2927.  6.08   1399.   512.   493.   18.36

      HYDROGRAPH AT
+                30R2   323.  6.00     144.    52.    50.    .00

      HYDROGRAPH AT
+                31A2   943.  6.25     111.    32.    31.    .00

      2 COMBINED AT
+                31B1   1266.  6.25    255.    84.    81.    .00

      HYDROGRAPH AT
+                31B    1463.  6.42    420.   138.   133.    .99

      HYDROGRAPH AT
+                36.6   416.  6.33     64.    19.    19.    .00

      HYDROGRAPH AT
+                36L2   466.  6.42     96.    29.    28.    .17

      2 COMBINED AT
+                32.1   1929.  6.42    516.   167.   161.   1.16

      HYDROGRAPH AT
+                32A    2056.  6.67    669.   218.   210.   2.04

      DIVERSION TO
+                32A2   2056.  .08     669.   218.   210.   2.04

      HYDROGRAPH AT
+                32A1   0.  .08        0.     0.     0.    2.04

      ROUTED TO
+                CNC1   0.  .08        0.     0.     0.    2.04
+                                                                .00     6.33

      HYDROGRAPH AT
+                36.10  273.  6.33     49.    15.    15.    .00

      HYDROGRAPH AT
+                37.5   532.  6.42     100.   31.    30.    .00

      2 COMBINED AT
+                37A1   789.  6.42     150.   46.    45.    .00

      HYDROGRAPH AT
+                37A    1222.  6.08    284.   89.    85.    .68

      ROUTED TO
+                CNC2   1139.  6.17    283.   89.    85.    .68
+                                                                2.51    6.17

      2 COMBINED AT
+                CNC3   1139.  6.17    283.   89.    85.    2.71

      ROUTED TO
+                CNC4   945.  6.67     280.   88.    85.    2.71
+                                                                1.65    6.67
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      HYDROGRAPH AT
+                CN1    1060.   6.17      141.      44.      42.     .74

      2 COMBINED AT
+                CNC5   1624.   6.25      420.     132.     127.    3.45

      ROUTED TO
+                DB1.1  1635.   6.25      419.     132.     127.    3.45
+                                                                   2.95     6.25

      HYDROGRAPH AT
+                CN2     272.   6.08       30.       9.       9.     .15

      HYDROGRAPH AT
+                CN3     899.   6.08       98.      30.      29.     .39

      3 COMBINED AT
+                DB1    2467.   6.17      546.     171.     165.    3.99

      ROUTED TO
+                38R-1   344.   8.17      324.     170.     164.    3.99
+                                                                 1652.33     8.17

      ROUTED TO
+                DB2.1   344.   8.25      324.     170.     164.    3.99
+                                                                    1.16     8.25

      HYDROGRAPH AT
+                CN5    1870.   6.08      217.      65.      63.     .70

      2 COMBINED AT
+                DB2    1999.   6.08      511.     235.     227.    4.69

      ROUTED TO
+                38R-2   695.   6.25      474.     235.     226.    4.69
+                                                                 1610.62     6.25

      ROUTED TO
+                108     687.   6.33      474.     235.     226.    4.69

      HYDROGRAPH AT
+                60CS    104.   6.08       13.       4.       4.     .04

      ROUTED TO
+                109      98.   6.08       13.       4.       4.     .04

      HYDROGRAPH AT
+                4A-BCS   154.   6.08       21.       6.       6.     .06

      2 COMBINED AT
+                110     252.   6.08       34.      10.      10.     .10

      2 COMBINED AT
+                111     842.   6.25      506.     245.     236.    4.79

      ROUTED TO
+                112     834.   6.33      505.     245.     236.    4.79

      HYDROGRAPH AT
+                12ACS   121.   6.08       15.       5.       4.     .04

      ROUTED TO
+                113     116.   6.08       16.       5.       4.     .04
```

	HYDROGRAPH AT						
+	11CS	92.	6.08	14.	4.	4.	.04
	2 COMBINED AT						
+	113A	208.	6.08	29.	9.	8.	.08
	ROUTED TO						
+	114	203.	6.08	29.	9.	8.	.08
	2 COMBINED AT						
+	115	985.	6.25	533.	254.	244.	4.87
	ROUTED TO						
+	116	981.	6.25	533.	254.	244.	4.87
	HYDROGRAPH AT						
+	3A-BCS	229.	6.33	58.	17.	17.	.17
	2 COMBINED AT						
+	118	1207.	6.25	589.	271.	261.	5.04
	ROUTED TO						
+	119	1200.	6.33	589.	271.	261.	5.04
	HYDROGRAPH AT						
+	1BCS	118.	6.08	15.	4.	4.	.04
	ROUTED TO						
+	119B	117.	6.08	15.	4.	4.	.04
	2 COMBINED AT						
+	119A	1272.	6.25	603.	275.	265.	5.08
	HYDROGRAPH AT						
+	1ACS	19.	6.08	3.	1.	1.	.01
	HYDROGRAPH AT						
+	2CS	29.	6.08	4.	1.	1.	.01
	HYDROGRAPH AT						
+	10ABCS	293.	6.08	50.	15.	15.	.14
	ROUTED TO						
+	120	292.	6.17	50.	15.	15.	.14
	HYDROGRAPH AT						
+	13CS	58.	6.08	7.	2.	2.	.02
	ROUTED TO						
+	121	56.	6.08	7.	2.	2.	.02
	HYDROGRAPH AT						
+	12BCS	44.	6.08	5.	2.	2.	.02
	2 COMBINED AT						
+	122	101.	6.08	13.	4.	4.	.04
	2 COMBINED AT						
+	123	383.	6.08	63.	19.	18.	.18
	ROUTED TO						
+	124	380.	6.17	63.	19.	18.	.18
	4 COMBINED AT						
+	125	1670.	6.17	670.	296.	285.	5.28

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      HYDROGRAPH AT
+                PR1    605.   6.08      67.     20.     20.     .29

      HYDROGRAPH AT
+                TPC1   827.   6.08      83.     25.     24.     .32

      3 COMBINED AT
+                126   2981.   6.08     817.    341.    329.    5.89

      2 COMBINED AT
+                3IN   5908.   6.08    2215.    854.    822.   24.25

      ROUTED TO
+                DIKE3    0.    .08       0.      0.      0.   24.25
+                                                          1528.40    24.92

      HYDROGRAPH AT
+                SUB7B   426.   6.42      96.     31.     29.     .53

      HYDROGRAPH AT
+                11A     321.   6.17      50.     16.     15.     .32

      2 COMBINED AT
+                8.1     697.   6.25     146.     46.     45.     .85

      HYDROGRAPH AT
+                8B1    1026.   6.17     249.     80.     77.    1.48

      ROUTED TO
+                8B1.2   991.   6.33     248.     79.     76.    1.48
+                                                             3.10    6.33

      DIVERSION TO
+                8B1.4   241.   6.33      60.     19.     19.    1.48

      HYDROGRAPH AT
+                8B1.3   750.   6.33     188.     60.     58.    1.48

      ROUTED TO
+                12R1    667.   6.58     185.     60.     58.    1.48
+                                                             1.89    6.58

      HYDROGRAPH AT
+                11B     333.   6.17      42.     13.     13.     .25

      HYDROGRAPH AT
+                12R    1379.   6.17     283.     89.     86.    1.49

      ROUTED TO
+                12R2   1317.   6.25     281.     89.     85.    1.49
+                                                             2.83    6.25

      2 COMBINED AT
+                12R3   1793.   6.42     465.    148.    143.    2.97

      DIVERSION TO
+                12R5    408.   6.42     106.     34.     33.    2.97

      HYDROGRAPH AT
+                12R4   1386.   6.42     359.    115.    110.    2.97

      ROUTED TO
+                4B1    1373.   6.42     358.    114.    110.    2.97
+                                                             2.90    6.42
```

	HYDROGRAPH AT						
+	SUB16	2476.	6.08	317.	97.	94.	1.46
	HYDROGRAPH AT						
+	SUB17	2003.	6.08	257.	79.	76.	1.19
	HYDROGRAPH AT						
+	SUB18	2319.	6.08	269.	83.	80.	1.26
	3 COMBINED AT						
+	CP19A	6799.	6.08	843.	260.	250.	3.91
	ROUTED TO						
+	CP19B	6528.	6.17	843.	260.	250.	3.91
	HYDROGRAPH AT						
+	SUB15	1533.	6.17	275.	86.	83.	1.37
	2 COMBINED AT						
+	CP19C	8060.	6.17	1118.	346.	333.	5.28
	HYDROGRAPH AT						
+	SUB19	8079.	6.17	1159.	359.	345.	5.46
	HYDROGRAPH AT						
+	SUB20	1019.	6.08	123.	38.	37.	.57
	2 COMBINED AT						
+	CP21	9051.	6.17	1282.	396.	382.	6.03
	HYDROGRAPH AT						
+	SUB21	5879.	6.67	1908.	610.	588.	9.70
	HYDROGRAPH AT						
+	SUB22	2676.	6.08	303.	93.	90.	1.39
	HYDROGRAPH AT						
+	SUB23	733.	6.08	87.	27.	26.	.39
	2 COMBINED AT						
+	CP24	3409.	6.08	389.	120.	115.	1.78
	HYDROGRAPH AT						
+	SUB24	3684.	6.17	478.	147.	142.	2.27
	HYDROGRAPH AT						
+	SUB25	2506.	6.17	349.	107.	103.	1.52
	2 COMBINED AT						
+	CP26	6190.	6.17	826.	254.	245.	3.79
	HYDROGRAPH AT						
+	SUB26	6214.	6.17	866.	267.	257.	4.01
	DIVERSION TO						
+	26.2	3107.	6.17	433.	134.	129.	4.01
	HYDROGRAPH AT						
+	26.1	3107.	6.17	433.	134.	129.	4.01
	ROUTED TO						
+	21.1	2718.	6.33	427.	133.	128.	4.01
	2 COMBINED AT						

```
+                CP27    7564.  6.50     2335.    743.    716.   13.71

     HYDROGRAPH AT
+                26.2    3107.  6.17      433.    134.    129.     .00

     HYDROGRAPH AT
+              SUB26A    3255.  6.33      518.    162.    156.     .53

     2 COMBINED AT
+                27.1   10182.  6.42     2853.    905.    871.   14.24

     ROUTED TO
+                27.2   10148.  6.42     2846.    903.    870.   14.24
+                                                             4.08    6.42

     HYDROGRAPH AT
+                SUB27    1146.  6.08      112.     35.     34.     .64

     2 COMBINED AT
+                27.3   10339.  6.42     2940.    938.    903.   14.87

     ROUTED TO
+                28A1   10252.  6.50     2932.    935.    901.   14.87
+                                                             4.10    6.50

     HYDROGRAPH AT
+                 28A    1402.  6.08      148.     46.     44.     .67

     2 COMBINED AT
+                28A2   10481.  6.50     3057.    981.    945.   15.54

     ROUTED TO
+                 4B2   10478.  6.50     3056.    980.    944.   15.54
+                                                             4.16    6.50

     2 COMBINED AT
+                 4B3   11844.  6.50     3413.   1095.   1054.   18.52

     ROUTED TO
+                28B1   11760.  6.58     3406.   1092.   1052.   18.52
+                                                             4.45    6.58

     HYDROGRAPH AT
+                 28B    2205.  6.08      244.     74.     72.     .92

     DIVERSION TO
+                28.2     441.  6.08       49.     15.     14.     .92

     HYDROGRAPH AT
+                28.1    1764.  6.08      195.     59.     57.     .92

     2 COMBINED AT
+                28B2   12038.  6.58     3576.   1152.   1109.   19.44

     ROUTED TO
+                29A1   11170.  6.75     3534.   1142.   1100.   19.44
+                                                             4.88    6.75

     HYDROGRAPH AT
+                 29A    3452.  6.08      406.    124.    120.    1.76

     2 COMBINED AT
+                29A2   11789.  6.75     3917.   1267.   1220.   21.20

     ROUTED TO
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+                29.1A   11612.  6.83    3899.   1261.   1215.   21.20
+                                                                5.00    6.83

  HYDROGRAPH AT
+                29.1    2758.   6.08    289.    89.     85.     1.39

  2 COMBINED AT
+                29.1B   11948.  6.75    4170.   1350.   1300.   22.59

  HYDROGRAPH AT
+                32A2    2056.   6.67    669.    218.    210.    .00

  ROUTED TO
+                CNC6    2048.   6.67    667.    217.    209.    .00
+                                                                3.55    6.67

  HYDROGRAPH AT
+                28.2    441.    6.08    49.     15.     14.     .00

  2 COMBINED AT
+                CNC7    2107.   6.67    712.    232.    224.    .00

  ROUTED TO
+                CNC8    2065.   6.75    706.    231.    223.    .00
+                                                                2.79    6.75

  HYDROGRAPH AT
+                CN4     1271.   6.08    139.    42.     41.     .55

  2 COMBINED AT
+                CNC9    2230.   6.75    840.    273.    263.    .55

  HYDROGRAPH AT
+                33A     2280.   6.92    933.    303.    292.    .93

  HYDROGRAPH AT
+                33.1A   2829.   6.17    1098.   357.    344.    1.64

  HYDROGRAPH AT
+                8B1.4   241.    6.33    60.     19.     19.     .00

  HYDROGRAPH AT
+                8B2     424.    6.17    103.    33.     32.     .23

  HYDROGRAPH AT
+                SUB9B   1029.   6.17    299.    95.     91.     1.10

  HYDROGRAPH AT
+                SUB10B  1528.   6.50    592.    189.    182.    2.54

  HYDROGRAPH AT
+                10.1B   1789.   6.58    765.    246.    237.    3.44

  HYDROGRAPH AT
+                12R5    408.    6.42    106.    34.     33.     .00

  HYDROGRAPH AT
+                13R     1762.   6.08    363.    114.    110.    1.07

  HYDROGRAPH AT
+                SUB14   2169.   6.42    699.    219.    211.    2.46

  HYDROGRAPH AT
+                14.1    2316.   6.58    836.    264.    254.    3.07
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     4 COMBINED AT
+                2IN   18247.  6.75     6868.     2216.     2134.     30.74
     ROUTED TO
+                DIKE2     0.   .08       0.        0.        0.    30.74
+                                                                   1539.21     24.92
```

1 SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION 53R

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1600.00	1625.00	1626.00
STORAGE	0.	1287.	1355.
OUTFLOW	0.	2438.	2500.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1608.67	.00	291.	1242.	.00	7.83	.00

SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION 38R-1

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1642.00	1657.00	1658.00
STORAGE	0.	317.	352.
OUTFLOW	0.	434.	450.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1652.33	.00	165.	344.	.00	8.17	.00

SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION 38R-2

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1600.00	1609.00	1610.00
STORAGE	0.	41.	51.
OUTFLOW	0.	490.	530.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1610.62	.62	57.	695.	.92	6.25	.00

SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION DIKE3

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1504.00	1541.00	1542.00
STORAGE	0.	6032.	6484.
OUTFLOW	0.	0.	290.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1528.40	.00	1692.	0.	.00	.00	.00

1 SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION DIKE2

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1514.00	1550.00	1550.20
STORAGE	0.	11834.	12000.
OUTFLOW	0.	0.	26.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1539.21	.00	4395.	0.	.00	.00	.00

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

FILE: MP9.24I

(100-Year, 24-Hour, SCS Type IIA Storm)

This model includes the Pima Road channel, the Rawhide Wash channel, the Scottsdale Road channel, the Deer Valley Road channels, the Core North system, the Core South system, and reservoir routing operations for CAP Dikes 2 and 3. Low-flow culvert diverts are de-activated. All of the Reata Pass flows are diverted to CAP Dike 4.

Same
comment
as before

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

  1       ID      UPPER INDIAN BEND WASH REGIONAL FLOOD CONTROL & DRAINAGE PLAN
  2       ID
  3       ID
  4       ID      MODEL MP9.24I -- SUB-BASIN SERIES 7B TO 53.1
  5       ID
  6       ID      THIS IS AN INTEGRATED MASTER PLAN MODEL WITH A NORTH-SOUTH INTERCEPTOR
  7       ID      CHANNEL IN-PLACE ALONG PIMA ROAD FROM POINT 3A TO 3K TO 3L.
  8       ID      ALL CORE NORTH-CORE SOUTH CHANNELS & DETENTION BASINS ARE IN-PLACE.
  9       ID      THE RAWHIDE WASH CHANNEL IS IN-PLACE ALONG ALIGNMENT 4A-4B-4D.
 10       ID      A NORTH-SOUTH INTERCEPTOR CHANNEL IS IN-PLACE ALONG SCOTTSDALE ROAD FROM
 11       ID      POINT 4C TO 4B.
 12       ID
 13       ID      DETENTION BASIN 53R HAS BEEN RECONFIGURED TO REFLECT NEW VOLUMES
 14       ID      & OUTLET DESIGN FROM STANLEY CONSULTANTS (8/10/90)
 15       ID      OUTLET DESIGN WAS SUBSEQUENTLY MODIFIED BY RLW
 16       ID
 17       ID      SUB 33A & CN5 MODIFIED TO REFLECT DRAINAGE SPLIT ON CORRIGAN-MARLEY
 18       ID
 19       ID      FUTURE CONDITION LAND-USE
 20       ID
 21       ID      ALL LOW-FLOW CULVERT DIVERTS ARE SET TO ZERO.
 22       ID
 23       ID      100% OF REATA PASS FAN IS DIVERTED SOUTH TO CAP DIKE 4.
 24       ID
 25       ID      RESERVOIR ROUTING OPERATIONS ARE IN-PLACE FOR CAP DIKES 2 & 3.
 26       ID
 27       ID      THIS MODEL REFLECTS ALL D.A. ADJUSTMENTS MADE TO MODEL F3.24I AND FLOW
 28       ID      DIVERSIONS NEAR RAWHIDE WASH APEX & PINNACLE PEAK.
 29       ID      THE TPC GOLF COURSE AND ADJACENT RESIDENTIAL AREAS HAVE BEEN ADDED TO
 30       ID      THE CORE SOUTH AREA.
 31       ID
 32       ID      100-YR, 24-HR STORM, USING SCS TYPE IIA RAINFALL DISTRIBUTION
 33       ID      RAINFALL FROM NOAA ATLAS, USING 25 SQ MI AREAL REDUCTION FACTOR
 34       ID
 35       ID      FUTURE LAND-USE DENSITIES FROM OCT 1987 GENERAL PLAN, BRW PLANS, AND
 36       ID      THE TONTO FOOTHILLS PLAN,    ALL SCOTTSDALE RESIDENTIAL AREAS HAVE THE
 37       ID      PERCENT OF IMPERVIOUS COVER ADJUSTED FOR NAOS REQUIREMENTS.
         *DIAGRAM
 38       IT      5 28APR90      0     300
 39       IO      5      0
 40       IN     30 28APR90      0

 41       KK     30R     SUB
 42       KM        RUNOFF FROM SUB-BASIN 30R
 43       BA  1.3105
 44       PB   4.25
 45       PC      0   .005   .009   .010   .013   .019   .021   .028   .032   .044
 46       PC   .057   .100   .660   .745   .776   .800   .816   .830   .840   .850
 47       PC   .861   .868   .878   .884   .891   .900   .905   .912   .919   .923
 48       PC   .930   .934   .939   .944   .950   .958   .961   .963   .969   .971
 49       PC   .974   .979   .981   .985   .989   .991   .993   .996  1.000
 50       LS           82    6.6
 51       UK    110  .0408    .20    100
 52       RK  10640  .0371    .045          TRAP     50    100
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  53      KK   30R1     DIV
  54      KM       DIVERT LOW-FLOWS TO EXISTING WASHS WEST OF PIMA ROAD ( SUB 31B)
  55      DT   30R2
  56      DI     0    145    500   1000   5000
  57      DQ     0      0      0      0      0

  58      KK   31.1      CP
  59      KM       ROUTE NON-DIVERTED FLOW DOWN PIMA ROAD CHANNEL TO THE BOTTOM OF SUB 31A
  60      RS     1   FLOW     -1
  61      RC  .035   .035   .035   5600  .0194
  62      RX     0      8      9     21     61     73     74     82
  63      RY    10      6      6      0      0      6      6     10

  64      KK    31A     SUB
  65      KM       RUNOFF FROM SUB 31A
  66      BA  .4132
  67      LS           70   15.0
  68      UK   102  .0213    .10    100
  69      RK  2500  .0213   .045   .042   TRAP      8      2
  70      RK  5600  .0194   .035          TRAP     40      2

  71      KK    34R     SUB
  72      KM       RUNOFF FROM SUB 34R
  73      BA  .6421
  74      LS           77    9.9
  75      UK   110  .0408    .20    100
  76      RK  6800  .0644   .045          TRAP     50    100

  77      KK   31.3      CP
  78      KM       ROUTE SUB 34R TO CP 31.3
  79      RK  4500  .0243   .045          TRAP     15     30

  80      KK   31.2      CP
  81      KM       COMBINE SUB 31A, CP 31.1, & CP 31.3
  82      HC     3

  83      KK   31A1     DIV
  84      KM       DIVERT LOW-FLOWS TO EXISTING WASHS WEST OF PIMA ROAD (SUB 31B)
  85      DT   31A2
  86      DI     0    145    500   1000   5000
  87      DQ     0      0      0      0      0

  88      KK   36.2      CP
  89      KM       ROUTE NON-DIVERTED FLOW DOWN PIMA ROAD CHANNEL TO THE BOTTOM OF SUB 36L1
  90      RS     1   FLOW     -1
  91      RC  .035   .035   .035   3600  .0194
  92      RX     0      8      9     21     71     83     84     92
  93      RY    10      6      6      0      0      6      6     10
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  94      KK   35N     SUB
  95      KM      RUNOFF FROM SUB-BASIN 35N
  96      KM      THIS BASIN DRAINS TO A CBC AT THE EAST SIDE OF DESERT HIGHLANDS
  97      BA  .4068
  98      LS          82   31.8
  99      UK   265  .0381    .20    100
 100      RK  5200  .0269   .045          TRAP     25      4

 101      KK   35N2    DIV
 102      KM      DIVERT FLOW THROUGH BLOCK WALL OPENINGS AT EAST SIDE OF DESERT HIGHLANDS
 103      DT   35N1
 104      DI     0    100   1000
 105      DQ     0     40    400

 106      KK   35L1     CP
 107      KM      ROUTE DIV 35N2 TO CP 35L1
 108      RK  7500  .0367   .045          TRAP     50      5

 109      KK    35L    SUB
 110      KM      RUNOFF FROM SUB 35L
 111      BA  .6521
 112      LS          78   12.7
 113      UK   265  .0381    .20    100
 114      RK  9400  .0463   .045          TRAP     50    100

 115      KK   35L2     CP
 116      KM      COMBINE SUB 35L & CP 35L1
 117      HC     2

 118      KK   36L1    SUB
 119      KM      RUNOFF FROM SUB 36L1 & ROUTE CP 35L2
 120      BA  .4125
 121      LS          73    7.2
 122      UK   116  .0213    .10    100
 123      RK  4350  .0269   .045          TRAP     50    130    YES

 124      KK   36.3     CP
 125      KM      ROUTE SUB 36L1 TO CP 36.3
 126      RS     1   FLOW     -1
 127      RC  .035   .035   .035   2000  .0194
 128      RX     0     8     9     21    71    83    84    92
 129      RY    10     6     6      0     0     6     6    10

 130      KK   36.4     CP
 131      KM      COMBINE CP 36.2 & CP 36.3
 132      HC     2

 133      KK   36.5    DIV
 134      KM      DIVERT LOW-FLOWS TO EXISTING WASHS WEST OF PIMA ROAD (SUB 36L2)
 135      DT   36.6
 136      DI     0    165    500   1000   5000
 137      DQ     0      0      0      0      0
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  138     KK   36.7     CP
  139     KM       ROUTE NON-DIVERTED FLOW DOWN PIMA ROAD CHANNEL TO BOUNDARY OF SUB 36R1
  140     RS     1   FLOW     -1
  141     RC  .035   .035   .035   1850  .0194
  142     RX     0     8     9     21    71    83    84    92
  143     RY    10     6     6      0     0     6     6    10

  144     KK   35N1    RET
  145     KM       RETRIEVE DIVERTED FLOW FROM SUB 35N
  146     DR   35N1

  147     KK    35R    SUB
  148     KM       RUNOFF FROM SUB 35R & ROUTE RET 35N1
  149     BA  .4455
  150     LS          77   10.4
  151     UK   265  .0381   .20   100
  152     RK  7700  .0357  .045         TRAP    50   100    YES

  153     KK   36R1    SUB
  154     KM       RUNOFF FROM SUB 36R1 & ROUTE SUB 35R
  155     BA  .6736
  156     LS          72   19.5
  157     UK   116  .0213   .10   100
  158     RK  6500  .0331  .045         TRAP    50   130    YES

  159     KK   36.8     CP
  160     KM       COMBINE SUB 36R1 & CP 36.7
  161     KM       D.A. FOR SUB 36R1 HAS BEEN REDUCED TO REFLECT THE PIMA ROAD CHANNEL
  162     HC     2

  163     KK   36.9    DIV
  164     KM       DIVERT LOW-FLOWS TO EXISTING WASHS WEST OF PIMA ROAD (SUB 37A)
  165     DT  36.10
  166     DI     0   165   500   1000   5000
  167     DQ     0     0     0     0     0

  168     KK   37.1     CP
  169     KM       ROUTE NON-DIVERTED FLOW DOWN PIMA ROAD CHANNEL TO PINNACLE PEAK ROAD
  170     KM       THIS LOCATION TIES INTO THE CORE NORTH, PIMA ROAD CHANNEL.
  171     RS     1   FLOW     -1
  172     RC  .035   .035   .035   3950  .0194
  173     RX     0     8     9     21    71    83    84    92
  174     RY    10     6     6      0     0     6     6    10

  175     KK    37B    SUB
  176     KM       RUNOFF FROM SUB 37B
  177     BA  .1148
  178     LS          73   15.4
  179     UK    61  .0213   .10   100
  180     RK  1300  .0237  .045         TRAP    25     3
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  181     KK   37.2     CP
  182     KM       ROUTE SUB 37B DOWN PIMA ROAD CHANNEL TO PINNACLE PEAK ROAD
  183     RS     1   FLOW     -1
  184     RC   .035   .035   .035   1900  .0194
  185     RX     0     8     9     21    71    83    84    92
  186     RY    10     6     6      0     0     6     6    10

  187     KK   37.3     CP
  188     KM       COMBINE CP 37.1 & CP 37.2
  189     HC     2

  190     KK   37.4    DIV
  191     KM       DIVERT LOW-FLOWS TO EXISTING WASHS WEST OF PIMA ROAD (SUB37A)
  192     DT   37.5
  193     DI     0   165   500   1000   5000
  194     DQ     0     0     0      0      0

  195     KK   52.1     CP
  196     KM       ROUTE NON-DIVERTED FLOW DOWN CORE NORTH, PIMA ROAD CHANNEL
  197     RS     1   FLOW     -1
  198     RC   .035   .035   .035   4100  .0223
  199     RX     0     8     9     21    91   103   104   112
  200     RY    10     6     6      0     0     6     6    10
          *    ***********************************************************************
          *
          *           INSERT SUB-BASINS 39 TO 53
          *
          *    ***********************************************************************

  201     KK   SUB39
  202     KM       RUNOFF FROM SUB-BASIN 39
  203     BA  1.9302
  204     LS           85   23.4
  205     UK    330  .0433    .20    100
  206     RK  11240  .0253   .045          TRAP    30     3

  207     KK   SUB40
  208     KM       RUNOFF FROM SUB-BASIN 40
  209     BA   .5844
  210     LS           83    9.9
  211     UK    160  .0627    .20    100
  212     RK   7000  .0350   .045          TRAP    20     3

  213     KK   CP41
  214     KM       COMBINE HYDROGRAPHS SUB39 & SUB40
  215     HC     2

  216     KK   SUB41
  217     KM       RUNOFF FROM SUB-BASIN 41 & ROUTE CP 41
  218     BA   .7911
  219     LS           74   10.1
  220     UK    280  .2386    .20    100
  221     RK   9400  .0282   .045          TRAP    50     3    YES
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 222        KK  SUB42
 223        KM      RUNOFF FROM SUB-BASIN 42
 224        BA  .5844
 225        LS          78   23.3
 226        UK   280  .2386   .20    100
 227        RK  8750  .0573  .045         TRAP    20     3

 228        KK  SUB43
 229        KM      RUNOFF FROM SUB-BASIN 43
 230        BA 1.0665
 231        LS          85   10.5
 232        UK   260  .0515   .20    100
 233        RK  7400  .0255  .045         TRAP    25     3

 234        KK  SUB44
 235        KM      RUNOFF FROM SUB-BASIN 44
 236        BA  .8389
 237        LS          85    8.1
 238        UK   260  .0515   .20    100
 239        RK  9840  .0622  .045         TRAP    25     3

 240        KK   CP45
 241        KM      COMBINE HYDROGRAPHS SUB43 & SUB44
 242        HC     2

 243        KK  SUB45
 244        KM      RUNOFF FROM SUB-BASIN 45 & ROUTE CP 45
 245        BA  .2037
 246        LS          81   14.5
 247        UK   125  .1166   .20    100
 248        RK  3600  .0366  .045         TRAP    30     3    YES

 249        KK SUB45A
 250        KM      RUNOFF FROM SUB 45A
 251        BA  .1720
 252        LS          86    6.9
 253        UK   275  .2200   .20    100
 254        RK  5400  .0411  .045         TRAP    15     3

 255        KK  SUB46
 256        KM      RUNOFF FROM SUB-BASIN 46
 257        BA  .9268
 258        LS          86    3.7
 259        UK   265  .4958   .20    100
 260        RK  3300  .2271  .045  .111   TRAP    10     3
 261        RK  7100  .0535  .045         TRAP    25     3

 262        KK   CP47
 263        KM      COMBINE HYDROGRAPHS SUB45, SUB45A, & SUB46
 264        HC     3
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  265     KK  SUB47
  266     KM      RUNOFF FROM SUB-BASIN 47 & ROUTE CP 47
  267     BA  .3757
  268     LS          77    8.6
  269     UK   375  .1000    .20    100
  270     RK  9600  .0217   .045          TRAP     50      3    YES

  271     KK   CP48
  272     KM      COMBINE HYDROGRAPHS SUB41, SUB42, & SUB47
  273     HC     3

  274     KK  SUB48
  275     KM      RUNOFF FROM SUB-BASIN 48 & ROUTE CP 48
  276     BA  .0438
  277     LS          73    6.9
  278     UK   150  .0733    .20    100
  279     RK  1300  .0338   .045          TRAP     75      3    YES

  280     KK  SUB50
  281     KM      RUNOFF FROM SUB-BASIN 50
  282     BA  .3580
  283     LS          84    2.8
  284     UK   300  .3555    .20    100
  285     RK   730  .1506   .045   .036   TRAP     10      3
  286     RK  6400  .0453   .045          TRAP     25      3

  287     KK   CP51
  288     KM      COMBINE HYDROGRAPHS SUB 48 & SUB 50
  289     HC     2

  290     KK   2004     DIV
  291     KM      DIVERT FLOW TO SUB 2005
  292     KM      THIS DIVERT OCCURS AT A BRAIDED CHANNEL BIFURCATION LOCATED 1000 FEET
  293     KM      SOUTH OF THE EAST END OF PINNACLE PEAK ROAD.
  294     KM      THIS IS AN ACTIVE ALLUVIAL FAN APEX.
  295     DT   2003
  296     DI     0  15000
  297     DQ     0  15000

  298     KK  SUB49
  299     KM      RUNOFF FROM SUB-BASIN 49
  300     BA  .3528
  301     LS          79    6.9
  302     UK   135  .0758    .20    100
  303     RK  5400  .0370   .045          TRAP     30      3

  304     KK   49.1     CP
  305     KM      COMBINE SUB 49 & NON-DIVERTED FLOW FROM DIV 2004
  306     HC     2
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

307       KK  SUB51
308       KM       RUNOFF FROM SUB-BASIN 51 & ROUTE CP 49.1
309       BA  1.0201
310       LS           72    12.8
311       UK     94  .0213    .10     100
312       RK   6400  .0329   .045          TRAP   1500      2    YES

313       KK    52A     SUB
314       KM       RUNOFF FROM SUB-BASIN 52A & ROUTE SUB 51
315       BA  1.0474
316       LS           71    17.7
317       UK     76  .0213    .10     100
318       RK   5800  .0300   .045          TRAP   2500      2    YES

319       KK    52.2      CP
320       KM       COMBINE SUB 52A & CP 52.1
321       HC      2

322       KK    52A1      CP
323       KM       ROUTE RUNOFF FROM CP 52.2 DOWN PIMA ROAD CHANNEL TO COMBINE WITH
324       KM       RUNOFF FROM SUB 53A.
325       RS      1   FLOW     -1
326       RC   .035   .035   .035   5300  .0150
327       RX      0      8      9     21     91    103    104    112
328       RY     10      6      6      0      0      6      6     10

329       KK    53A     SUB
330       KM       RUNOFF FROM SUB-BASIN 53A
331       BA   .3329
332       LS           74      18
333       UK     67  .0213    .10     100
334       RK   3900  .0196   .045          TRAP     50     50

335       KK    53A1      CP
336       KM       COMBINE SUB 53A & CP 52A1
337       HC      2

338       KK   DB3.1      CP
339       KM       ROUTE CP 53A1 TO DETENTION BASIN No.3
340       RS      1   FLOW     -1
341       RC   .035   .035   .035   2200  .0150
342       RX      0      8      9     21     91    103    104    112
343       RY     10      6      6      0      0      6      6     10

344       KK     CN6     SUB
345       KM       RUNOFF FROM SUB CN6 (REVISED: 5/1/90)
346       BA  1.3659
347       LS           74    40.3
348       UK    100  .0150    .15     100
349       RK   1400  .0100   .018  .1921   TRAP     30      5
350       RK   9000  .0070   .040          TRAP    100     20
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

351       KK    DB3     CP
352       KM       COMBINE CP DB3.1 & SUB CN6
353       KM       THIS IS THE TOTAL INFLOW TO DETENTION BASIN No.3
354       HC     2

355       KK    53R     DAM
356       KM       PERFORM RESERVOIR ROUTING OPERATION FOR DETENTION BASIN No.3
357       KM       USE SV/SE DATA PROVIDED BY STANLEY & ASSC.  THIS DATA HAS BEEN EXTENDED
358       KM       ABOVE ELEV. 1620 BY R. WARD.  SQ/SE DATA IS BASED ON 2-4x10 & 1-4x5
359       KM       BOX CULVERTS OPERATING UNDER INLET CONTROL.  CULVERT INVERTS ARE AT
360       KM       ELEV. 1600
361       RS     1   STOR
362       SQ     0    210    382    575    775    912   1175   1375   1550   1700
363       SQ  1850   2000   2125   2250   2375   2500
364       SE  1600   1602   1603   1604   1605   1606   1608   1610   1612   1614
365       SE  1616   1618   1620   1622   1624   1626
366       SV     0   1.80   9.80  28.40     59   99.9  148.8  201.5  255.0  309.2
367       SV 364.3  420.2  476.9  534.4  592.6  711.6  833.8  959.2 1219.6 1354.6
368       SE  1600   1601   1602   1603   1604   1605   1606   1607   1608   1609
369       SE  1610   1611   1612   1613   1614   1616   1618   1620   1624   1626
370       SS  1625    100    2.9    1.5
371       ST  1626    100    2.9    1.5
        * ************************************************************************
        *          ROUTE OUTFLOW FROM DETENTION BASIN No. 3 TO CORE SOUTH CHANNELS
        *
        *          A "CS" SUFFIX HAS BEEN ADDED TO THE ORIGINAL, SLA CORE SOUTH
        *          SUB-BASIN NUMBERS TO DISTINGUISH THEM FROM OTHER, UPSTREAM
        *          SUB-BASINS WITH THE SAME NUMBER.
        * ************************************************************************

372       KK    200     CP
373       KM       USE DIVERT ROUTINE TO MODEL DUAL OUTLETS FROM DETENTION BASIN #3 IN
374       KM       CORE NORTH. THE WESTERN OUTLET TO THE HAYDEN ROAD CHANNEL IS A WEIR
375       KM       OUTLET. THE EASTERN OUTLET IS A CONCRETE BOX CULVERT. THIS OPERATION
376       KM       DIVERTS FLOW TO THE EASTERN OUTLET, WHICH IS A DESIGNATED AS CP 201.
377       KM       DIVERT RATIOS WERE CHANGED ON 8/10/90 TO REFLECT A SINGLE OUTLET
378       KM       NEAR THE EAST END OF THE DETENTION BASIN, PER STANLEY & ASSOCIATES
379       DT   53RD
380       DI     0    669    715   1858   3157
381       DQ     0    669    715   1858   3157

382       KK    202     CP
383       KM       ROUTE CP 200 SOUTH ALONG HAYDEN ROAD TO CP 202.
384       RK   2100 0.0137  0.018          TRAP    100      1

385       KK   14CS    SUB
386       KM       RUNOFF FROM SUB 14
387       BA 0.1090
388       LS           75     90
389       UK   1133 0.0135   0.10    100
390       RK   2400 0.0065  0.018          TRAP      8      1
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  391     KK    203      CP
  392     KM       COMBINE CP 202 WITH SUB 14. THIS WILL BE THE TOTAL CHANNEL DISCHARGE
  393     KM       LEAVING THE INTERSECTION OF HAYDEN RD AND UNION HILLS RD.
  394     HC      2

  395     KK    204      CP
  396     KM       ROUTE CP 203 T0 CP 204
  397     RK   3550 0.0130  0.018          TRAP    100      1

  398     KK  15ACS     SUB
  399     KM       RUNOFF FROM SUB 15A
  400     BA 0.0996
  401     LS           75      90
  402     UK   2170 0.0133   0.10     100
  403     RK   3550 0.0130  0.018          TRAP    100      1

  404     KK  15BCS     SUB
  405     KM       RUNOFF FROM SUB 15B
  406     BA 0.0944
  407     LS           75      90
  408     UK   2700 0.0130   0.10     100
  409     RK   1590 0.0038  0.018          TRAP      8      1

  410     KK    205      CP
  411     KM       COMBINE SUB 15A WITH 15B. THIS IS THE TOTAL RUNOFF FROM SUB 15.
  412     HC      2

  413     KK    206      CP
  414     KM       COMBINE CP 204 WITH CP 205. THIS IS THE TOTAL RUNOFF AT THE
  415     KM       INTERSECTION OF HAYDEN ROAD AND BELL ROAD.
  416     HC      2

  417     KK    201      CP
  418     KM       RETRIEVE DIVERTED OUTFLOW FROM EAST END OF DETENTION BASIN IN SUB 53
  419     DR   53RD

  420     KK    207      CP
  421     KM       ROUTE CP 201 TO CP 207
  422     RK   3040 0.0141  0.018          TRAP     40      1

  423     KK  21ACS     SUB
  424     KM       RUNOFF FROM SUB 21A
  425     BA 0.1041
  426     LS           75      90
  427     UK   1800 0.0164   0.10     100
  428     RK   2300 0.0070  0.018          TRAP      8      1

  429     KK  21BCS     SUB
  430     KM       RUNOFF FROM SUB 21B
  431     BA 0.0762
  432     LS           75      90
  433     UK   1900 0.0184   0.10     100
  434     RK   2320 0.0151  0.018          TRAP      8      1
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

435       KK    208     CP
436       KM       COMBINE SUB 21A WITH 21B. THIS IS THE TOTAL RUNOFF FROM SUB 21.
437       KM       CORE SOUTH
438       HC      2

439       KK    209     CP
440       KM       ROUTE CP 208 TO CP 209
441       RK   1600  0.0119   0.018          TRAP      8      1

442       KK   17BCS     SUB
443       KM       RUNOFF FROM SUB 17B
444       BA  0.0299
445       LS            75      90
446       UK   1400  0.0157    0.10     100
447       RK   1000  0.0100   0.018          TRAP      8      1

448       KK    210     CP
449       KM       COMBINE SUB 17B WITH CP 209. THIS IS THE PEAK DISCHARGE THROUGH THE
450       KM       CHANNEL ALONG THE SOUTH SIDE OF SUB 17.
451       HC      2

452       KK   17ACS     SUB
453       KM       RUNOFF FROM SUB 17A
454       BA  0.0423
455       LS            75      90
456       UK   1400  0.0157    0.10     100
457       RK   2150  0.0116   0.018          TRAP      8      1

458       KK    211     CP
459       KM       COMBINE SUB 17A WITH CP 210
460       HC      2

461       KK    212     CP
462       KM       ROUTE CP 211 TO CP 212
463       RK   1640  0.0052   0.018          TRAP     10      1

464       KK   16BCS     SUB
465       KM       RUNOFF FROM SUB 16B
466       BA  0.0722
467       LS            75      90
468       UK   1760  0.0159    0.10     100
469       RK   1640  0.0052   0.018          TRAP     10      1

470       KK    213     CP
471       KM       COMBINE SUB 16B WITH CP 212. THIS IS THE PEAK DISCHARGE THROUGH THE
472       KM       CHANNEL ALONG THE SOUTH SIDE OF SUB 16.
473       HC      2

474       KK   16ACS     SUB
475       KM       RUNOFF FROM SUB 16A
476       BA  0.0331
477       LS            75      90
478       UK   1300  0.0146    0.10     100
479       RK   2000  0.0110   0.018          TRAP      8      1
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  480     KK    214     CP
  481     KM       COMBINE SUB 16A WITH CP 213, AND CP 207
  482     HC      3

  483     KK    215     CP
  484     KM       ROUTE CP 214 TO CP 215 (BELL ROAD)
  485     RK   1600  0.0131   0.018          TRAP     40      1

  486     KK   19CS     SUB
  487     KM       RUNOFF FROM SUB 19
  488     BA  0.0225
  489     LS            75      90
  490     UK    680  0.0124    0.10     100
  491     RK    920  0.0050   0.018          TRAP      8      1

  492     KK    216     CP
  493     KM       ROUTE SUB 19 TO CP 216
  494     RK    980  0.0122   0.018          TRAP      8      1

  495     KK    217     CP
  496     KM       ROUTE CP 216 TO CP 217
  497     RK    950  0.0042   0.018          TRAP      8      1

  498     KK   18CS     SUB
  499     KM       RUNOFF FROM SUB 18
  500     BA  0.0932
  501     LS            75      90
  502     UK   1350  0.0137    0.10     100
  503     RK   2040  0.0029   0.018          TRAP      8      1

  504     KK    218     CP
  505     KM       COMBINE CP 217 WITH SUB 18. THIS IS THE PEAK DISCHARGE THROUGH THE
  506     KM       CHANNEL ALONG THE SOUTH SIDE OF SUB 18.
  507     HC      2

  508     KK    219     CP
  509     KM       COMBINE CP 215 WITH CP 218. THIS IS THE PEAK DISCHARGE PASSING BELL
  510     KM       ROAD AT THIS LOCATION.
  511     HC      2

  512     KK  20ACS     SUB
  513     KM       RUNOFF FROM SUB 20A. THIS IS THE PEAK DISCHARGE THROUGH THE CHANNEL
  514     KM       ALONG THE WEST SIDE OF SUB 20.
  515     BA  0.0264
  516     LS            75      90
  517     UK   1300  0.0154    0.10     100
  518     RK   1870  0.0112   0.018          TRAP      8      1

  519     KK    220     CP
  520     KM       ROUTE SUB 20A TO CP 220
  521     RK    880  0.0011   0.018          TRAP      8      1
1
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

522       KK  20BCS     SUB
523       KM       RUNOFF FROM SUB 20B
524       BA  0.0744
525       LS           75     90
526       UK   1650  0.0158    0.10     100
527       RK    880  0.0011   0.018  0.0372    TRAP      8      1

528       KK    221      CP
529       KM       COMBINE SUB 20B WITH CP 220. THIS IS THE PEAK DISCHARGE PASSING BELL
530       KM       ROAD AT THIS LOCATION.
531       HC      2

532       KK   TPC2     SUB
533       KM       RUNOFF FROM THE TPC GOLF COURSE BETWEEN HAYDEN & PIMA ROADS.
534       KM       THE CURVE NUMBER HAS BEEN INCREASED FROM 74 TO 88 TO REFLECT AMC 3 THAT
535       KM       WILL RESULT FROM CONSTANT WATERING OF THE GOLF COURSE.
536       BA  .4138
537       LS           88
538       UK    150  .0100    .15     100
539       RK   1400  .0150   .035          TRAP    100     20

540       KK    222      CP
541       KM       COMBINE CP 206, CP 219, CP 221, & SUB TPC2
542       KM       THIS IS THE TOTAL INFLOW TO CAP DIKE No.3 FROM THE CORE SOUTH SYSTEM
543       KM       LOCATED BETWEEN HAYDEN & PIMA ROADS.
544       HC      4
          *          *************                          ****************
          *          ************* END OF CORE SOUTH CHANNEL SYSTEM  ****************
          *          *************                          ****************

545       KK   30R2     RET
546       KM       RETRIEVE LOW-FLOW DIVERTS FROM SUB 30R
547       DR   30R2

548       KK   31A2     RET
549       KM       RETRIEVE LOW-FLOW DIVERTS FROM SUB 31A
550       DR   31A2

551       KK   31B1      CP
552       KM       COMBINE LOW-FLOW DIVERTS, RET 30R2 & RET 31A2
553       HC      2

554       KK    31B     SUB
555       KM       RUNOFF FROM SUB-BASIN 31B & ROUTE CP 31B1
556       BA  .9898
557       LS           74   13.8
558       UK    102  .0213    .10     100
559       RK   8800  .0228   .045          TRAP     50    130     YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  560     KK   36.6     RET
  561     KM        RETRIEVE LOW-FLOW DIVERT FROM SUB 36L1
  562     DR   36.6

  563     KK   36L2     SUB
  564     KM        RUNOFF FROM SUB 36L2 & ROUTE LOW-FLOW DIVERTS (RET 36.6)
  565     BA  .1736
  566     LS            74    18.4
  567     UK    116  .0213    .10     100
  568     RK   3000  .0269    .045          TRAP     50    130     YES

  569     KK   32.1      CP
  570     KM        COMBINE SUB 31B & SUB 36L2
  571     HC      2

  572     KK    32A     SUB
  573     KM        RUNOFF FROM SUB-BASIN 32A & ROUTE CP 32.1
  574     BA  .8745
  575     LS            74    20.0
  576     UK     67  .0213    .10     100
  577     RK   8000  .0214    .045          TRAP     50    130     YES

  578     KK   32A1     DIV
  579     KM        DIVERT FLOW AT HAYDEN ROAD INTXN WITH DEER VALLEY ROAD
  580     DT   32A2
  581     DI      0    100   10000
  582     DQ      0    100   10000

  583     KK   CNC1      CP
  584     KM        ROUTE DIV 32A1 TO CP CNC1
  585     RS      1   FLOW     -1
  586     RC   .035   .035   .035   1950  .0050
  587     RX      0      8      9     21     71     83     84     92
  588     RY     10      6      6      0      0      6      6     10

  589     KK  36.10     RET
  590     KM        RETRIEVE LOW-FLOW DIVERT FROM SUB 36R1
  591     DR  36.10

  592     KK   37.5     RET
  593     KM        RETRIEVE LOW-FLOW DIVERT FROM SUB 37B
  594     DR   37.5

  595     KK   37A1      CP
  596     KM        COMBINE LOW-FLOW DIVERTS, RET 36.10 & RET 37.5
  597     HC      2

  598     KK    37A     SUB
  599     KM        RUNOFF FROM SUB-BASIN 37A & ROUTE LOW-FLOW DIVERTS (CP 37A1)
  600     BA  .6765
  601     LS            74    24.8
  602     UK     61  .0213    .10     100
  603     RK   4800  .0237    .045          TRAP     50    130     YES
1
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

604       KK   CNC2     CP
605       KM      ROUTE SUB 37A TO CP CNC2
606       RS     1   FLOW     -1
607       RC   .035   .035   .035   3000  .0125
608       RX     0     8     9     21    71    83    84    92
609       RY    10     6     6      0     0     6     6    10

610       KK   CNC3     CP
611       KM      COMBINE CP CNC1 & CP CNC2
612       HC     2

613       KK   CNC4     CP
614       KM      ROUTE CP CNC3 THROUGH GOLF COURSE TO CP CNC4
615       KM      BW=100',  Z=20:1
616       RS     1   FLOW     -1
617       RC   .035   .035   .035   4200  .0070
618       RX     0    20    21    201   301   481   482   502
619       RY    10     9     9      0     0     9     9    10

620       KK    CN1    SUB
621       KM      RUNOFF FROM SUB CN1
622       KM      COLLECTOR CHANNEL HAS BEEN ADDED TO SIMULATE STREET FLOW
623       KM      THIS SAME COLLECTOR CHANNEL IS USED FOR ALL CORE NORTH SUB-BASINS
624       BA   .7361
625       LS          74   22.8
626       UK    100  .0150   .15   100
627       RK   1400  .0100   .018  .147  TRAP   30    5
628       RK   6000  .0070   .040        TRAP  100   20

629       KK   CNC5     CP
630       KM      COMBINE CP CNC4 & SUB CN1
631       HC     2

632       KK  DB1.1     CP
633       KM      ROUTE CP CNC5 TO DETENTION BASIN No.1 LOCATED AT THE INTXN OF HAYDEN
634       KM      ROAD & THOMPSON PEAK PARKWAY.
635       RS     1   FLOW     -1
636       RC   .035   .035   .035   1200  .0150
637       RX     0     8     9     21    71    83    84    92
638       RY    10     6     6      0     0     6     6    10

639       KK    CN2    SUB
640       KM      RUNOFF FROM SUB CN2 (REVISED: 5/1/90)
641       BA   .1507
642       LS          74   28.1
643       UK    100  .0150   .15   100
644       RK   1000  .0100   .018  .111  TRAP   30    5
645       RK   5000  .0150   .045        TRAP   25    2
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

646       KK    CN3     SUB
647       KM        RUNOFF FROM SUB CN3
648       BA   .3924
649       LS            74    47.7
650       UK    100   .0150    .15    100
651       RK   1400   .0100   .018   .078   TRAP     30      5
652       RK   3500   .0100   .035          TRAP     25      2

653       KK    DB1     CP
654       KM        COMBINE CP DB1.1, SUB CN2, & SUB CN3
655       KM        THIS IS THE TOTAL FLOW INTO DETENTION BASIN No.1
656       HC      3

657       KK   38R-1     DAM
658       KM        PERFORM RESERVOIR ROUTING OPERATION FOR DETENTION BASIN No.1
659       KM        USE RESERVOIR DATA PROVIDED BY CARTER & ASSC.
660       RS      1    STOR
661       SQ      0     23     64    115    156    197    231    262    289    313
662       SQ    337    358    378    398    416    434    450
663       SE   1642   1643   1644   1645   1646   1647   1648   1649   1650   1651
664       SE   1652   1653   1654   1655   1656   1657   1658
665       SV      0    .77    4.3   11.1   23.1   40.1   60.4     81    103    127
666       SV  155.5    184    213    248    280    317    352
667       SE   1642   1643   1644   1645   1646   1647   1648   1649   1650   1651
668       SE   1652   1653   1654   1655   1656   1657   1658
669       SS   1657
670       ST   1658    100    2.9    1.5

671       KK   DB2.1     CP
672       KM        ROUTE OUTFLOW FROM DETENTION BASIN No.1 TO DETENTION BASIN No.2
673       RS      1    FLOW     -1
674       RC   .035   .035   .035   2500  .0150
675       RX      0      8      9     21     71     83     84     92
676       RY     10      6      6      0      0      6      6     10

677       KK    CN5     SUB
678       KM        RUNOFF FROM SUB CN5
679       KM        DRAINAGE AREA REVISED ON 8/10/90 TO REFLECT ADDITION OF 0.1040 SQ MI
680       KM        FROM CORRIGAN-MARLEY PARCEL.  NO OTHER PARAMETERS WERE CHANGED.
681       BA   .6980
682       LS            74    72.8
683       UK    100   .0150    .15    100
684       RK   1400   .0100   .018   .119   TRAP     30      5
685       RK   2500   .0150   .035          TRAP     50      2

686       KK    DB2     CP
687       KM        COMBINE CP DB2.1 & SUB CN5
688       KM        THIS IS THE TOTAL INFLOW TO DETENTION BASIN No.2
689       HC      2
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

690       KK  38R-2    DAM
691       KM       PERFORM RESERVOIR ROUTING OPERATION FOR DETENTION BASIN No.2
692       KM       USE RESERVOIR DATA PROVIDED BY CARTER & ASSC.
693       RS     1   STOR
694       SQ     0    30    85   146   220   289   338   395   445   490
695       SQ   530
696       SE  1600  1601  1602  1603  1604  1605  1606  1607  1608  1609
697       SE  1610
698       SV     0   .12   1.0   3.2   6.9  11.8  17.7  24.7  32.6  41.4
699       SV  51.1
700       SE  1600  1601  1602  1603  1604  1605  1606  1607  1608  1609
701       SE  1610
702       SS  1609
703       ST  1610   100   2.9   1.5
          *   ***************************************************************************
          *        ROUTE OUTFLOW FROM 38R-2 THROUGH CORE SOUTH CHANNEL SYSTEM.
          *
          *        A "CS" SUFFIX HAS BEEN ADDED TO THE ORIGINAL, SLA CORE SOUTH
          *        SUB-BASIN NUMBERS TO DISTINGUISH THEM FROM OTHER, UPSTREAM
          *        SUB-BASINS WITH THE SAME NUMBER.
          *   ***************************************************************************

704       KK   108     CP
705       KM       ROUTE OUTFLOW FROM DETENTION BASIN No.2 TO CP 108
706       RK  1600 0.0144  0.018          TRAP    50     1

707       KK   60CS    SUB
708       KM       RUNOFF FROM SUB 60
709       BA  .0386
710       LS          75    90
711       UK   830 0.0139   0.10   100
712       RK  1300 0.0035  0.018          TRAP     8     1

713       KK   109     CP
714       KM       ROUTE SUB 60CS TO CP 109
715       RK  1640 0.0055  0.018          TRAP     8     1

716       KK 4A-BCS    SUB
717       KM       RUNOFF FROM SUB 4A AND 4B
718       BA 0.0590
719       LS          75    90
720       UK  1053 0.0138   0.10   100
721       RK  1640 0.0055  0.018          TRAP     8     1

722       KK   110     CP
723       KM       COMBINE CP 109 AND SUB 4A-4B.
724       KM       THIS IS THE TOTAL CONTRIBUTION FROM THE CHANNEL ALONG THE SOUTH
725       KM       SIDE OF SUB 4A-4B.
726       HC     2
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 727        KK    111      CP
 728        KM        COMBINE CP 108 AND CP 110
 729        HC      2

 730        KK    112      CP
 731        KM        ROUTE CP 111 TO CP 112
 732        RK   1920  0.0115   0.018          TRAP     50      1

 733        KK  12ACS     SUB
 734        KM        RUNOFF FROM SUB 12A
 735        BA  0.0445
 736        LS            75      90
 737        UK    980  0.0143    0.10     100
 738        RK   1250  0.0028   0.018          TRAP      8      1

 739        KK    113      CP
 740        KM        ROUTE SUB 12A TO CP 113
 741        RK    690  0.0029   0.018          TRAP      8      1

 742        KK   11CS     SUB
 743        KM        RUNOFF FROM SUB 11
 744        BA  0.0396
 745        LS            75      90
 746        UK   1450  0.0148    0.10     100
 747        RK    690  0.0029   0.018          TRAP      8      1

 748        KK   113A      CP
 749        KM        COMBINE SUB 11CS WITH CP 113. THIS IS THE PEAK DISCHARGE THAT WILL
 750        KM        FLOW THROUGH THE CHANNEL ALONG THE SOUTH SIDE OF SUB 11 IN CORE SOUTH.
 751        HC      2

 752        KK    114      CP
 753        KM        ROUTE CP 113A TO CP 114
 754        RK    330  0.0029   0.018          TRAP      8      1

 755        KK    115      CP
 756        KM        COMBINE CP 112 WITH CP 114
 757        HC      2

 758        KK    116      CP
 759        KM        ROUTE CP 115 TO CP 116
 760        RK   1080  0.0106   0.018          TRAP     50      1

 761        KK 3A-BCS     SUB
 762        KM        RUNOFF FROM SUB 3A-3B
 763        BA  0.1676
 764        LS            75      90
 765        UK   2800  0.0129    0.10     100
 766        RK   1760  0.0114   0.018          TRAP     50      1
1
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

767       KK    118      CP
768       KM       COMBINE CP 116, AND SUB 3A-B
769       HC      2

770       KK    119      CP
771       KM       ROUTE CP 118 TO CP 119
772       RK   1150  0.0099   0.018          TRAP      50       1

773       KK    1BCS     SUB
774       KM       RUNOFF FROM SUB 1B
775       BA  0.0427
776       LS            75      90
777       UK    790  0.0149    0.10     100
778       RK    910  0.0099   0.018          TRAP      50       1

779       KK    119B     CP
780       KM       ROUTE SUB 1B TO CP 119B
781       RK    280  0.0099   0.018          TRAP      50       1

782       KK    119A     CP
783       KM       COMBINE CP 119 AND CP 119B
784       KM       THIS IS THE TERMINUS OF THE CHANNEL ALONG THE WEST SIDE OF PARCEL #1.
785       KM       WATER WILL ENTER THE CAP DETENTION BASIN AT THIS POINT.
786       HC      2

787       KK    1ACS     SUB
788       KM       RUNOFF FROM SUB 1A
789       KM       RUNOFF FROM THIS PARCEL WILL FLOW DIRECTLY SOUTH INTO THE CAP
790       KM       DETENTION BASIN.
791       BA  0.0073
792       LS            75      90
793       UK   1123  0.0129    0.10     100
794       RK      1  0.0010   0.018          TRAP       8       1

795       KK    2CS      SUB
796       KM       RUNOFF FROM SUB 2.
797       KM       RUNOFF FROM THIS SUB-BASIN WILL FLOW DIRECTLY TO THE SOUTH, BOTH
798       KM       THROUGH AND ALONG THE EAST SIDE OF SUB 1. NO CHANNEL IS PROVIDED
799       KM       FOR THIS SMALL BASIN SINCE IT WILL FLOW INTO THE CAP DETENTION BASIN.
800       BA  0.0105
801       LS            75      90
802       UK    830  0.0108    0.10     100
803       RK      1  0.0014   0.018          TRAP       8       1

804       KK  10ABCS     SUB
805       KM       RUNOFF FROM SUB 10A AND 10B
806       BA  0.1447
807       LS            75      90
808       UK   1660  0.0142    0.10     100
809       RK   1530  0.0026   0.018  0.0724    TRAP       8       1
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  810     KK    120     CP
  811     KM       ROUTE SUB 10A-B TO CP 120
  812     RK    860  0.0140   0.018          TRAP     8     1

  813     KK   13CS     SUB
  814     KM       RUNOFF FROM SUB 13
  815     BA  0.0204
  816     LS            75     90
  817     UK    650  0.0129    0.10    100
  818     RK    920  0.0022   0.018          TRAP     8     1

  819     KK    121     CP
  820     KM       ROUTE SUB 13 TO CP 121
  821     RK    850  0.0041   0.018          TRAP     8     1

  822     KK  12BCS     SUB
  823     KM       RUNOFF FROM SUB 12B
  824     BA  0.0157
  825     LS            75     90
  826     UK    645  0.0122    0.10    100
  827     RK    850  0.0041   0.018          TRAP     8     1

  828     KK    122     CP
  829     KM       COMBINE CP 121 AND SUB 12B
  830     KM       THIS IS THE PEAK DISCHARGE THROUGH THE CHANNEL ALONG THE SOUTH
  831     KM       BOUNDARY OF SUB 12B.
  832     HC     2

  833     KK    123     CP
  834     KM       COMBINE CP 120 AND CP 122
  835     HC     2

  836     KK    124     CP
  837     KM       ROUTE CP 123 TO CP 124.
  838     KM       THIS IS THE PEAK DISCHARGE (AT BELL ROAD) INTO THE CAP DETENTION BASIN
  839     KM       FROM THE CHANNEL LOCATED APPROXIMATELY 1/3 MILE WEST OF HAYDEN ROAD.
  840     RK   3000  0.0130   0.018          TRAP    10     1

  841     KK    125     CP
  842     KM       COMBINE CP 119A, SUB 1A, SUB 2, & CP 124
  843     HC     4

  844     KK    PR1     SUB
  845     KM       RUNOFF FROM RESIDENTIAL & COMMERCIAL AREAS NEAR PRINCESS RESORT.
  846     KM       THIS AREA IS LOCATED ALONG THE NORTH SIDE OF THE THE TPC GOLF COURSE,
  847     KM       BETWEEN SCOTTSDALE & HAYDEN ROADS.
  848     BA   .2878
  849     LS            74     40
  850     UK    150   .0100    .15    100
  851     RK   3000   .0150   .035          TRAP    50     2
1
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

852       KK   TPC1     SUB
853       KM       RUNOFF FROM THE TPC GOLF COURSE BETWEEN SCOTTSDALE & HAYDEN ROADS.
854       KM       THE CURVE NUMBER HAS BEEN INCREASED FROM 74 TO 88 TO REFLECT AMC 3 THAT
855       KM       WILL RESULT FROM CONSTANT WATERING OF THE GOLF COURSE.
856       BA  .3246
857       LS          88
858       UK   150  .0100   .15    100
859       RK  1400  .0150  .035          TRAP    100     20

860       KK   126     CP
861       KM       COMBINE CP 125, SUB PR1, & TPC1
862       KM       THIS IS THE TOTAL INFLOW TO CAP DIKE No.3 FROM THE CORE SOUTH SYSTEM
863       KM       LOCATED BETWEEN SCOTTSDALE & HAYDEN ROADS.
864       HC     3
          *    *************                          ************************
          *    ************* END OF CORE SOUTH CHANNEL SYSTEM ************************

865       KK   3IN     CP
866       KM       COMBINE CP 126 & CP 222
867       KM       THIS IS THE TOTAL INFLOW TO CAP DIKE No.3
868       HC     2

869       KK  DIKE3     DAM
870       KM       ROUTE CP 3IN THROUGH CAP DIKE NO.3
871       KO     1     2
872       RS     1   STOR
873       SV     0     2     7    15    27    43    68   125   243   447
874       SV   749  1130  1586  2112  2695  3328  4001  4757  5580  6484
875       SE  1504  1506  1508  1510  1512  1514  1516  1518  1520  1522
876       SE  1524  1526  1528  1530  1532  1534  1536  1538  1540  1542
877       SS  1541   100   2.9   1.5
878       ST  1542   100   2.9   1.5
          *    ******************                          ***************
          *    ****************** BEGIN DRAINAGE AREA FOR CAP DIKE No.2
          *    ******************                          ***************

879       KK  SUB7B
880       KM       RUNOFF FROM SUB-BASIN 7B
881       BA  .5334
882       PB  4.25
883       PC     0  .005  .009  .010  .013  .019  .021  .028  .032  .044
884       PC  .057  .100  .660  .745  .776  .800  .816  .830  .840  .850
885       PC  .861  .868  .878  .884  .891  .900  .905  .912  .919  .923
886       PC  .930  .934  .939  .944  .950  .958  .961  .963  .969  .971
887       PC  .974  .979  .981  .985  .989  .991  .993  .996 1.000
888       LS          78   8.2
889       UK   255  .0262   .20    100
890       RK 12200  .0197  .045          TRAP     40     20
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  891     KK    11A     SUB
  892     KM        RUNOFF FROM SUB 11A
  893     BA   .3171
  894     LS            74     7.9
  895     UK    150   .0425    .20     100
  896     RK   6200   .0226   .045          TRAP     30     50

  897     KK    8.1      CP
  898     KM        COMBINE SUB7B & SUB 11A
  899     HC      2

  900     KK    8B1     SUB
  901     KM        RUNOFF FROM SUB 8B1 & ROUTE CP 8.1
  902     BA   .6306
  903     LS            74     9.9
  904     UK    116   .0213    .10     100
  905     RK   5300   .0196   .045          TRAP     30    100    YES

  906     KK   8B1.2     CP
  907     KM        ROUTE SUB 8B1 DOWN SCOTTSDALE ROAD CHANNEL TO CP 8B1.2
  908     RS      1   FLOW     -1
  909     RC   .035    .035    .035    3400   .0171
  910     RX      0      8       9      21     46     58     59     67
  911     RY     10      6       6       0      0      6      6     10

  912     KK   8B1.3     DIV
  913     KM        DIVERT LOW-FLOWS TO EXISTING WASHS WEST OF SCOTTSDALE ROAD (SUB 8B2)
  914     DT   8B1.4
  915     DI      0    106     500    1000   5000
  916     DQ      0      0       0       0      0

  917     KK    12R1     CP
  918     KM        ROUTE NON-DIVERTED FLOW DOWN SCOTTSDALE ROAD CHANNEL TO CP 12R1
  919     RS      1   FLOW     -1
  920     RC   .035    .035    .035    6500   .0171
  921     RX      0      8       9      21     61     73     74     82
  922     RY     10      6       6       0      0      6      6     10

  923     KK    11B     SUB
  924     KM        RUNOFF FROM SUB-BASIN 11B
  925     BA   .2547
  926     LS            74    11.9
  927     UK    150   .0425    .20     100
  928     RK   4700   .0213   .045          TRAP     30     50

  929     KK    12R     SUB
  930     KM        RUNOFF FROM SUB 12R & ROUTE SUB 11B
  931     BA  1.2375
  932     LS            74    22.3
  933     UK     95   .0213    .10     100
  934     RK   9900   .0214   .045          TRAP     50    100    YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

935       KK   12R2     CP
936       KM       ROUTE SUB 12R DOWN SCOTTSDALE ROAD CHANNEL TO CP 12R2
937       RS     1   FLOW     -1
938       RC   .035   .035   .035   3600  .0171
939       RX     0     8     9     21    61    73    74    82
940       RY    10     6     6      0     0     6     6    10

941       KK   12R3     CP
942       KM       COMBINE CP 12R1 & CP 12R2
943       HC     2

944       KK   12R4    DIV
945       KM       DIVERT LOW-FLOWS TO WEST SIDE OF SCOTTSDALE ROAD (SUB 13R)
946       DT   12R5
947       DI     0   145   500   1000   5000
948       DQ     0     0     0      0      0

949       KK    4B1     CP
950       KM       ROUTE NON-DIVERTED FLOW FROM DIV 12R4 TO CP 4B1
951       RS     1   FLOW     -1
952       RC   .035   .035   .035   3150  .0171
953       RX     0     8     9     21    61    73    74    82
954       RY    10     6     6      0     0     6     6    10

955       KK   SUB16
956       KM       RUNOFF FROM SUB-BASIN 16
957       BA  1.4570
958       LS           83    9.8
959       UK    217  .0581    .20    100
960       RK  14800  .0216   .045          TRAP    25     3

961       KK   SUB17
962       KM       RUNOFF FROM SUB-BASIN 17
963       BA  1.1851
964       LS           83    9.8
965       UK    285  .0421    .20    100
966       RK  12200  .0254   .045          TRAP    25     3

967       KK   SUB18
968       KM       RUNOFF FROM SUB-BASIN 18
969       BA  1.2641
970       LS           83    6.5
971       UK    285  .0421    .20    100
972       RK  10840  .0259   .045          TRAP    25     3

973       KK   CP19A
974       KM       COMBINE HYDROGRAPHS SUB16, SUB17, & SUB18
975       HC     3
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 976      KK  CP19B
 977      KM      ROUTE CP19A TO CP19B
 978      RK   1100  .0155  0.045          TRAP    35     3

 979      KK  SUB15
 980      KM      RUNOFF FROM SUB-BASIN 15
 981      BA  1.3702
 982      LS          82    5.4
 983      UK    217  .0581    .20    100
 984      RK  21200  .0236   .045          TRAP    25     3

 985      KK  CP19C
 986      KM      COMBINE HYDROGRAPHS SUB15 & CP19B
 987      HC     2

 988      KK  SUB19
 989      KM      RUNOFF FROM SUB-BASIN 19 & ROUTE CP 19C
 990      BA  .1872
 991      LS          84    7.2
 992      UK    275  .0800    .20    100
 993      RK   3730  .0352   .045   .160   TRAP    15     3
 994      RK   1800  .0200   .045          TRAP    50    30    YES

 995      KK  SUB20
 996      KM      RUNOFF FROM SUB-BASIN 20
 997      BA  .5698
 998      LS          84    3.6
 999      UK    300  .0750    .20    100
1000      RK   9640  .0197   .045          TRAP    15     3

1001      KK   CP21
1002      KM      COMBINE HYDROGRAPHS SUB19 & SUB20
1003      HC     2

1004      KK  SUB21
1005      KM      RUNOFF FROM SUB-BASIN 21 & ROUTE CP 21
1006      BA  3.6659
1007      LS          80    6.4
1008      UK    297  .0558    .20    100
1009      RK  27600  .0196   .045          TRAP    50    30    YES

1010      KK  SUB22
1011      KM      RUNOFF FROM SUB-BASIN 22
1012      BA  1.3860
1013      LS          84    5.1
1014      UK    225  .0590    .20    100
1015      RK  13000  .0238   .045          TRAP    25     3

1016      KK  SUB23
1017      KM      RUNOFF FROM SUB-BASIN 23
1018      BA  .3945
1019      LS          84    6.3
1020      UK    225  .0590    .20    100
1021      RK  10200  .0304   .045          TRAP    20     3
```

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

1022      KK   CP24
1023      KM       COMBINE HYDROGRAPHS SUB22 & SUB23
1024      HC     2

1025      KK  SUB24
1026      KM       RUNOFF FROM SUB-BASIN 24 & ROUTE CP 24
1027      BA  .4907
1028      LS           77    6.8
1029      UK    295  .0438    .20    100
1030      RK   6800  .0257   .045          TRAP     15      3     YES

1031      KK  SUB25
1032      KM       RUNOFF FROM SUB-BASIN 25
1033      BA 1.5166
1034      LS           85    9.0
1035      UK    295  .0438    .20    100
1036      RK  16700  .0302   .045          TRAP     25      3

1037      KK   CP26
1038      KM       COMBINE HYDROGRAPHS SUB24 & SUB25
1039      HC     2

1040      KK  SUB26
1041      KM       RUNOFF FROM SUB-BASIN 26 & ROUTE CP 26
1042      BA  .2231
1043      LS           78    6.9
1044      UK    200  .0250    .20    100
1045      RK   1400  .0217   .045          TRAP     60      7     YES

1046      KK   26.1    DIV
1047      KM       DIVERT FLOW FROM SUB 26 TO SUB 26A
1048      DT   26.2
1049      DI     0    500   1000  10000
1050      DQ     0    250    500   5000

1051      KK   21.1     CP
1052      KM       ROUTE DIV 26.1 TO OUTLET OF SUB 21
1053      RK  10600  .0263   .045          TRAP     35     10

1054      KK   CP27
1055      KM       COMBINE SUB 21 & CP 21.1
1056      HC     2

1057      KK   26.2    RET
1058      KM       RETRIEVE DIVERTED FLOW FROM CP 26
1059      DR   26.2

1060      KK SUB26A
1061      KM       RUNOFF FROM SUB 26A & ROUTE RET 26.2
1062      BA  .5251
1063      LS           74   14.5
1064      UK    200  .0250    .20    100
1065      RK  10000  .0263   .045          TRAP     35     10     YES
```

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

1066      KK   27.1     CP
1067      KM       COMBINE CP 27 & SUB 26A
1068      HC     2

1069      KK   27.2     CP
1070      KM       ROUTE CP 27.1 THROUGH NEW CHANNEL TO CP 27.2
1071      RS     1   FLOW     -1
1072      RC   .035   .035   .035   3150  .0227
1073      RX     0     8     9     21    171   183   184   192
1074      RY    10     6     6      0     0     6     6    10

1075      KK   SUB27
1076      KM       RUNOFF FROM SUB-BASIN 27
1077      BA   .6385
1078      LS           73   16.3
1079      UK    159  .0213   .10   100
1080      RK   3200  .0227   .035        TRAP   150     2

1081      KK   27.3     CP
1082      KM       COMBINE CP 27.2 & SUB 27
1083      HC     2

1084      KK   28A1     CP
1085      KM       ROUTE CP 27.3 THROUGH NEW CHANNEL TO PINNACLE PEAK ROAD
1086      RS     1   FLOW     -1
1087      RC   .035   .035   .035   4150  .0227
1088      RX     0     8     9     21    171   183   184   192
1089      RY    10     6     6      0     0     6     6    10

1090      KK    28A    SUB
1091      KM       RUNOFF FROM SUB-BASIN 28A
1092      BA   .6708
1093      LS           73   35.0
1094      UK     96  .0213   .10   100
1095      RK   4150  .0227   .035        TRAP   150     2

1096      KK   28A2     CP
1097      KM       COMBINE SUB 28A & CP 28A1
1098      HC     2

1099      KK    4B2     CP
1100      KM       ROUTE CP 28A2 TO CP 4B2
1101      RS     1   FLOW     -1
1102      RC   .035   .035   .035   1300  .0227
1103      RX     0     8     9     21    171   183   184   192
1104      RY    10     6     6      0     0     6     6    10

1105      KK    4B3     CP
1106      KM       COMBINE CP 4B1 & CP 4B2
1107      KM       THIS IS THE COMBINED FLOW AT RAWHIDE FROM CHANNELS 4C-4B & 4A-4B.
1108      HC     2
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1

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

1109      KK   28B1     CP
1110      KM      ROUTE CP 4B3 DOWN SCOTTSDALE ROAD CHANNEL TO CP 28B1
1111      RS     1   FLOW     -1
1112      RC   .035   .035   .035   3300  .0227
1113      RX     0     8     9     21    171   183   184   192
1114      RY    10     6     6      0     0     6     6    10

1115      KK    28B    SUB
1116      KM      RUNOFF FROM SUB 28B
1117      BA   .9182
1118      LS           74   53.3
1119      UK    96  .0213    .10    100
1120      RK  4750  .0227    .035          TRAP    150     2

1121      KK   28.1    DIV
1122      KM      DIVERT FLOW TO SIMULATE RUNOFF FROM SUB 28B THAT IS INTERCEPTED BY THE
1123      KM      CORE NORTH CHANNEL AT THE INTXN OF SCOTTSDALE & DEER VALLEY ROADS.
1124      KM      DIVERT RATIO IS BASED ON THE PERCENTAGE OF THE DOWNSTREAM BOUNDARY OF
1125      KM      SUB 28 THAT IS INTERCEPTED BY THE CORE NORTH CHANNEL.
1126      DT   28.2
1127      DI     0   100  10000
1128      DQ     0    20   2000

1129      KK   28B2     CP
1130      KM      COMBINE NON-DIVERTED FLOW FROM SUB 28B WITH CP 28B1
1131      HC     2

1132      KK   29A1     CP
1133      KM      ROUTE CP 28B2 DOWN RAWHIDE WASH CHANNEL TO CP 29A1
1134      RS     1   FLOW     -1
1135      RC   .035   .035   .035  10200  .0150
1136      RX     0     8     9     21    171   183   184   192
1137      RY    10     6     6      0     0     6     6    10

1138      KK    29A    SUB
1139      KM      RUNOFF FROM SUB 29A
1140      BA  1.7630
1141      LS           74   40.6
1142      UK    88  .0213    .10    100
1143      RK  2500  .0100    .035    .34   TRAP     25     2
1144      RK 10200  .0150    .035          TRAP    150     2

1145      KK   29A2     CP
1146      KM      COMBINE SUB 29A & CP 29A1
1147      HC     2

1148      KK  29.1A     CP
1149      KM      ROUTE CP 29A2 DOWN RAWHIDE WASH CHANNEL TO CAP DIKE No.2
1150      RS     1   FLOW     -1
1151      RC   .035   .035   .035   5500  .0150
1152      RX     0     8     9     21    171   183   184   192
1153      RY    10     6     6      0     0     6     6    10
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1154      KK   29.1    SUB
1155      KM       RUNOFF FROM SUB 29.1
1156      BA  1.3896
1157      LS           74   28.6
1158      UK     88  .0213    .10    100
1159      RK   2500  .0100   .035    .26   TRAP     25      2
1160      RK   5500  .0150   .035          TRAP    150      2

1161      KK  29.1B     CP
1162      KM       COMBINE SUB 29.1 & CP 29.1A
1163      HC      2

1164      KK   32A2    RET
1165      KM       RETRIEVE DIVERTED FLOW FROM SUB 32A
1166      DR   32A2

1167      KK   CNC6     CP
1168      KM       ROUTE RET 32A2 TO THE INTXN OF SCOTTSDALE & DEER VALLEY ROADS
1169      RS      1   FLOW     -1
1170      RC   .035   .035   .035   2650  .0125
1171      RX      0      8      9     21    71    83    84    92
1172      RY     10      6      6      0     0     6     6    10

1173      KK   28.2    RET
1174      KM       RETRIEVE PORTION OF RUNOFF FROM SUB 28 THAT MAY FLOW TO THE
1175      KM       SCOTTSDALE ROAD-DEER VALLEY ROAD INTXN
1176      DR   28.2

1177      KK   CNC7     CP
1178      KM       COMBINE CP CNC6 & RET 28.2
1179      HC      2

1180      KK   CNC8     CP
1181      KM       ROUTE CP CNC7 DOWN SCOTTSDALE ROAD CHANNEL TO BEARDSLEY ROAD
1182      RS      1   FLOW     -1
1183      RC   .035   .035   .035   5400  .0150
1184      RX      0      8      9     21    91   103   104   112
1185      RY     10      6      6      0     0     6     6    10

1186      KK    CN4    SUB
1187      KM       RUNOFF FROM SUB CN4
1188      BA   .5546
1189      LS           74   48.9
1190      UK    100  .0150    .15    100
1191      RK   1400  .0100   .018   .111   TRAP     30      5
1192      RK   5400  .0150   .035          TRAP     75      2

1193      KK   CNC9     CP
1194      KM       COMBINE SUB CN4 & CP CNC8
1195      KM       THIS FLOW IS ASSUMED TO SHEETFLOW ACROSS SCOTTSDALE ROAD
1196      HC      2
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1

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

1197      KK    33A     SUB
1198      KM        RUNOFF FROM SUB-BASIN 33A & ROUTE CNC9
1199      KM        DRAINAGE AREA REVISED ON 8/10/90 TO REFLECT DELETION OF 0.1040 SQ MI
1200      KM        FROM CORRIGAN-MARLEY PARCEL.  NO OTHER PARAMETERS WERE CHANGED.
1201      BA   .3738
1202      LS            74    57.7
1203      UK     89   .0213    .10     100
1204      RK   4000   .0161    .045          TRAP     50     50     YES

1205      KK   33.1A     SUB
1206      KM        RUNOFF FROM SUB 33.1A & ROUTE SUB 33A
1207      KM        THE OUTER LOOP IS NOT ASSUMED TO BE IN-PLACE FOR THE PURPOSE OF
1208      KM        ROUTING FLOWS FROM SUB 33A TO SUB 33.1A.  IF THE OUTER LOOP WERE
1209      KM        IN-PLACE, THE CHANNEL SIDE-SLOPES WOULD BE 2:1 RATHER THAN 50:1.
1210      BA   .7109
1211      LS            74    48.2
1212      UK     89   .0213    .10     100
1213      RK   6700   .0116    .045          TRAP     50     50     YES

1214      KK   8B1.4     RET
1215      KM        RETRIEVE LOW-FLOW DIVERT FROM SUB 8B1
1216      DR   8B1.4

1217      KK    8B2     SUB
1218      KM        RUNOFF FROM SUB 8B2 & ROUTE LOW-FLOW DIVERT FROM SUB 8B1
1219      BA   .2260
1220      LS            74    20.4
1221      UK    116   .0213    .10     100
1222      RK   4500   .0196    .045          TRAP     30     30     YES

1223      KK   SUB9B
1224      KM        RUNOFF FROM SUB-BASIN 9B & ROUTE SUB 8B2
1225      BA   .8767
1226      LS            74    37.6
1227      UK     95   .0213    .10     100
1228      RK  10400   .0192    .045          TRAP     30    130     YES

1229      KK  SUB10B
1230      KM        RUNOFF FROM SUB-BASIN 10B ROUTE SUB 9B
1231      BA  1.4377
1232      LS            74     31
1233      UK    107   .0213    .10     100
1234      RK  11000   .0136    .045          TRAP     30    175     YES

1235      KK   10.1B     SUB
1236      KM        RUNOFF FROM SUB 10.1B & ROUTE SUB 10B
1237      BA   .8989
1238      LS            74    28.2
1239      UK    107   .0213    .10     100
1240      RK   6000   .0106    .045          TRAP     30    190     YES
```

1

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

1241      KK   12R5     RET
1242      KM        RETRIEVE LOW-FLOW DIVERT FROM SUB 12R
1243      DR   12R5

1244      KK    13R     SUB
1245      KM        RUNOFF FROM SUB 13R & ROUTE LOW-FLOW DIVERT FROM SUB 12R
1246      BA  1.0668
1247      LS            74    44.0
1248      UK     86  .0213    .10     100
1249      RK   9200  .0192   .045          TRAP     30     50     YES

1250      KK   SUB14
1251      KM        RUNOFF FROM SUB-BASIN 14 & ROUTE SUB 13
1252      BA  1.3910
1253      LS            74    46.7
1254      UK    101  .0213    .10     100
1255      RK  11200  .0142   .045          TRAP     50    150     YES

1256      KK   14.1     SUB
1257      KM        RUNOFF FROM SUB 14.1 & ROUTE SUB 14
1258      BA   .6112
1259      LS            74    43.8
1260      UK    101  .0213    .10     100
1261      RK   5800  .0112   .045          TRAP     50    160     YES

1262      KK    2IN      CP
1263      KM        COMBINE SUB 10.1B, SUB 14.1, CP 29.1B, & SUB 33.1
1264      KM        THIS IS THE TOTAL INFLOW TO CAP DIKE No.2
1265      HC      4

1266      KK   DIKE2     DAM
1267      KM        ROUTE CP 2IN THROUGH CAP DIKE No.2
1268      KO      1      2
1269      RS      1   STOR
1270      SV      0      2     48    169    342    546    775   1031   1332   1732
1271      SV   2273   2958   3796   4783   5904   7170   8578  10131  11834  12000
1272      SE   1514   1516   1518   1520   1522   1524   1526   1528   1530   1532
1273      SE   1534   1536   1538   1540   1542   1544   1546   1548   1550  1550.2
1274      SS   1550    100    2.9    1.5
1275      ST  1550.2   100    2.9    1.5
1276      ZZ
```

1

SCHEMATIC DIAGRAM OF STREAM NETWORK

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

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

  41      30R
          .
          .
  55       .------->   30R2
  53      30R1
           V
           V
  58      31.1
          .
          .
  64       .       31A
          .         .
          .         .
  71       .         .       34R
          .         .         V
          .         .         V
  77       .         .       31.3
          .         .         .
          .         .         .
  80      31.2......................
          .
          .
  85       .------->   31A2
  83      31A1
           V
           V
  88      36.2
          .
          .
  94       .       35N
          .         .
          .         .
 103       .         .------->   35N1
 101       .       35N2
          .         V
          .         V
 106       .       35L1
          .         .
          .         .
 109       .         .       35L
          .         .         .
          .         .         .
 115       .       35L2............
          .         V
          .         V
 118       .       36L1 ***
          .         V
          .         V
 124       .       36.3
          .         .
          .         .
 130      36.4............
          .
          .
 135       .------->   36.6
 133      36.5
           V
           V
```

```
138     36.7
         .
         .
146      .        .<-------    35N1
144      .      35N1
         .       V
         .       V
147      .      35R ***
         .       V
         .       V
153      .      36R1 ***
         .       .
         .       .
159     36.8............
         .
         .
165      .------->   36.10
163     36.9
         V
         V
168     37.1
         .
         .
175      .      37B
         .       V
         .       V
181      .      37.2
         .       .
         .       .
187     37.3............
         .
         .
192      .------->   37.5
190     37.4
         V
         V
195     52.1
         .
         .
201      .      SUB39
         .       .
         .       .
207      .       .      SUB40
         .       .       .
         .       .       .
213      .      CP41............
         .       V
         .       V
216      .      SUB41 ***
         .       .
         .       .
222      .       .      SUB42
         .       .       .
         .       .       .
228      .       .       .      SUB43
         .       .       .       .
         .       .       .       .
234      .       .       .       .      SUB44
         .       .       .       .        .
         .       .       .       .        .
240      .       .       .      CP45............
         .       .       .       V
         .       .       .       V
243      .       .       .      SUB45 ***
         .       .       .       .
```

```
          .        .        .        .
249       .        .        .        .     SUB45A
          .        .        .        .        .
          .        .        .        .        .
255       .        .        .        .        .     SUB46
          .        .        .        .        .        .
          .        .        .        .        .        .
262       .        .        .     CP47.......................
          .        .        .      V
          .        .        .      V
265       .        .        .    SUB47 ***
          .        .        .      .
          .        .        .      .
271       .     CP48.......................
          .      V
          .      V
274       .    SUB48 ***
          .      .
          .      .
280       .      .     SUB50
          .      .       .
          .      .       .
287       .    CP51............
          .      .
          .      .
295       .      .-------->   2003
290       .    2004
          .      .
          .      .
298       .      .     SUB49
          .      .       .
          .      .       .
304       .    49.1............
          .      V
          .      V
307       .    SUB51 ***
          .      V
          .      V
313       .    52A ***
          .      .
          .      .
319     52.2............
         V
         V
322     52A1
         .
         .
329       .    53A
          .      .
          .      .
335     53A1............
         V
         V
338     DB3.1
         .
         .
344       .    CN6
          .      .
          .      .
351     DB3............
         V
         V
355     53R
         .
         .
```

```
379      .------->   53RD
372     200
         V
         V
382     202
         .
         .
385      .      14CS
         .       .
         .       .
391     203............
         V
         V
395     204
         .
         .
398      .     15ACS
         .       .
         .       .
404      .       .     15BCS
         .       .       .
         .       .       .
410      .     205............
         .       .
         .       .
413     206............
         .
         .
419      .       .<-------   53RD
417      .     201
         .      V
         .      V
420      .     207
         .       .
         .       .
423      .       .     21ACS
         .       .       .
         .       .       .
429      .       .       .     21BCS
         .       .       .       .
         .       .       .       .
435      .       .     208............
         .       .      V
         .       .      V
439      .       .     209
         .       .       .
         .       .       .
442      .       .       .     17BCS
         .       .       .       .
         .       .       .       .
448      .       .     210............
         .       .       .
         .       .       .
452      .       .       .     17ACS
         .       .       .       .
         .       .       .       .
458      .       .     211............
         .       .      V
         .       .      V
461      .       .     212
         .       .       .
         .       .       .
464      .       .       .     16BCS
         .       .       .       .
         .       .       .       .
```

```
470     .     .     213.........
        .     .     .
        .     .     .
474     .     .     .     16ACS
        .     .     .     .
        .     .     .     .
480     .     214.......................
        .     V
        .     V
483     .     215
        .     .
        .     .
486     .     .     19CS
        .     .     V
        .     .     V
492     .     .     216
        .     .     V
        .     .     V
495     .     .     217
        .     .     .
        .     .     .
498     .     .     .     18CS
        .     .     .     .
        .     .     .     .
504     .     .     218.........
        .     .     .
        .     .     .
508     .     219.........
        .     .
        .     .
512     .     .     20ACS
        .     .     V
        .     .     V
519     .     .     220
        .     .     .
        .     .     .
522     .     .     .     20BCS
        .     .     .     .
        .     .     .     .
528     .     .     221.........
        .     .     .
        .     .     .
532     .     .     .     TPC2
        .     .     .     .
        .     .     .     .
540   222.....................................
        .
        .
547     .     .<-------   30R2
545     .     30R2
        .     .
        .     .
550     .     .     .<-------   31A2
548     .     .     31A2
        .     .     .
        .     .     .
551     .     31B1.........
        .     V
        .     V
554     .     31B ***
        .     .
        .     .
562     .     .     .<-------   36.6
560     .     .     36.6
        .     .     V
```

```
          .        .        V
563       .        .      36L2 ***
          .        .        .
          .        .        .
569       .      32.1............
          .       V
          .       V
572       .      32A ***
          .        .
          .        .
580       .        .-------->   32A2
578       .      32A1
          .       V
          .       V
583       .      CNC1
          .        .
          .        .
591       .        .        .<-------   36.10
589       .        .      36.10
          .        .        .
          .        .        .
594       .        .        .        .<-------   37.5
592       .        .        .      37.5
          .        .        .        .
          .        .        .        .
595       .        .      37A1............
          .        .        V
          .        .        V
598       .        .      37A ***
          .        .        V
          .        .        V
604       .        .      CNC2
          .        .        .
          .        .        .
610       .      CNC3............
          .       V
          .       V
613       .      CNC4
          .        .
          .        .
620       .        .      CN1
          .        .        .
          .        .        .
629       .      CNC5............
          .       V
          .       V
632       .      DB1.1
          .        .
          .        .
639       .        .      CN2
          .        .        .
          .        .        .
646       .        .        .      CN3
          .        .        .        .
          .        .        .        .
653       .      DB1........................
          .       V
          .       V
657       .      38R-1
          .       V
          .       V
671       .      DB2.1
          .        .
          .        .
677       .        .      CN5
```

686 DB2.....
690 38R-2
704 108
707 60CS
713 109
716 4A-BCS
722 110.....
727 111.....
730 112
733 12ACS
739 113
742 11CS
748 113A.....
752 114
755 115.....
758 116
761 3A-BCS
767 118.....
770 119
773 1BCS
779 119B

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782     .     119A............
        .     .
        .     .
787     .     .     1ACS
        .     .     .
        .     .     .
795     .     .     .     2CS
        .     .     .     .
        .     .     .     .
804     .     .     .     .     10ABCS
        .     .     .     .       V
        .     .     .     .       V
810     .     .     .     .       120
        .     .     .     .       .
        .     .     .     .       .
813     .     .     .     .       .     13CS
        .     .     .     .       .       V
        .     .     .     .       .       V
819     .     .     .     .       .     121
        .     .     .     .       .       .
        .     .     .     .       .       .
822     .     .     .     .       .       .     12BCS
        .     .     .     .       .       .       .
        .     .     .     .       .       .       .
828     .     .     .     .       .     122............
        .     .     .     .       .       .
        .     .     .     .       .       .
833     .     .     .     .     123............
        .     .     .     .       V
        .     .     .     .       V
836     .     .     .     .     124
        .     .     .     .       .
        .     .     .     .       .
841     .     125.......................................
        .     .
        .     .
844     .     .     PR1
        .     .     .
        .     .     .
852     .     .     .     TPC1
        .     .     .     .
        .     .     .     .
860     .     126........................
        .     .
        .     .
865   3IN............
      V
      V
869 DIKE3
      .
      .
879     .     SUB7B
        .     .
        .     .
891     .     .     11A
        .     .     .
        .     .     .
897     .     8.1............
        .     V
        .     V
900     .     8B1 ***
        .     V
        .     V
906     .     8B1.2
        .     .
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        .       .
914     .       .-------> 8B1.4
912     .     8B1.3
        .       V
        .       V
917     .     12R1
        .       .
        .       .
923     .       .       11B
        .       .       V
        .       .       V
929     .       .       12R ***
        .       .       V
        .       .       V
935     .       .      12R2
        .       .       .
        .       .       .
941     .     12R3............
        .       .
        .       .
946     .       .-------> 12R5
944     .     12R4
        .       V
        .       V
949     .     4B1
        .       .
        .       .
955     .       .     SUB16
        .       .       .
        .       .       .
961     .       .       .     SUB17
        .       .       .       .
        .       .       .       .
967     .       .       .       .     SUB18
        .       .       .       .       .
        .       .       .       .       .
973     .       .     CP19A........................
        .       .       V
        .       .       V
976     .       .     CP19B
        .       .       .
        .       .       .
979     .       .       .     SUB15
        .       .       .       .
        .       .       .       .
985     .       .     CP19C............
        .       .       V
        .       .       V
988     .       .     SUB19 ***
        .       .       .
        .       .       .
995     .       .       .     SUB20
        .       .       .       .
        .       .       .       .
1001    .       .      CP21............
        .       .       V
        .       .       V
1004    .       .      SUB21 ***
        .       .       .
        .       .       .
1010    .       .       .     SUB22
        .       .       .       .
        .       .       .       .
1016    .       .       .       .     SUB23
        .       .       .       .       .
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         .     .     .     .     .
1022     .     .     .   CP24............
         .     .     .     V
         .     .     .     V
1025     .     .     .   SUB24 ***
         .     .     .     .
         .     .     .     .
1031     .     .     .     .     SUB25
         .     .     .     .     .
         .     .     .     .     .
1037     .     .     .   CP26............
         .     .     .     V
         .     .     .     V
1040     .     .     .   SUB26 ***
         .     .     .     .
         .     .     .     .
1048     .     .     .     .-------->   26.2
1046     .     .     .   26.1
         .     .     .     V
         .     .     .     V
1051     .     .     .   21.1
         .     .     .     .
         .     .     .     .
1054     .     .   CP27............
         .     .     .
         .     .     .
1059     .     .     .     .<-------   26.2
1057     .     .     .   26.2
         .     .     .     V
         .     .     .     V
1060     .     .     .   SUB26A ***
         .     .     .     .
         .     .     .     .
1066     .     .   27.1............
         .     .     V
         .     .     V
1069     .     .   27.2
         .     .     .
         .     .     .
1075     .     .     .   SUB27
         .     .     .     .
         .     .     .     .
1081     .     .   27.3............
         .     .     V
         .     .     V
1084     .     .   28A1
         .     .     .
         .     .     .
1090     .     .     .     28A
         .     .     .     .
         .     .     .     .
1096     .     .   28A2............
         .     .     V
         .     .     V
1099     .     .     4B2
         .     .     .
         .     .     .
1105     .     4B3............
         .     V
         .     V
1109     .     28B1
         .     .
         .     .
1115     .     .     28B
         .     .     .
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        .       .       .
1126    .       .       .-------> 28.2
1121    .       .     28.1
        .       .       .
        .       .       .
1129    .     28B2............
        .      V
        .      V
1132    .     29A1
        .       .
        .       .
1138    .       .     29A
        .       .       .
        .       .       .
1145    .     29A2............
        .      V
        .      V
1148    .     29.1A
        .       .
        .       .
1154    .       .     29.1
        .       .       .
        .       .       .
1161    .     29.1B............
        .       .
        .       .
1166    .       .       .<------- 32A2
1164    .       .     32A2
        .       .      V
        .       .      V
1167    .       .     CNC6
        .       .       .
        .       .       .
1176    .       .       .       .<------- 28.2
1173    .       .       .     28.2
        .       .       .       .
        .       .       .       .
1177    .       .     CNC7............
        .       .      V
        .       .      V
1180    .       .     CNC8
        .       .       .
        .       .       .
1186    .       .       .     CN4
        .       .       .       .
        .       .       .       .
1193    .       .     CNC9............
        .       .      V
        .       .      V
1197    .       .      33A ***
        .       .      V
        .       .      V
1205    .       .    33.1A ***
        .       .       .
        .       .       .
1216    .       .       .       .<------- 8B1.4
1214    .       .       .     8B1.4
        .       .       .      V
        .       .       .      V
1217    .       .       .      8B2 ***
        .       .       .      V
        .       .       .      V
1223    .       .       .     SUB9B ***
        .       .       .      V
        .       .       .      V
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1229      .      .      .    SUB10B ***
        .      .      .      V
        .      .      .      V
1235      .      .      .    10.1B ***
        .      .      .      .
        .      .      .      .
1243      .      .      .      .        .<-------   12R5
1241      .      .      .      .      12R5
        .      .      .      .       V
        .      .      .      .       V
1244      .      .      .      .      13R ***
        .      .      .      .       V
        .      .      .      .       V
1250      .      .      .      .     SUB14 ***
        .      .      .      .       V
        .      .      .      .       V
1256      .      .      .      .     14.1 ***
        .      .      .      .       .
        .      .      .      .       .
1262      .    2IN.................................
        .      V
        .      V
1266      .    DIKE2
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(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

1 ****

FLOOD HYDROGRAPH PACKAGE HEC-1 (IBM XT 512K VERSION) -FEB 1,1985
U.S. ARMY CORPS OF ENGINEERS, THE HYDROLOGIC ENGINEERING CENTER, 609 SECOND STREET, DAVIS, CA. 95616
****

UPPER INDIAN BEND WASH REGIONAL FLOOD CONTROL & DRAINAGE PLAN

MODEL MP9.24I -- SUB-BASIN SERIES 7B TO 53.1

THIS IS AN INTEGRATED MASTER PLAN MODEL WITH A NORTH-SOUTH INTERCEPTOR
CHANNEL IN-PLACE ALONG PIMA ROAD FROM POINT 3A TO 3K TO 3L.
ALL CORE NORTH-CORE SOUTH CHANNELS & DETENTION BASINS ARE IN-PLACE.
THE RAWHIDE WASH CHANNEL IS IN-PLACE ALONG ALIGNMENT 4A-4B-4D.
A NORTH-SOUTH INTERCEPTOR CHANNEL IS IN-PLACE ALONG SCOTTSDALE ROAD FROM
POINT 4C TO 4B.

DETENTION BASIN 53R HAS BEEN RECONFIGURED TO REFLECT NEW VOLUMES
& OUTLET DESIGN FROM STANLEY CONSULTANTS (8/10/90)
OUTLET DESIGN WAS SUBSEQUENTLY MODIFIED BY RLW

SUB 33A & CN5 MODIFIED TO REFLECT DRAINAGE SPLIT ON CORRIGAN-MARLEY

FUTURE CONDITION LAND-USE

ALL LOW-FLOW CULVERT DIVERTS ARE SET TO ZERO.

100% OF REATA PASS FAN IS DIVERTED SOUTH TO CAP DIKE 4.

RESERVOIR ROUTING OPERATIONS ARE IN-PLACE FOR CAP DIKES 2 & 3.

THIS MODEL REFLECTS ALL D.A. ADJUSTMENTS MADE TO MODEL F3.24I AND FLOW
DIVERSIONS NEAR RAWHIDE WASH APEX & PINNACLE PEAK.
THE TPC GOLF COURSE AND ADJACENT RESIDENTIAL AREAS HAVE BEEN ADDED TO
THE CORE SOUTH AREA.

100-YR, 24-HR STORM, USING SCS TYPE IIA RAINFALL DISTRIBUTION
RAINFALL FROM NOAA ATLAS, USING 25 SQ MI AREAL REDUCTION FACTOR

FUTURE LAND-USE DENSITIES FROM OCT 1987 GENERAL PLAN, BRW PLANS, AND
THE TONTO FOOTHILLS PLAN, ALL SCOTTSDALE RESIDENTIAL AREAS HAVE THE
PERCENT OF IMPERVIOUS COVER ADJUSTED FOR NAOS REQUIREMENTS.

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

 IT        HYDROGRAPH TIME DATA
             NMIN         5  MINUTES IN COMPUTATION INTERVAL
            IDATE    28APR90  STARTING DATE
            ITIME      0000  STARTING TIME
               NQ       300  NUMBER OF HYDROGRAPH ORDINATES
           NDDATE    29APR90  ENDING DATE
           NDTIME      0055  ENDING TIME

          COMPUTATION INTERVAL     .08 HOURS
             TOTAL TIME BASE   24.92 HOURS

      ENGLISH UNITS
```

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 5929. TO 17125.

THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 1046. TO 17125.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 644. TO 17125.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
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*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 8692. TO 24217.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 1863. TO 19861.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 3010. TO 8694.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 4760. TO 13747.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 286. TO 15059.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 2383. TO 15059.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** ***

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	AREA	BASIN STAGE	MAXIMUM MAX STAGE	TIME OF
+	HYDROGRAPH AT	30R	1914.	6.17	275.	85.	82.	1.31			
+	DIVERSION TO	30R2	0.	6.17	0.	0.	0.	1.31			
+	HYDROGRAPH AT	30R1	1914.	6.17	275.	85.	82.	1.31			
+	ROUTED TO	31.1	1669.	6.25	273.	85.	81.	1.31			
+								3.14	6.25		
+	HYDROGRAPH AT	31A	616.	6.08	63.	20.	19.	.41			
+	HYDROGRAPH AT	34R	977.	6.08	116.	36.	35.	.64			
+	ROUTED TO	31.3	964.	6.33	120.	37.	36.	.64			
+	3 COMBINED AT	31.2	3028.	6.25	455.	142.	137.	2.37			
+	DIVERSION TO	31A2	0.	6.25	0.	0.	0.	2.37			
+	HYDROGRAPH AT	31A1	3028.	6.25	455.	142.	137.	2.37			
+	ROUTED TO	36.2	2950.	6.25	453.	141.	136.	2.37			
+								3.86	6.25		
+	HYDROGRAPH AT	35N	946.	6.08	102.	31.	30.	.41			
+	DIVERSION TO	35N1	378.	6.08	41.	12.	12.	.41			
+	HYDROGRAPH AT	35N2	568.	6.08	61.	19.	18.	.41			
+	ROUTED TO	35L1	476.	6.17	61.	18.	18.	.41			
+	HYDROGRAPH AT	35L	685.	6.25	124.	39.	37.	.65			
+	2 COMBINED AT	35L2	1159.	6.25	185.	57.	55.	1.06			
+	HYDROGRAPH AT	36L1	1284.	6.33	247.	78.	75.	1.47			

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      ROUTED TO
+                36.3   1284.  6.33    246.    77.    75.   1.47
+                                                           2.37    6.33

      2 COMBINED AT
+                36.4   4165.  6.33    699.   219.   211.   3.84

      DIVERSION TO
+                36.6      0.  6.33      0.     0.     0.   3.84

      HYDROGRAPH AT
+                36.5   4165.  6.33    699.   219.   211.   3.84

      ROUTED TO
+                36.7   4206.  6.33    698.   219.   211.   3.84
+                                                           4.75    6.33

      HYDROGRAPH AT
+                35N1    378.  6.08     41.    12.    12.    .00

      HYDROGRAPH AT
+                 35R    650.  6.25    121.    38.    37.    .45

      HYDROGRAPH AT
+                36R1   1028.  6.17    239.    76.    73.   1.12

      2 COMBINED AT
+                36.8   5156.  6.33    935.   294.   283.   4.96

      DIVERSION TO
+                36.10     0.  6.33      0.     0.     0.   4.96

      HYDROGRAPH AT
+                36.9   5156.  6.33    935.   294.   283.   4.96

      ROUTED TO
+                37.1   4976.  6.33    932.   294.   283.   4.96
+                                                           5.24    6.33

      HYDROGRAPH AT
+                 37B    212.  6.08     20.     6.     6.    .11

      ROUTED TO
+                37.2    188.  6.08     20.     6.     6.    .11
+                                                            .73    6.08

      2 COMBINED AT
+                37.3   5050.  6.33    951.   300.   289.   5.07

      DIVERSION TO
+                37.5      0.  6.33      0.     0.     0.   5.07

      HYDROGRAPH AT
+                37.4   5050.  6.33    951.   300.   289.   5.07

      ROUTED TO
+                52.1   4974.  6.42    947.   299.   288.   5.07
+                                                           4.18    6.42

      HYDROGRAPH AT
+                SUB39  4477.  6.08    489.   149.   143.   1.93

      HYDROGRAPH AT
+                SUB40  1343.  6.08    132.    40.    39.    .58
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	2 COMBINED AT						
+	CP41	5821.	6.08	622.	189.	182.	2.51
	HYDROGRAPH AT						
+	SUB41	6325.	6.17	775.	236.	227.	3.31
	HYDROGRAPH AT						
+	SUB42	1252.	6.08	126.	39.	37.	.58
	HYDROGRAPH AT						
+	SUB43	2512.	6.08	255.	77.	75.	1.07
	HYDROGRAPH AT						
+	SUB44	1951.	6.08	198.	60.	58.	.84
	2 COMBINED AT						
+	CP45	4463.	6.08	453.	138.	132.	1.91
	HYDROGRAPH AT						
+	SUB45	4602.	6.08	498.	151.	146.	2.11
	HYDROGRAPH AT						
+	SUB45A	425.	6.08	43.	13.	12.	.17
	HYDROGRAPH AT						
+	SUB46	2271.	6.08	230.	69.	66.	.93
	3 COMBINED AT						
+	CP47	7298.	6.08	771.	233.	224.	3.21
	HYDROGRAPH AT						
+	SUB47	7150.	6.17	870.	263.	253.	3.58
	3 COMBINED AT						
+	CP48	14513.	6.17	1769.	537.	517.	7.47
	HYDROGRAPH AT						
+	SUB48	14273.	6.17	1774.	539.	519.	7.52
	HYDROGRAPH AT						
+	SUB50	824.	6.08	81.	25.	24.	.36
	2 COMBINED AT						
+	CP51	14935.	6.17	1855.	563.	543.	7.88
	DIVERSION TO						
+	2003	14935.	.08	1855.	563.	543.	7.88
	HYDROGRAPH AT						
+	2004	0.	.08	0.	0.	0.	7.88
	HYDROGRAPH AT						
+	SUB49	713.	6.08	68.	21.	20.	.35
	2 COMBINED AT						
+	49.1	713.	6.08	68.	21.	20.	8.23
	HYDROGRAPH AT						
+	SUB51	1064.	6.25	224.	72.	69.	9.25
	HYDROGRAPH AT						
+	52A	1194.	6.58	381.	125.	121.	10.30
	2 COMBINED AT						
+	52.2	6104.	6.42	1327.	424.	409.	15.37

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      ROUTED TO
+                52A1   5837.  6.50    1319.    423.    407.   15.37
+                                                             5.15     6.50

      HYDROGRAPH AT
+                53A    554.   6.08    61.      19.     18.    .33

      2 COMBINED AT
+                53A1   5972.  6.50    1372.    442.    425.   15.70

      ROUTED TO
+                DB3.1  5925.  6.58    1370.    441.    425.   15.70
+                                                             5.20     6.58

      HYDROGRAPH AT
+                CN6    2124.  6.17    313.     97.     93.    1.37

      2 COMBINED AT
+                DB3    6836.  6.50    1676.    537.    518.   17.07

      ROUTED TO
+                53R    1478.  8.00    1299.    536.    516.   17.07
+                                                             1611.18  8.00

      DIVERSION TO
+                53RD   1478.  .08     1299.    536.    516.   17.07

      HYDROGRAPH AT
+                200    0.     .08     0.       0.      0.     17.07

      ROUTED TO
+                202    0.     .08     0.       0.      0.     17.07

      HYDROGRAPH AT
+                14CS   272.   6.08    38.      11.     11.    .11

      2 COMBINED AT
+                203    272.   6.08    38.      11.     11.    17.17

      ROUTED TO
+                204    251.   6.25    39.      12.     11.    17.17

      HYDROGRAPH AT
+                15ACS  166.   6.25    34.      10.     10.    .10

      HYDROGRAPH AT
+                15BCS  133.   6.33    33.      10.     9.     .09

      2 COMBINED AT
+                205    298.   6.25    66.      20.     19.    .19

      2 COMBINED AT
+                206    549.   6.25    106.     32.     30.    17.37

      HYDROGRAPH AT
+                201    1478.  8.00    1299.    536.    516.   .00

      ROUTED TO
+                207    1478.  8.00    1299.    535.    515.   .00

      HYDROGRAPH AT
+                21ACS  209.   6.17    36.      11.     10.    .10

      HYDROGRAPH AT
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+	21BCS	154.	6.08	26.	8.	8.	.08
	2 COMBINED AT						
+	208	362.	6.17	63.	19.	18.	.18
	ROUTED TO						
+	209	362.	6.17	63.	19.	18.	.18
	HYDROGRAPH AT						
+	17BCS	73.	6.08	10.	3.	3.	.03
	2 COMBINED AT						
+	210	429.	6.17	73.	22.	21.	.21
	HYDROGRAPH AT						
+	17ACS	101.	6.08	15.	4.	4.	.04
	2 COMBINED AT						
+	211	524.	6.17	88.	26.	25.	.25
	ROUTED TO						
+	212	520.	6.17	88.	26.	25.	.25
	HYDROGRAPH AT						
+	16BCS	146.	6.08	25.	8.	7.	.07
	2 COMBINED AT						
+	213	665.	6.17	113.	34.	33.	.32
	HYDROGRAPH AT						
+	16ACS	81.	6.08	12.	3.	3.	.03
	3 COMBINED AT						
+	214	1550.	7.67	1372.	572.	551.	.36
	ROUTED TO						
+	215	1550.	7.67	1372.	572.	551.	.36
	HYDROGRAPH AT						
+	19CS	63.	6.08	8.	2.	2.	.02
	ROUTED TO						
+	216	62.	6.08	8.	2.	2.	.02
	ROUTED TO						
+	217	59.	6.08	8.	2.	2.	.02
	HYDROGRAPH AT						
+	18CS	216.	6.08	32.	10.	9.	.09
	2 COMBINED AT						
+	218	275.	6.08	40.	12.	12.	.12
	2 COMBINED AT						
+	219	1574.	7.50	1402.	584.	563.	.47
	HYDROGRAPH AT						
+	20ACS	66.	6.08	9.	3.	3.	.03
	ROUTED TO						
+	220	64.	6.17	9.	3.	3.	.03
	HYDROGRAPH AT						
+	20BCS	158.	6.08	26.	8.	7.	.07

```
      2 COMBINED AT
+                221   219.  6.17    35.    11.    10.    .10

      HYDROGRAPH AT
+                TPC2  1055.  6.08   106.    32.    31.    .41

      4 COMBINED AT
+                222   2928.  6.08  1626.   658.   634.  18.36

      HYDROGRAPH AT
+                30R2    0.   .08     0.     0.     0.    .00

      HYDROGRAPH AT
+                31A2    0.   .08     0.     0.     0.    .00

      2 COMBINED AT
+                31B1    0.   .08     0.     0.     0.    .00

      HYDROGRAPH AT
+                31B   1011.  6.17   173.    54.    52.    .99

      HYDROGRAPH AT
+                36.6    0.   .08     0.     0.     0.    .00

      HYDROGRAPH AT
+                36L2  284.  6.08    32.    10.    10.    .17

      2 COMBINED AT
+                32.1  1262.  6.17   204.    64.    62.   1.16

      HYDROGRAPH AT
+                32A   1511.  6.33   367.   116.   112.   2.04

      DIVERSION TO
+                32A2  1511.   .08   367.   116.   112.   2.04

      HYDROGRAPH AT
+                32A1    0.   .08     0.     0.     0.   2.04

      ROUTED TO
+                CNC1    0.   .08     0.     0.     0.   2.04
+                                                          .00    14.67

      HYDROGRAPH AT
+                36.10   0.   .08     0.     0.     0.    .00

      HYDROGRAPH AT
+                37.5    0.   .08     0.     0.     0.    .00

      2 COMBINED AT
+                37A1    0.   .08     0.     0.     0.    .00

      HYDROGRAPH AT
+                37A   1118.  6.08   134.    42.    40.    .68

      ROUTED TO
+                CNC2  1009.  6.17   133.    42.    40.    .68
+                                                         2.34     6.17

      2 COMBINED AT
+                CNC3  1009.  6.17   133.    42.    40.   2.71

      ROUTED TO
+                CNC4   674.  6.33   132.    41.    40.   2.71
+                                                         1.35     6.33
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      HYDROGRAPH AT
+                CN1   1060.  6.17    141.    44.    42.    .74

      2 COMBINED AT
+                CNC5  1530.  6.17    273.    85.    82.   3.45

      ROUTED TO
+                DB1.1 1552.  6.25    272.    85.    82.   3.45
+                                                         2.86     6.25

      HYDROGRAPH AT
+                CN2   272.   6.08    30.     9.     9.    .15

      HYDROGRAPH AT
+                CN3   899.   6.08    98.     30.    29.   .39

      3 COMBINED AT
+                DB1   2421.  6.17    400.    124.   120.  3.99

      ROUTED TO
+                38R-1 305.   7.50    277.    124.   119.  3.99
+                                                         1650.66  7.50

      ROUTED TO
+                DB2.1 305.   7.58    277.    124.   119.  3.99
+                                                         1.09     7.58

      HYDROGRAPH AT
+                CN5   1870.  6.08    217.    65.    63.   .70

      2 COMBINED AT
+                DB2   1998.  6.08    473.    189.   182.  4.69

      ROUTED TO
+                38R-2 694.   6.25    448.    189.   182.  4.69
+                                                         1610.61  6.25

      ROUTED TO
+                108   686.   6.33    448.    189.   182.  4.69

      HYDROGRAPH AT
+                60CS  104.   6.08    13.     4.     4.    .04

      ROUTED TO
+                109   98.    6.08    13.     4.     4.    .04

      HYDROGRAPH AT
+                4A-BCS 154.  6.08    21.     6.     6.    .06

      2 COMBINED AT
+                110   252.   6.08    34.     10.    10.   .10

      2 COMBINED AT
+                111   841.   6.25    480.    199.   192.  4.79

      ROUTED TO
+                112   833.   6.33    480.    199.   192.  4.79

      HYDROGRAPH AT
+                12ACS 121.   6.08    15.     5.     4.    .04

      ROUTED TO
+                113   116.   6.08    16.     5.     4.    .04
```

	HYDROGRAPH AT						
+	11CS	92.	6.08	14.	4.	4.	.04
	2 COMBINED AT						
+	113A	208.	6.08	29.	9.	8.	.08
	ROUTED TO						
+	114	203.	6.08	29.	9.	8.	.08
	2 COMBINED AT						
+	115	984.	6.25	508.	208.	200.	4.87
	ROUTED TO						
+	116	980.	6.25	508.	208.	200.	4.87
	HYDROGRAPH AT						
+	3A-BCS	229.	6.33	58.	17.	17.	.17
	2 COMBINED AT						
+	118	1206.	6.25	565.	225.	217.	5.04
	ROUTED TO						
+	119	1199.	6.25	565.	225.	217.	5.04
	HYDROGRAPH AT						
+	1BCS	118.	6.08	15.	4.	4.	.04
	ROUTED TO						
+	119B	117.	6.08	15.	4.	4.	.04
	2 COMBINED AT						
+	119A	1271.	6.25	578.	229.	221.	5.08
	HYDROGRAPH AT						
+	1ACS	19.	6.08	3.	1.	1.	.01
	HYDROGRAPH AT						
+	2CS	29.	6.08	4.	1.	1.	.01
	HYDROGRAPH AT						
+	10ABCS	293.	6.08	50.	15.	15.	.14
	ROUTED TO						
+	120	292.	6.17	50.	15.	15.	.14
	HYDROGRAPH AT						
+	13CS	58.	6.08	7.	2.	2.	.02
	ROUTED TO						
+	121	56.	6.08	7.	2.	2.	.02
	HYDROGRAPH AT						
+	12BCS	44.	6.08	5.	2.	2.	.02
	2 COMBINED AT						
+	122	101.	6.08	13.	4.	4.	.04
	2 COMBINED AT						
+	123	383.	6.08	63.	19.	18.	.18
	ROUTED TO						
+	124	380.	6.17	63.	19.	18.	.18
	4 COMBINED AT						
+	125	1670.	6.17	646.	250.	241.	5.28

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      HYDROGRAPH AT
+                PR1    605.   6.08      67.      20.      20.     .29

      HYDROGRAPH AT
+                TPC1   827.   6.08      83.      25.      24.     .32

      3 COMBINED AT
+                126   2981.   6.08     794.     295.     285.    5.89

      2 COMBINED AT
+                3IN   5910.   6.08    2414.     953.     918.   24.25

      ROUTED TO
+                DIKE3    0.    .08       0.       0.       0.   24.25
+                                                                1529.16    24.92

      HYDROGRAPH AT
+                SUB7B   426.   6.42      96.      31.      29.     .53

      HYDROGRAPH AT
+                11A    321.   6.17      50.      16.      15.     .32

      2 COMBINED AT
+                8.1    697.   6.25     146.      46.      45.     .85

      HYDROGRAPH AT
+                8B1   1026.   6.17     249.      80.      77.    1.48

      ROUTED TO
+                8B1.2  991.   6.33     248.      79.      76.    1.48
+                                                                   3.10     6.33

      DIVERSION TO
+                8B1.4    0.   6.33       0.       0.       0.    1.48

      HYDROGRAPH AT
+                8B1.3  991.   6.33     248.      79.      76.    1.48

      ROUTED TO
+                12R1   895.   6.58     245.      79.      76.    1.48
+                                                                   2.26     6.58

      HYDROGRAPH AT
+                11B    333.   6.17      42.      13.      13.     .25

      HYDROGRAPH AT
+                12R   1379.   6.17     283.      89.      86.    1.49

      ROUTED TO
+                12R2  1317.   6.25     281.      89.      85.    1.49
+                                                                   2.83     6.25

      2 COMBINED AT
+                12R3  2024.   6.42     525.     168.     162.    2.97

      DIVERSION TO
+                12R5     0.   6.42       0.       0.       0.    2.97

      HYDROGRAPH AT
+                12R4  2024.   6.42     525.     168.     162.    2.97

      ROUTED TO
+                4B1   2002.   6.42     523.     167.     161.    2.97
+                                                                   3.62     6.42
```

	HYDROGRAPH AT						
+	SUB16	2476.	6.08	317.	97.	94.	1.46
	HYDROGRAPH AT						
+	SUB17	2003.	6.08	257.	79.	76.	1.19
	HYDROGRAPH AT						
+	SUB18	2319.	6.08	269.	83.	80.	1.26
	3 COMBINED AT						
+	CP19A	6799.	6.08	843.	260.	250.	3.91
	ROUTED TO						
+	CP19B	6528.	6.17	843.	260.	250.	3.91
	HYDROGRAPH AT						
+	SUB15	1533.	6.17	275.	86.	83.	1.37
	2 COMBINED AT						
+	CP19C	8060.	6.17	1118.	346.	333.	5.28
	HYDROGRAPH AT						
+	SUB19	8079.	6.17	1159.	359.	345.	5.46
	HYDROGRAPH AT						
+	SUB20	1019.	6.08	123.	38.	37.	.57
	2 COMBINED AT						
+	CP21	9051.	6.17	1282.	396.	382.	6.03
	HYDROGRAPH AT						
+	SUB21	5879.	6.67	1908.	610.	588.	9.70
	HYDROGRAPH AT						
+	SUB22	2676.	6.08	303.	93.	90.	1.39
	HYDROGRAPH AT						
+	SUB23	733.	6.08	87.	27.	26.	.39
	2 COMBINED AT						
+	CP24	3409.	6.08	389.	120.	115.	1.78
	HYDROGRAPH AT						
+	SUB24	3684.	6.17	478.	147.	142.	2.27
	HYDROGRAPH AT						
+	SUB25	2506.	6.17	349.	107.	103.	1.52
	2 COMBINED AT						
+	CP26	6190.	6.17	826.	254.	245.	3.79
	HYDROGRAPH AT						
+	SUB26	6214.	6.17	866.	267.	257.	4.01
	DIVERSION TO						
+	26.2	3107.	6.17	433.	134.	129.	4.01
	HYDROGRAPH AT						
+	26.1	3107.	6.17	433.	134.	129.	4.01
	ROUTED TO						
+	21.1	2718.	6.33	427.	133.	128.	4.01
	2 COMBINED AT						

```
+                CP27    7564.   6.50     2335.     743.     716.    13.71

     HYDROGRAPH AT
+                26.2    3107.   6.17      433.     134.     129.     .00

     HYDROGRAPH AT
+              SUB26A    3255.   6.33      518.     162.     156.     .53

     2 COMBINED AT
+                27.1   10182.   6.42     2853.     905.     871.    14.24

     ROUTED TO
+                27.2   10148.   6.42     2846.     903.     870.    14.24
+                                                                     4.08     6.42

     HYDROGRAPH AT
+               SUB27    1146.   6.08      112.      35.      34.     .64

     2 COMBINED AT
+                27.3   10339.   6.42     2940.     938.     903.    14.87

     ROUTED TO
+                28A1   10252.   6.50     2932.     935.     901.    14.87
+                                                                     4.10     6.50

     HYDROGRAPH AT
+                 28A    1402.   6.08      148.      46.      44.     .67

     2 COMBINED AT
+                28A2   10481.   6.50     3057.     981.     945.    15.54

     ROUTED TO
+                 4B2   10478.   6.50     3056.     980.     944.    15.54
+                                                                     4.16     6.50

     2 COMBINED AT
+                 4B3   12477.   6.50     3578.    1147.    1105.    18.52

     ROUTED TO
+                28B1   12383.   6.58     3571.    1145.    1103.    18.52
+                                                                     4.59     6.58

     HYDROGRAPH AT
+                 28B    2205.   6.08      244.      74.      72.     .92

     DIVERSION TO
+                28.2     441.   6.08       49.      15.      14.     .92

     HYDROGRAPH AT
+                28.1    1764.   6.08      195.      59.      57.     .92

     2 COMBINED AT
+                28B2   12661.   6.58     3739.    1205.    1160.    19.44

     ROUTED TO
+                29A1   11783.   6.75     3697.    1195.    1151.    19.44
+                                                                     5.04     6.75

     HYDROGRAPH AT
+                 29A    3452.   6.08      406.     124.     120.     1.76

     2 COMBINED AT
+                29A2   12402.   6.75     4080.    1319.    1271.    21.20

     ROUTED TO
```

+	29.1A	12215.	6.83	4062.	1314.	1265.	21.20	
+							5.15	6.83
	HYDROGRAPH AT							
+	29.1	2758.	6.08	289.	89.	85.	1.39	
	2 COMBINED AT							
+	29.1B	12585.	6.75	4332.	1403.	1351.	22.59	
	HYDROGRAPH AT							
+	32A2	1511.	6.33	367.	116.	112.	.00	
	ROUTED TO							
+	CNC6	1495.	6.42	365.	116.	111.	.00	
+							2.95	6.42
	HYDROGRAPH AT							
+	28.2	441.	6.08	49.	15.	14.	.00	
	2 COMBINED AT							
+	CNC7	1564.	6.42	412.	131.	126.	.00	
	ROUTED TO							
+	CNC8	1527.	6.50	408.	130.	125.	.00	
+							2.33	6.50
	HYDROGRAPH AT							
+	CN4	1271.	6.08	139.	42.	41.	.55	
	2 COMBINED AT							
+	CNC9	2118.	6.17	546.	172.	166.	.55	
	HYDROGRAPH AT							
+	33A	2272.	6.17	641.	203.	195.	.93	
	HYDROGRAPH AT							
+	33.1A	2828.	6.17	814.	257.	247.	1.64	
	HYDROGRAPH AT							
+	8B1.4	0.	.08	0.	0.	0.	.00	
	HYDROGRAPH AT							
+	8B2	355.	6.08	42.	13.	13.	.23	
	HYDROGRAPH AT							
+	SUB9B	1023.	6.17	241.	75.	72.	1.10	
	HYDROGRAPH AT							
+	SUB10B	1520.	6.50	539.	170.	163.	2.54	
	HYDROGRAPH AT							
+	10.1B	1786.	6.58	715.	227.	218.	3.44	
	HYDROGRAPH AT							
+	12R5	0.	.08	0.	0.	0.	.00	
	HYDROGRAPH AT							
+	13R	1843.	6.08	257.	79.	76.	1.07	
	HYDROGRAPH AT							
+	SUB14	2191.	6.33	599.	185.	178.	2.46	
	HYDROGRAPH AT							
+	14.1	2324.	6.58	740.	230.	221.	3.07	

```
     4 COMBINED AT
+                2IN   18689.  6.75    6598.    2116.    2038.   30.74

     ROUTED TO
+                DIKE2     0.   .08      0.       0.       0.   30.74
+                                                                1538.81    24.92
```

1 SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION 53R

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1600.00	1625.00	1626.00
STORAGE	0.	1287.	1355.
OUTFLOW	0.	2438.	2500.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1611.18	.00	430.	1478.	.00	8.00	.00

SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION 38R-1

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1642.00	1657.00	1658.00
STORAGE	0.	317.	352.
OUTFLOW	0.	434.	450.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1650.66	.00	119.	305.	.00	7.50	.00

1 SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION 38R-2

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1600.00	1609.00	1610.00
STORAGE	0.	41.	51.
OUTFLOW	0.	490.	530.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1610.61	.61	57.	694.	.92	6.25	.00

1 SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION DIKE3

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1504.00	1541.00	1542.00
STORAGE	0.	6032.	6484.
OUTFLOW	0.	0.	290.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1529.16	.00	1891.	0.	.00	.00	.00

1 SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION DIKE2

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1514.00	1550.00	1550.20
STORAGE	0.	11834.	12000.
OUTFLOW	0.	0.	26.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1538.81	.00	4195.	0.	.00	.00	.00

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

FILE: PSJ3.24I

(100-Year, 24-Hour, SCS Type IIA Storm)

This model includes the Jomax Road channel, the Squaw Peak Parkway channel, the east Pinnacle Peak Road channel, the west Pinnacle Peak Road channel, and a reservoir routing operation for CAP Dike 1. Low-flow culvert diverts are de-activated. One hundred percent of the flow from Sub-Basin 1480 is assumed to be diverted into Sub-Basin 3660.

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

  1       ID      UPPER INDIAN BEND WASH REGIONAL FLOOD CONTROL & DRAINAGE PLAN
  2       ID
  3       ID
  4       ID      MODEL PSJ3.24I
  5       ID      FUTURE CONDITION LAND-USE
  6       ID      THIS MODEL SIMULATES A PROPOSED CHANNEL ALONG PINNACLE PEAK ROAD FROM
  7       ID      SUB-BASIN 9A TO THE SQUAW PEAK PARKWAY & THEN SOUTH TO CAP DIKE No.1.
  8       ID      A SECOND CHANNEL RUNS ALONG PINNACLE PEAK ROAD FROM THE WEST SIDE OF
  9       ID      THE SQUAW PEAK PARKWAY TO CAVE CREEK ROAD, & THEN SOUTH TO CAP DIKE No.1
 10       ID      A THIRD CHANNEL EXTENDS FROM SUB-BASIN 8A TO THE SQUAW PEAK PARKWAY &
 11       ID      THEN SOUTH ALONG THE PARKWAY TO JOIN THE PINNACLE PEAK ROAD CHANNEL.
 12       ID      NO OTHER UPSTREAM DRAINAGE IMPROVEMENTS ARE IN-PLACE.
 13       ID
 14       ID      ALL LOW-FLOW DIVERTS ARE SET TO ZERO.
 15       ID      DIVERSION FROM SUB 1480 DIRECTS 100% OF FLOW TO SUB 3660.
 16       ID
 17       ID
 18       ID      RESERVOIR ROUTING OPERATIONS ARE IN-PLACE FOR CAP DIKE 1
 19       ID
 20       ID      THIS MODEL REFLECTS D.A. ADJUSTMENTS MADE TO MODEL F3.24I
 21       ID
 22       ID      100-YR, 24-HR STORM, USING SCS TYPE IIA RAINFALL DISTRIBUTION
 23       ID      RAINFALL FROM NOAA ATLAS, USING 25 SQ MI AREAL REDUCTION FACTOR (.968)
 24       ID
 25       ID      FUTURE LAND-USE DENSITIES FROM OCT 1987 GENERAL PLAN, BRW PLANS, AND
 26       ID      THE TOMTO FOOTHILLS PLAN,   ALL SCOTTSDALE RESIDENTIAL AREAS HAVE THE
 27       ID      PERCENT OF IMPERVIOUS COVER ADJUSTED FOR NAOS REQUIREMENTS.
 28       ID
         *DIAGRAM
 29       IT      5 28APR90      0    300
 30       IO      5      0
 31       IN     30 28APR90      0

 32       KK   SUB7A
 33       KM       RUNOFF FROM SUB-BASIN 7A
 34       BA   .1356
 35       PB   4.25
 36       PC     0   .005   .009   .010   .013   .019   .021   .028   .032   .044
 37       PC   .057   .100   .660   .745   .776   .800   .816   .830   .840   .850
 38       PC   .861   .868   .878   .884   .891   .900   .905   .912   .919   .923
 39       PC   .930   .934   .939   .944   .950   .958   .961   .963   .969   .971
 40       PC   .974   .979   .981   .985   .989   .991   .993   .996  1.000
 41       LS           78    9.9
 42       UK    255  .0262    .20    100
 43       RK   3900  .0231   .045          TRAP     30     10

 44       KK   SUB8A
 45       KM       RUNOFF FROM SUB-BASIN 8A & ROUTE SUB 7A
 46       BA   .4491
 47       LS           75   12.2
 48       UK    116  .0213    .10    100
 49       RK   8400  .0196   .045          TRAP     30    100    YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 50       KK    8A1     DIV
 51       KM        DIVERT LOW-FLOWS TO SUB 9A
 52       DT    8A2
 53       DI     0    500   5000
 54       DQ     0      0      0

 55       KK   5.1A      CP
 56       KM        ROUTE NON-DIVERTED FLOW THROUGH NEW CHANNEL TO CP 5.1A
 57       RS     1    FLOW     -1
 58       RC   .035   .035   .035   5000  .0150
 59       RX     0      8      9     21    61    73    74    82
 60       RY    10      6      6      0     0     6     6    10

 61       KK   SUB1
 62       KM        RUNOFF FROM SUB-BASIN 1
 63       BA  .3371
 64       LS            75    9.9
 65       UK    255  .0262    .20    100
 66       RK   7160  .0289   .045          TRAP    35     3

 67       KK   SUB2
 68       KM        RUNOFF FROM SUB-BASIN 2
 69       BA 1.2170
 70       LS            83   14.4
 71       UK    337  .0308    .20    100
 72       RK  24000  .0196   .045          TRAP    35     3

 73       KK   SUB3
 74       KM        RUNOFF FROM SUB-BASIN 3
 75       BA  .5448
 76       LS            81   10.3
 77       UK    255  .0262    .20    100
 78       RK  16400  .0201   .045          TRAP    35     3

 79       KK    CP4
 80       KM        COMBINE HYDROGRAPHS SUB1, SUB2, & SUB3
 81       HC      3

 82       KK   SUB4
 83       KM        RUNOFF FROM SUB-BASIN 4 & ROUTE CP 4
 84       BA 1.5034
 85       LS            73   16.1
 86       UK     84  .0213    .10    100
 87       RK  10633  .0191   .045          TRAP    50   100    YES

 88       KK    5.1     SUB
 89       KM        RUNOFF FROM SUB 5.1 & ROUTE SUB 4
 90       BA  .3695
 91       LS            74   12.2
 92       UK     81  .0213    .10    100
 93       RK   2250  .0175   .045          TRAP    50   130    YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 94       KK    5.2     CP
 95       KM       COMBINE SUB 5.1 & CP 5.1A
 96       HC     2

 97       KK    5.3    DIV
 98       KM       DIVERT LOW-FLOWS TO SUB 5.5
 99       DT    5.4
100       DI     0    178    500   1000   5000
101       DQ     0      0      0      0      0

102       KK   3666     CP
103       KM       ROUTE NON-DIVERTED FLOW (DIV 5.3) TO CP 3666  (NEW CHANNEL)
104       RS     1   FLOW     -1
105       RC  .035   .035   .035   6250  .0157
106       RX     0      8      9     21     81     93     94    102
107       RY    10      6      6      0      0      6      6     10

108       KK   1470    SUB
109       KM       RUNOFF FROM SUB 1470
110       BA  .2977
111       PB   4.63
112       PC     0   .005   .009   .010   .013   .019   .021   .028   .032   .044
113       PC  .057   .100   .660   .745   .776   .800   .816   .830   .840   .850
114       PC  .861   .868   .878   .884   .891   .900   .905   .912   .919   .923
115       PC  .930   .934   .939   .944   .950   .958   .961   .963   .969   .971
116       PC  .974   .979   .981   .985   .989   .991   .993   .996  1.000
117       LS            84  14.70
118       UK   200  .0500    .20    100
119       RK 15000  .0293    .045          TRAP     20      3

120       KK   1475    SUB
121       KM       RUNOFF FROM SUB 1475 AND ROUTE SUB 1470
122       BA 1.6895
123       LS            84  24.72
124       UK   285  .0419    .20    100
125       RK 17600  .0188    .045          TRAP     25      3    YES

126       KK   1480    SUB
127       KM       RUNOFF FROM SUB 1480 AND ROUTE SUB 1475
128       BA 1.0015
129       LS            83  14.10
130       UK   300  .0167    .20    100
131       RK  7500  .0213    .045          TRAP     25      3    YES

132       KK   1482    DIV
133       KM       DIVERT FLOW FROM SUB 1480 TO SUB 3510
134       DT   1481
135       DI     0   8000
136       DQ     0      0
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Where is Subbas 3510. Mark it on the map and the diversion

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

 137        KK   3660     SUB
 138        KM       RUNOFF FROM SUB 3660 & ROUTE DIV 1482
 139        BA  .7554
 140        PB  4.14
 141        PC     0   .005   .009   .010   .013   .019   .021   .028   .032   .044
 142        PC  .057   .100   .660   .745   .776   .800   .816   .830   .840   .850
 143        PC  .861   .868   .878   .884   .891   .900   .905   .912   .919   .923
 144        PC  .930   .934   .939   .944   .950   .958   .961   .963   .969   .971
 145        PC  .974   .979   .981   .985   .989   .991   .993   .996  1.000
 146        LS          76     21
 147        UK   224  .0212    .15    100
 148        RK  18600  .0184   .045          TRAP     30     30    YES

 149        KK   3665     SUB
 150        KM       RUNOFF FROM SUB 3665 & ROUTE SUB 3660
 151        BA  .8932
 152        LS          74    24.7
 153        UK   100  .0213    .10    100
 154        RK  7400  .0183   .045          TRAP     40     50    YES

 155        KK   3667     CP
 156        KM       COMBINE CP 3666 & SUB 3665
 157        HC     2

 158        KK   3668     DIV
 159        KM       DIVERT LOW-FLOWS TO SUB 3675
 160        DT   3669
 161        DI     0   1000   5000
 162        DQ     0      0      0

 163        KK   SPJ1     CP
 164        KM       ROUTE NON-DIVERTED FLOW THROUGH NEW CHANNEL TO SQUAW PEAK PARKWAY
 165        RS     1   FLOW     -1
 166        RC  .035   .035   .035   6250  .0157
 167        RX     0      8      9     21     81     93     94    102
 168        RY    10      6      6      0      0      6      6     10

 169        KK 3680A1     CP
 170        KM       ROUTE SPJ1 DOWN SQUAW PEAK PARKWAY CHANNEL TO CP 3680A1
 171        RS     1   FLOW     -1
 172        RC  .035   .035   .035   3000  .0100
 173        RX     0      8      9     21     81     93     94    102
 174        RY    10      6      6      0      0      6      6     10

 175        KK   3669     RET
 176        KM       RETRIEVE LOW-FLOW DIVERTS FROM SUB 3665
 177        DR   3669

 178        KK   3675     SUB
 179        KM       RUNOFF FROM SUB 3675 & ROUTE RET 3669
 180        BA  .5632
 181        LS          74    31.6
 182        UK   100  .0213    .10    100
 183        RK  3900  .0183   .045          TRAP     40     50    YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  184     KK  3675A     DIV
  185     KM        RATIO RUNOFF FROM SUB 3675 TO SUB 3680A & 3680B.  DIVERT RATIO IS BASED
  186     KM        OM THE APPROXIMATE D.A. INTERCEPTED BY EACH SUB-BASIN.
  187     DT  3675B
  188     DI     0    100   1000  10000
  189     DQ     0     60    600   6000

  190     KK  3680A     SUB
  191     KM        RUNOFF FROM SUB 3680A & ROUTE DIV 3675A
  192     BA  .3702
  193     PB  4.14
  194     PC     0   .005   .009   .010   .013   .019   .021   .028   .032   .044
  195     PC  .057   .100   .660   .745   .776   .800   .816   .830   .840   .850
  196     PC  .861   .868   .878   .884   .891   .900   .905   .912   .919   .923
  197     PC  .930   .934   .939   .944   .950   .958   .961   .963   .969   .971
  198     PC  .974   .979   .981   .985   .989   .991   .993   .996  1.000
  199     LS            74   35.9
  200     UK   150  .0213    .10    100
  201     RK  3200  .0139    .045          TRAP     40     75    YES

  202     KK  3680A2     CP
  203     KM        COMBINE SUB 3680A & CP 3680A1
  204     HC     2

  205     KK  3680A3     DIV
  206     KM        DIVERT LOW-FLOWS TO SUB 3680C
  207     DT  3680A4
  208     DI     0   1000  10000
  209     DQ     0      0      0

  210     KK    SP3     CP
  211     KM        ROUTE DIV 3680A3 DOWN SQUAW PEAK PARKWAY CHANNEL TO PINNACLE PEAK ROAD
  212     RS     1   FLOW     -1
  213     RC  .035   .035   .035   3750  .0135
  214     RX     0      8      9     21     81     93     94    102
  215     RY    10      6      6      0      0      6      6     10

  216     KK    8A2     RET
  217     KM        RETRIEVE LOW-FLOW DIVERTS FROM SUB 8A
  218     DR    8A2

  219     KK  SUB9A
  220     KM        RUNOFF FROM SUB-BASIN 9A & ROUTE RET 8A2
  221     BA  1.0359
  222     PB  4.25
  223     PC     0   .005   .009   .010   .013   .019   .021   .028   .032   .044
  224     PC  .057   .100   .660   .745   .776   .800   .816   .830   .840   .850
  225     PC  .861   .868   .878   .884   .891   .900   .905   .912   .919   .923
  226     PC  .930   .934   .939   .944   .950   .958   .961   .963   .969   .971
  227     PC  .974   .979   .981   .985   .989   .991   .993   .996  1.000
  228     LS            74   26.0
  229     UK    95  .0213    .10    100
  230     RK 12100  .0192    .045          TRAP     30    130    YES
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  231       KK    9A3     DIV
  232       KM        DIVERT LOW-FLOWS TO SUB 10A
  233       DT    9A4
  234       DI     0    500   5000
  235       DQ     0      0      0

  236       KK    6A1      CP
  237       KM        ROUTE NON-DIVERTED FLOW THROUGH NEW CHANNEL TP CP 6A1
  238       RS     1   FLOW     -1
  239       RC  .035   .035   .035   4750  .0091
  240       RX     0      8      9     21     61     73     74     82
  241       RY    10      6      6      0      0      6      6     10

  242       KK    5.4     RET
  243       KM        RETRIEVE LOW-FLOW DIVERTS FROM SUB 5.1
  244       DR    5.4

  245       KK    5.5     SUB
  246       KM        RUNOFF FROM SUB 5.5 & ROUTE RET 5.4
  247       BA  1.5084
  248       LS            74   25.4
  249       UK     81  .0213    .10    100
  250       RK   8850  .0175   .045          TRAP     50    130    YES

  251       KK     6A     SUB
  252       KM        RUNOFF FROM SUB 6A & ROUTE SUB 5
  253       BA   .5395
  254       LS            74   36.3
  255       UK    146  .0213    .10    100
  256       RK   3000  .0179   .045          TRAP     50    150    YES

  257       KK    6A2      CP
  258       KM        COMBINE SUB 6A & CP 6A1
  259       HC      2

  260       KK    6A3     DIV
  261       KM        DIVERT LOW-FLOWS TO SUB 6B
  262       DT    6A4
  263       DI     0    500   5000
  264       DQ     0      0      0

  265       KK    SP1      CP
  266       KM        ROUTE NON-DIVERTED FLOW THROUGH NEW CHANNEL TO CP SP1
  267       RS     1   FLOW     -1
  268       RC  .035   .035   .035   5500  .0081
  269       RX     0      8      9     21    101    113    114    122
  270       RY    10      6      6      0      0      6      6     10

  271       KK  3675B     RET
  272       KM        RETRIEVE PRO-RATED FLOW FROM SUB 3675
  273       DR  3675B
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  274     KK  3680B    SUB
  275     KM       RUNOFF FROM SUB 3680B & ROUTE PARTIAL RUNOFF FROM SUB 3675
  276     BA  .3609
  277     PB  4.14
  278     PC     0  .005  .009  .010  .013  .019  .021  .028  .032  .044
  279     PC  .057  .100  .660  .745  .776  .800  .816  .830  .840  .850
  280     PC  .861  .868  .878  .884  .891  .900  .905  .912  .919  .923
  281     PC  .930  .934  .939  .944  .950  .958  .961  .963  .969  .971
  282     PC  .974  .979  .981  .985  .989  .991  .993  .996 1.000
  283     LS          74   45.3
  284     UK   150 .0213   .10   100
  285     RK  6000 .0143  .045 .18045   TRAP    40    75
  286     RK  2200 .0133  .035         TRAP    80     2   YES

  287     KK   SP2     CP
  288     KM       COMBINE SUB 3680B & SP1
  289     KM       THIS IS THE INFLOW TO THE SQUAW PEAK PARKWAY CHANNEL FROM THE
  290     KM       PINNACLE PEAK ROAD CHANNEL
  291     HC     2

  292     KK   SP4     CP
  293     KM       COMBINE SP2 & SP3
  294     KM       THIS IS THE COMBINED FLOW FROM THE SQUAW PEAK & PINNACLE PEAK ROAD
  295     KM       CHANNELS.
  296     HC     2

  297     KK 3680E1     CP
  298     KM       ROUTE CP SP4 DOWN SQUAW PEAK PARKWAY CHANNEL TO CP 3680E1
  299     RS     1   FLOW     -1
  300     RC  .035   .035   .035   5900  .0114
  301     RX     0     8     9    21   121   133   134   142
  302     RY    10     6     6     0     0     6     6    10

  303     KK  3680E    SUB
  304     KM       RUNOFF FROM SUB 3680E
  305     BA  .2396
  306     LS          74   38.3
  307     UK   150 .0213   .10   100
  308     RK  1500 .0133  .035  .048   TRAP     8     2
  309     RK  5900 .0114  .035         TRAP    80     2

  310     KK 3680E2     CP
  311     KM       COMBINE SUB 3680E & CP 3680E1
  312     HC     2

  313     KK    6B1     CP
  314     KM       ROUTE CP 3680E2 DOWN SQUAW PEAK PARKWAY CHANNEL TO CP 6B1
  315     RS     1   FLOW     -1
  316     RC  .035   .035   .035   4400  .0114
  317     RX     0     8     9    21   121   133   134   142
  318     RY    10     6     6     0     0     6     6    10
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  319     KK    6A4     RET
  320     KM        RETRIEVE LOW-FLOW DIVERTS FROM SUB 6A
  321     DR    6A4

  322     KK     6B     SUB
  323     KM        RUNOFF FROM SUB 6B & ROUTE RET 6A4
  324     BA  2.3767
  325     PB    4.25
  326     PC      0   .005   .009   .010   .013   .019   .021   .028   .032   .044
  327     PC   .057   .100   .660   .745   .776   .800   .816   .830   .840   .850
  328     PC   .861   .868   .878   .884   .891   .900   .905   .912   .919   .923
  329     PC   .930   .934   .939   .944   .950   .958   .961   .963   .969   .971
  330     PC   .974   .979   .981   .985   .989   .991   .993   .996  1.000
  331     LS            74    56.4
  332     UK    146  .0213    .10    100
  333     RK  11400  .0124   .045          TRAP     50    150    YES

  334     KK    6B2     DIV
  335     KM        RATIO RUNOFF FROM SUB 6B TO SQUAW PEAK PARKWAY CHANNEL BETWEEN CP 6B1 &
  336     KM        CP 3680E2.  DIVERT RATIO IS BASED ON SUB 6B WIDTH (PERPENDICULAR TO
  337     KM        FLOW) AT CP 6B1.
  338     DT    6B3
  339     DI      0   1000  10000
  340     DQ      0    240   2404

  341     KK    6B4      CP
  342     KM        COMBINE CP 6B1 & PRO-RATED FLOW FROM SUB 6B (DIV 6B2)
  343     HC      2

  344     KK   6.1A      CP
  345     KM        ROUTE CP 6B4 DOWN SQUAW PEAK PARKWAY CHANNEL TO CAP DIKE No.1
  346     RS      1    FLOW     -1
  347     RC   .035    .035    .035   3300  .0114
  348     RX      0       8       9     21    121    133    134    142
  349     RY     10       6       6      0      0      6      6     10

  350     KK     6C     SUB
  351     KM        RUNOFF FROM SUB 6C
  352     BA   .1507
  353     LS            74    58.5
  354     UK    146  .0213    .10    100
  355     RK   4000  .0110   .045          TRAP     10     30

  356     KK    6C1      CP
  357     KM        ROUTE SUB 6C TO CAP DIKE No.1
  358     RK   1800  .0110   .045          TRAP     10     50

  359     KK    6B3     RET
  360     KM        RETRIEVE PRO-RATED FLOW FROM SUB 6B
  361     DR    6B3
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  362     KK    6.1     SUB
  363     KM        RUNOFF FROM SUB 6.1 & ROUTE RET 6B3
  364     BA   .8659
  365     LS            74    47.2
  366     UK    146   .0213    .10     100
  367     RK   3400   .0094    .045          TRAP     50     160     YES

  368     KK    6.1B     CP
  369     KM        COMBINE CP 6C1, CP 6.1A, & SUB 6.1
  370     KM        THIS IS THE TOTAL DISCHARGE TO CAP DIKE No.1 THROUGH SUB 6.1
  371     HC      3

  372     KK  3680A4     RET
  373     KM        RETRIEVE LOW-FLOW DIVERTS FROM SUB 3680A
  374     DR  3680A4

  375     KK   3680C     SUB
  376     KM        RUNOFF FROM SUB 3680C & ROUTE RET 3680A4
  377     BA   .7490
  378     PB    4.14
  379     PC      0    .005    .009    .010    .013    .019    .021    .028    .032    .044
  380     PC    .057    .100    .660    .745    .776    .800    .816    .830    .840    .850
  381     PC    .861    .868    .878    .884    .891    .900    .905    .912    .919    .923
  382     PC    .930    .934    .939    .944    .950    .958    .961    .963    .969    .971
  383     PC    .974    .979    .981    .985    .989    .991    .993    .996   1.000
  384     LS            74    37.6
  385     UK    150   .0213    .10     100
  386     RK   5500   .0139    .045          TRAP     40      75     YES

  387     KK  3680C1     DIV
  388     KM        DIVERT LOW-FLOWS TO SUB 3680D
  389     DT  3680C2
  390     DI      0     500    5000
  391     DQ      0       0       0

  392     KK   3641     CP
  393     KM        ROUTE NON-DIVERTED FLOW FROM SUB 3680C TO CP 3641
  394     RS      1    FLOW      -1
  395     RC    .035    .035    .035    4000   .0077
  396     RX      0       8       9      21      81      93      94     102
  397     RY     10       6       6       0       0       6       6      10

  398     KK   3620     SUB
  399     KM        RUNOFF FROM SUB 3620
  400     BA   .6858
  401     LS            77      19
  402     UK    224   .0212    .15     100
  403     RK  16000   .0194    .045          TRAP     15      30
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  404     KK   3630     SUB
  405     KM        RUNOFF FROM SUB 3630 & ROUTE SUB 3620
  406     BA  .8300
  407     LS            74     31
  408     UK    100  .0213    .10    100
  409     RK  11300  .0177   .045          TRAP     30     30    YES

  410     KK   3640     SUB
  411     KM        RUNOFF FROM SUB 3640 & ROUTE SUB 3630
  412     BA  1.6127
  413     LS            74    30.1
  414     UK    150  .0213    .10    100
  415     RK  11600  .0129   .045          TRAP     40     50    YES

  416     KK   3640A    DIV
  417     KM        RATIO FLOW FROM SUB 3640 TO CP 3641.  DIVERT RATIO IS BASED ON THE
  418     KM        WIDTH AT THE BOTTOM OF SUB 3640.
  419     DT   3640B
  420     DI      0   1000   10000
  421     DQ      0    773    7727

  422     KK   3642     CP
  423     KM        COMBINE CP 3641 & DIV 3640A
  424     HC       2

  425     KK  3650A1     CP
  426     KM        ROUTE CP 3642 DOWN PINNACLE PEAK ROAD CHANNEL TO CAVE CREEK ROAD.
  427     RS       1   FLOW     -1
  428     RC    .035   .035   .035   3600  .0080
  429     RX       0      8      9     21     81     93     94    102
  430     RY      10      6      6      0      0      6      6     10

  431     KK   3640B    RET
  432     KM        RETRIEVE PRO-RATED FLOW FROM SUB 3640
  433     DR   3640B

  434     KK   3650A     SUB
  435     KM        RUNOFF FROM SUB 3650A & ROUTE RET 3640B
  436     BA  .1679
  437     LS            74    32.2
  438     UK    150  .0213    .10    100
  439     RK   1900  .0100   .045   .084   TRAP    100     50
  440     RK   3600  .0080   .035          TRAP     60      2    YES

  441     KK  3650A2     CP
  442     KM        COMBINE SUB 3650A & CP 3650A1
  443     HC       2

  444     KK  3650A3    DIV
  445     KM        DIVERT LOW-FLOWS TO SUB 3650B
  446     DT  3650A4
  447     DI      0    500    5000
  448     DQ      0      0       0
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

449       KK  3650B1     CP
450       KM       ROUTE NON-DIVERTED FLOW THROUGH NEW CHANNEL TO CAP DIKE No.1 (CP 3650B1)
451       RS     1   FLOW     -1
452       RC   .035   .035   .035   7700  .0080
453       RX     0     8     9     21    81    93    94   102
454       RY    10     6     6      0     0     6     6    10

455       KK  3650A4     RET
456       KM       RETRIEVE LOW-FLOW DIVERTS FROM SUB 3650A
457       DR  3650A4

458       KK   3650B     SUB
459       KM       RUNOFF FROM SUB 3650B & ROUTE RET 3650A4
460       BA  1.0273
461       LS           74   19.7
462       UK    150  .0213   .10    100
463       RK   7200  .0082   .045          TRAP    100     50    YES

464       KK  3650B2     CP
465       KM       COMBINE SUB 3650B & CP 3650B1
466       KM       THIS IS THE TOTAL DISCHARGE TO CAP DIKE No.1 THROUGH SUB 3650B
467       HC     2

468       KK  3680C2     RET
469       KM       RETRIEVE LOW-FLOW DIVERTS FROM SUB 3680C
470       DR  3680C2

471       KK   3680D     SUB
472       KM       RUNOFF FROM SUB 3680D & ROUTE RET 3680C2
473       BA   .5251
474       LS           74   38.3
475       UK    150  .0213   .10    100
476       RK   3000  .0134   .045          TRAP     40     75    YES

477       KK    3690     SUB
478       KM       RUNOFF FROM SUB 3690 & ROUTE SUB 3680D
479       BA  1.4670
480       LS           74   20.5
481       UK    150  .0213   .10    100
482       RK   7300  .0110   .045          TRAP     50    100    YES

483       KK     9A4     RET
484       KM       RETRIEVE LOW-FLOW DIVERTS FROM SUB 9A
485       DR     9A4

486       KK  SUB10A
487       KM       RUNOFF FROM SUB-BASIN 10A ROUTE RET 9A4
488       BA   .7895
489       PB   4.25
490       PC     0   .005   .009   .010   .013   .019   .021   .028   .032   .044
491       PC   .057   .100   .660   .745   .776   .800   .816   .830   .840   .850
492       PC   .861   .868   .878   .884   .891   .900   .905   .912   .919   .923
493       PC   .930   .934   .939   .944   .950   .958   .961   .963   .969   .971
494       PC   .974   .979   .981   .985   .989   .991   .993   .996  1.000
```

1

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

495       LS            74    39.7
496       UK     107   .0213    .10     100
497       RK   11300   .0142    .045          TRAP     30     175     YES

498       KK   10.1A     SUB
499       KM       RUNOFF FROM SUB 10.1A & ROUTE SUB 10A
500       BA   .5933
501       LS            74    43.0
502       UK     107   .0213    .10     100
503       RK    5500   .0100    .045          TRAP     30     190     YES

504       KK     1IN      CP
505       KM       COMBINE CP 3650B2, SUB 3690, CP 6.1B, & SUB 10.1A
506       KM       THIS IS THE TOTAL INFLOW TO CAP DIKE No.1
507       KO       1       2
508       HC       4

509       KK   DIKE1      DAM
510       KM       ROUTE CP 1IN THROUGH CAP DIKE No.1
511       KO       1       2
512       RS       1    STOR
513       SV       0      10      68     209     429     740    1167    1750    2522    3486
514       SV    4640    5986    7534    9280   11210   13332   15646   15900   18145
515       SE    1518    1520    1522    1524    1526    1528    1530    1532    1534    1536
516       SE    1538    1540    1542    1544    1546    1548    1550  1550.2    1552
517       SS  1550.2     100     2.9     1.5
518       ST    1552     100     2.9     1.5
519       ZZ
```

SCHEMATIC DIAGRAM OF STREAM NETWORK

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

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

  32     SUB7A
           V
           V
  44     SUB8A ***
           .
           .
  52       .------->    8A2
  50     8A1
           V
           V
  55     5.1A
           .
           .
  61       .      SUB1
           .        .
           .        .
  67       .        .      SUB2
           .        .        .
           .        .        .
  73       .        .        .      SUB3
           .        .        .        .
           .        .        .        .
  79       .      CP4.......................
           .        V
           .        V
  82       .      SUB4 ***
           .        V
           .        V
  88       .      5.1 ***
           .        .
           .        .
  94     5.2............
           .
           .
  99       .------->    5.4
  97     5.3
           V
           V
 102     3666
           .
           .
 108       .      1470
           .        V
           .        V
 120       .      1475 ***
           .        V
           .        V
 126       .      1480 ***
           .        .
           .        .
 134       .        .------->   1481
 132       .      1482
           .        V
           .        V
 137       .      3660 ***
           .        V
           .        V
 149       .      3665 ***
```

```
          .         .
          .         .
155     3667.........
          .
          .
160       .------->   3669
158     3668
         V
         V
163     SPJ1
         V
         V
169     3680A1
          .
          .
177       .         .<-------   3669
175       .       3669
          .         V
          .         V
178       .       3675 ***
          .         .
          .         .
187       .         .------->  3675B
184       .       3675A
          .         V
          .         V
190       .       3680A ***
          .         .
          .         .
202     3680A2.........
          .
          .
207       .------->  3680A4
205     3680A3
         V
         V
210     SP3
          .
          .
218       .         .<-------   8A2
216       .       8A2
          .         V
          .         V
219       .       SUB9A ***
          .         .
          .         .
233       .         .------->   9A4
231       .       9A3
          .         V
          .         V
236       .       6A1
          .         .
          .         .
244       .         .         .<-------   5.4
242       .         .       5.4
          .         .         V
          .         .         V
245       .         .       5.5 ***
          .         .         V
          .         .         V
251       .         .       6A ***
          .         .         .
          .         .         .
257       .       6A2.........
          .         .
```

```
        .         .
262     .         .-------->   6A4
260     .       6A3
        .       V
        .       V
265     .       SP1
        .       .
        .       .
273     .       .         .<-------   3675B
271     .       .       3675B
        .       .         V
        .       .         V
274     .       .       3680B ***
        .       .         .
        .       .         .
287     .       SP2............
        .       .
        .       .
292   SP4............
      V
      V
297 3680E1
      .
      .
303     .     3680E
        .       .
        .       .
310 3680E2.............
      V
      V
313   6B1
      .
      .
321     .       .<-------   6A4
319     .     6A4
        .       V
        .       V
322     .       6B ***
        .       .
        .       .
338     .       .-------->   6B3
334     .     6B2
        .       .
        .       .
341   6B4............
      V
      V
344   6.1A
      .
      .
350     .       6C
        .       V
        .       V
356     .     6C1
        .       .
        .       .
361     .       .         .<-------   6B3
359     .       .       6B3
        .       .         V
        .       .         V
362     .       .       6.1 ***
        .       .         .
        .       .         .
368   6.1B........................
      .
```

```
          .
374       .        .<-------  3680A4
372       .     3680A4
          .        V
          .        V
375       .     3680C ***
          .        .
          .        .
389       .        .-------> 3680C2
387       .     3680C1
          .        V
          .        V
392       .     3641
          .        .
          .        .
398       .        .     3620
          .        .       V
          .        .       V
404       .        .     3630 ***
          .        .       V
          .        .       V
410       .        .     3640 ***
          .        .       .
          .        .       .
419       .        .       .-------> 3640B
416       .        .     3640A
          .        .       .
          .        .       .
422       .     3642.............
          .        V
          .        V
425       .     3650A1
          .        .
          .        .
433       .        .       .<-------  3640B
431       .        .     3640B
          .        .       V
          .        .       V
434       .        .     3650A ***
          .        .       .
          .        .       .
441       .     3650A2.............
          .        .
          .        .
446       .        .-------> 3650A4
444       .     3650A3
          .        V
          .        V
449       .     3650B1
          .        .
          .        .
457       .        .       .<-------  3650A4
455       .        .     3650A4
          .        .       V
          .        .       V
458       .        .     3650B ***
          .        .       .
          .        .       .
464       .     3650B2.............
          .        .
          .        .
470       .        .       .<-------  3680C2
468       .        .     3680C2
          .        .       V
          .        .       V
```

```
471      .        .      3680D ***
         .        .       V
         .        .       V
477      .        .      3690 ***
         .        .       .
         .        .       .
485      .        .       .        .<-------    9A4
483      .        .       .      9A4
         .        .       .       V
         .        .       .       V
486      .        .       .    SUB10A ***
         .        .       .       V
         .        .       .       V
498      .        .       .    10.1A ***
         .        .       .       .
         .        .       .       .
504     1IN.................................
        V
        V
509    DIKE1
```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

1 ****

FLOOD HYDROGRAPH PACKAGE HEC-1 (IBM XT 512K VERSION) -FEB 1,1985
U.S. ARMY CORPS OF ENGINEERS, THE HYDROLOGIC ENGINEERING CENTER, 609 SECOND STREET, DAVIS, CA. 95616
****

UPPER INDIAN BEND WASH REGIONAL FLOOD CONTROL & DRAINAGE PLAN

MODEL PSJ3.24I
FUTURE CONDITION LAND-USE
THIS MODEL SIMULATES A PROPOSED CHANNEL ALONG PINNACLE PEAK ROAD FROM
SUB-BASIN 9A TO THE SQUAW PEAK PARKWAY & THEN SOUTH TO CAP DIKE No.1.
A SECOND CHANNEL RUNS ALONG PINNACLE PEAK ROAD FROM THE WEST SIDE OF
THE SQUAW PEAK PARKWAY TO CAVE CREEK ROAD, & THEN SOUTH TO CAP DIKE No.1
A THIRD CHANNEL EXTENDS FROM SUB-BASIN 8A TO THE SQUAW PEAK PARKWAY &
THEN SOUTH ALONG THE PARKWAY TO JOIN THE PINNACLE PEAK ROAD CHANNEL.
NO OTHER UPSTREAM DRAINAGE IMPROVEMENTS ARE IN-PLACE.

ALL LOW-FLOW DIVERTS ARE SET TO ZERO.
DIVERSION FROM SUB 1480 DIRECTS 100% OF FLOW TO SUB 3660.

RESERVOIR ROUTING OPERATIONS ARE IN-PLACE FOR CAP DIKE 1

THIS MODEL REFLECTS D.A. ADJUSTMENTS MADE TO MODEL F3.24I

100-YR, 24-HR STORM, USING SCS TYPE IIA RAINFALL DISTRIBUTION
RAINFALL FROM NOAA ATLAS, USING 25 SQ MI AREAL REDUCTION FACTOR (.968)

FUTURE LAND-USE DENSITIES FROM OCT 1987 GENERAL PLAN, BRW PLANS, AND
THE TOMTO FOOTHILLS PLAN, ALL SCOTTSDALE RESIDENTIAL AREAS HAVE THE
PERCENT OF IMPERVIOUS COVER ADJUSTED FOR NAOS REQUIREMENTS.

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

  IT       HYDROGRAPH TIME DATA
             NMIN         5  MINUTES IN COMPUTATION INTERVAL
            IDATE    28APR90  STARTING DATE
            ITIME      0000  STARTING TIME
               NQ       300  NUMBER OF HYDROGRAPH ORDINATES
           NDDATE    29APR90  ENDING DATE
           NDTIME      0055  ENDING TIME

          COMPUTATION INTERVAL     .08 HOURS
             TOTAL TIME BASE   24.92 HOURS

      ENGLISH UNITS

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN     5921. TO    14254.
          THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
          THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN     8028. TO    16562.
          THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
          THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN    21400. TO    23615.
          THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
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THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 8735. TO 23615.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** ***

1

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

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT SUB7A	203.	6.17	25.	8.	8.	.14			
+	HYDROGRAPH AT SUB8A	408.	6.25	104.	33.	32.	.58			
+	DIVERSION TO 8A2	0.	6.25	0.	0.	0.	.58			
+	HYDROGRAPH AT 8A1	408.	6.25	104.	33.	32.	.58			
+	ROUTED TO 5.1A	369.	6.50	103.	33.	32.	.58			
+								1.38	6.50	
+	HYDROGRAPH AT SUB1	402.	6.17	56.	18.	17.	.34			
+	HYDROGRAPH AT SUB2	1055.	6.33	266.	83.	80.	1.22			
+	HYDROGRAPH AT SUB3	437.	6.33	108.	34.	33.	.54			
+	3 COMBINED AT CP4	1830.	6.25	429.	135.	130.	2.10			
+	HYDROGRAPH AT SUB4	2045.	6.58	676.	217.	209.	3.60			
+	HYDROGRAPH AT 5.1	2118.	6.67	736.	236.	227.	3.97			
+	2 COMBINED AT 5.2	2468.	6.67	838.	269.	259.	4.56			
+	DIVERSION TO 5.4	0.	6.67	0.	0.	0.	4.56			
+	HYDROGRAPH AT 5.3	2468.	6.67	838.	269.	259.	4.56			
+	ROUTED TO 3666	2423.	6.75	831.	268.	258.	4.56			
+								3.31	6.75	
+	HYDROGRAPH AT 1470	507.	6.17	78.	24.	23.	.30			
+	HYDROGRAPH AT 1475	3520.	6.17	552.	169.	163.	1.99			
+	HYDROGRAPH AT 1480	4923.	6.17	813.	249.	239.	2.99			

```
      DIVERSION TO
+                1481     0.   6.17       0.       0.       0.     2.99

      HYDROGRAPH AT
+                1482  4923.   6.17     813.     249.     239.     2.99

      HYDROGRAPH AT
+                3660  3237.   6.67     926.     290.     279.     3.74

      HYDROGRAPH AT
+                3665  3290.   6.83    1077.     342.     330.     4.64

      2 COMBINED AT
+                3667  5674.   6.83    1906.     610.     588.     9.19

      DIVERSION TO
+                3669     0.   6.83       0.       0.       0.     9.19

      HYDROGRAPH AT
+                3668  5674.   6.83    1906.     610.     588.     9.19

      ROUTED TO
+                 SPJ1  5596.   6.92    1897.     607.     585.     9.19
+                                                                   5.40     6.92

      ROUTED TO
+               3680A1  5574.   6.92    1893.     606.     584.     9.19
+                                                                   6.11     6.92

      HYDROGRAPH AT
+                3669     0.    .08       0.       0.       0.      .00

      HYDROGRAPH AT
+                3675  1063.   6.08     115.      36.      34.      .56

      DIVERSION TO
+               3675B   638.   6.08      69.      21.      21.      .56

      HYDROGRAPH AT
+               3675A   425.   6.08      46.      14.      14.      .56

      HYDROGRAPH AT
+               3680A  1086.   6.08     126.      39.      38.      .93

      2 COMBINED AT
+               3680A2  5710.   6.92    2002.     645.     621.    10.13

      DIVERSION TO
+               3680A4     0.   6.92       0.       0.       0.    10.13

      HYDROGRAPH AT
+               3680A3  5710.   6.92    2002.     645.     621.    10.13

      ROUTED TO
+                 SP3  5680.   7.00    1998.     643.     620.    10.13
+                                                                   5.69     7.00

      HYDROGRAPH AT
+                 8A2     0.    .08       0.       0.       0.      .00

      HYDROGRAPH AT
+               SUB9A   916.   6.33     209.      65.      63.     1.04

      DIVERSION TO
+                 9A4     0.   6.33       0.       0.       0.     1.04
```

	HYDROGRAPH AT							
+	9A3	916.	6.33	209.	65.	63.	1.04	
	ROUTED TO							
+	6A1	865.	6.42	207.	65.	63.	1.04	
+							2.67	6.42
	HYDROGRAPH AT							
+	5.4	0.	.08	0.	0.	0.	.00	
	HYDROGRAPH AT							
+	5.5	1916.	6.17	303.	94.	91.	1.51	
	HYDROGRAPH AT							
+	6A	2237.	6.17	423.	132.	127.	2.05	
	2 COMBINED AT							
+	6A2	2916.	6.25	629.	197.	189.	3.08	
	DIVERSION TO							
+	6A4	0.	6.25	0.	0.	0.	3.08	
	HYDROGRAPH AT							
+	6A3	2916.	6.25	629.	197.	189.	3.08	
	ROUTED TO							
+	SP1	2753.	6.42	623.	196.	188.	3.08	
+							3.68	6.42
	HYDROGRAPH AT							
+	3675B	638.	6.08	69.	21.	21.	.00	
	HYDROGRAPH AT							
+	3680B	1099.	6.17	155.	48.	46.	.36	
	2 COMBINED AT							
+	SP2	3414.	6.33	777.	243.	234.	3.44	
	2 COMBINED AT							
+	SP4	7436.	6.83	2768.	887.	854.	13.57	
	ROUTED TO							
+	3680E1	7362.	6.92	2752.	883.	850.	13.57	
+							5.23	6.92
	HYDROGRAPH AT							
+	3680E	402.	6.08	51.	16.	15.	.24	
	2 COMBINED AT							
+	3680E2	7427.	6.92	2798.	898.	865.	13.81	
	ROUTED TO							
+	6B1	7394.	7.00	2788.	895.	862.	13.81	
+							5.25	7.00
	HYDROGRAPH AT							
+	6A4	0.	.08	0.	0.	0.	.00	
	HYDROGRAPH AT							
+	6B	3403.	6.17	641.	196.	189.	2.38	
	DIVERSION TO							
+	6B3	818.	6.17	154.	47.	45.	2.38	

	HYDROGRAPH AT							
+	6B2	2585.	6.17	487.	149.	143.	2.38	
	2 COMBINED AT							
+	6B4	8207.	6.92	3247.	1044.	1006.	16.19	
	ROUTED TO							
+	6.1A	8186.	7.00	3242.	1042.	1003.	16.19	
+							5.57	7.00
	HYDROGRAPH AT							
+	6C	346.	6.08	41.	13.	12.	.15	
	ROUTED TO							
+	6C1	327.	6.25	43.	13.	12.	.15	
	HYDROGRAPH AT							
+	6B3	818.	6.17	154.	47.	45.	.00	
	HYDROGRAPH AT							
+	6.1	2277.	6.08	373.	114.	110.	.87	
	3 COMBINED AT							
+	6.1B	8834.	6.83	3644.	1169.	1126.	17.20	
	HYDROGRAPH AT							
+	3680A4	0.	.08	0.	0.	0.	.00	
	HYDROGRAPH AT							
+	3680C	1286.	6.08	162.	50.	48.	.75	
	DIVERSION TO							
+	3680C2	0.	6.08	0.	0.	0.	.75	
	HYDROGRAPH AT							
+	3680C1	1286.	6.08	162.	50.	48.	.75	
	ROUTED TO							
+	3641	1081.	6.25	161.	50.	48.	.75	
+							2.53	6.25
	HYDROGRAPH AT							
+	3620	496.	6.42	129.	41.	39.	.69	
	HYDROGRAPH AT							
+	3630	1021.	6.17	296.	94.	90.	1.52	
	HYDROGRAPH AT							
+	3640	1920.	6.17	612.	194.	187.	3.13	
	DIVERSION TO							
+	3640B	1484.	6.17	473.	150.	145.	3.13	
	HYDROGRAPH AT							
+	3640A	436.	6.17	139.	44.	42.	3.13	
	2 COMBINED AT							
+	3642	1515.	6.25	300.	94.	91.	3.88	
	ROUTED TO							
+	3650A1	1395.	6.33	298.	94.	90.	3.88	
+							2.91	6.33
	HYDROGRAPH AT							
+	3640B	1484.	6.17	473.	150.	145.	.00	

```
      HYDROGRAPH AT
+              3650A   1608.   6.25     507.     160.     154.     .17

      2 COMBINED AT
+              3650A2  2983.   6.33     805.     254.     245.    4.05

      DIVERSION TO
+              3650A4     0.   6.33      0.       0.       0.    4.05

      HYDROGRAPH AT
+              3650A3  2983.   6.33     805.     254.     245.    4.05

      ROUTED TO
+              3650B1  2555.   6.50     794.     252.     243.    4.05
+                                                             4.16     6.50

      HYDROGRAPH AT
+              3650A4     0.    .08      0.       0.       0.     .00

      HYDROGRAPH AT
+               3650B  1094.   6.17     182.      57.      55.    1.03

      2 COMBINED AT
+              3650B2  3223.   6.42     972.     309.     298.    5.07

      HYDROGRAPH AT
+              3680C2     0.    .08      0.       0.       0.     .00

      HYDROGRAPH AT
+               3680D  1047.   6.08     114.      35.      34.     .53

      HYDROGRAPH AT
+                3690  2134.   6.17     378.     118.     114.    1.99

      HYDROGRAPH AT
+                 9A4     0.    .08      0.       0.       0.     .00

      HYDROGRAPH AT
+              SUB10A   722.   6.42     183.      57.      55.     .79

      HYDROGRAPH AT
+               10.1A  1063.   6.17     323.     100.      97.    1.38

      4 COMBINED AT
+                 1IN 14148.   6.50    5316.    1697.    1635.   25.65

      ROUTED TO
+               DIKE1     0.    .08      0.       0.       0.   25.65
+                                                          1535.75    24.92
```

SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION DIKE1

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1518.00	1550.20	1552.00
STORAGE	0.	15900.	18145.
OUTFLOW	0.	0.	700.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1535.75	.00	3365.	0.	.00	.00	.00

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

FILE: PSJ5.24I

(100-Year, 24-Hour, SCS Type IIA Storm)

This model includes the Jomax Road channel, the Squaw Peak Parkway channel, the east Pinnacle Peak Road channel, the west Pinnacle Peak road channel, and a reservoir routing operation for CAP Dike 1. One hundred percent of the flow from Sub-Basin 1480 is assumed to be diverted into Sub-Basin 3660.

Check the change in the division cards.

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

  1       ID     UPPER INDIAN BEND WASH REGIONAL FLOOD CONTROL & DRAINAGE PLAN
  2       ID
  3       ID
  4       ID     MODEL PSJ5.24I
  5       ID
  6       ID     FUTURE CONDITION LAND-USE
  7       ID     THIS MODEL SIMULATES A PROPOSED CHANNEL ALONG PINNACLE PEAK ROAD FROM
  8       ID     SUB-BASIN 9A TO THE SQUAW PEAK PARKWAY & THEN SOUTH TO CAP DIKE No.1.
  9       ID     A SECOND CHANNEL RUNS ALONG PINNACLE PEAK ROAD FROM THE WEST SIDE OF
 10       ID     THE SQUAW PEAK PARKWAY TO CAVE CREEK ROAD, & THEN SOUTH TO CAP DIKE No.1
 11       ID     A THIRD CHANNEL EXTENDS FROM SUB-BASIN 8A TO THE SQUAW PEAK PARKWAY &
 12       ID     THEN SOUTH ALONG THE PARKWAY TO JOIN THE PINNACLE PEAK ROAD CHANNEL.
 13       ID     NO OTHER UPSTREAM DRAINAGE IMPROVEMENTS ARE IN-PLACE.
 14       ID
 15       ID     LOW-FLOW CULVERT DIVERTS ARE ACTIVATED.
 16       ID
 17       ID     DIVERSION FROM SUB 1480 DIRECTS 100% OF FLOW TO SUB 3660.
 18       ID
 19       ID     RESERVOIR ROUTING OPERATIONS ARE IN-PLACE FOR CAP DIKE 1
 20       ID
 21       ID     THIS MODEL REFLECTS D.A. ADJUSTMENTS MADE TO MODEL F3.24I
 22       ID
 23       ID     100-YR, 24-HR STORM, USING SCS TYPE IIA RAINFALL DISTRIBUTION
 24       ID     RAINFALL FROM NOAA ATLAS, USING 25 SQ MI AREAL REDUCTION FACTOR (.968)
 25       ID
 26       ID     FUTURE LAND-USE DENSITIES FROM OCT 1987 GENERAL PLAN, BRW PLANS, AND
 27       ID     THE TONTO FOOTHILLS PLAN,    ALL SCOTTSDALE RESIDENTIAL AREAS HAVE THE
 28       ID     PERCENT OF IMPERVIOUS COVER ADJUSTED FOR NAOS REQUIREMENTS.
 29       ID
         *DIAGRAM
 30       IT     5 28APR90      0    289
 31       IO     5      0
 32       IN    30 28APR90      0

 33       KK   SUB7A
 34       KM       RUNOFF FROM SUB-BASIN 7A
 35       BA   .1356
 36       PB   4.25
 37       PC     0   .005   .009   .010   .013   .019   .021   .028   .032   .044
 38       PC   .057   .100   .660   .745   .776   .800   .816   .830   .840   .850
 39       PC   .861   .868   .878   .884   .891   .900   .905   .912   .919   .923
 40       PC   .930   .934   .939   .944   .950   .958   .961   .963   .969   .971
 41       PC   .974   .979   .981   .985   .989   .991   .993   .996  1.000
 42       LS           78    9.9
 43       UK    255  .0262    .20    100
 44       RK   3900  .0231    .045          TRAP     30     10

 45       KK   SUB8A
 46       KM       RUNOFF FROM SUB-BASIN 8A & ROUTE SUB 7A
 47       BA   .4491
 48       LS           75    12.2
 49       UK    116  .0213    .10    100
 50       RK   8400  .0196    .045          TRAP     30    100    YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  51      KK    8A1     DIV
  52      KM        DIVERT LOW-FLOWS TO SUB 9A
  53      DT    8A2
  54      DI     0    440   1000
  55      DQ     0    294    350

  56      KK    5.1A     CP
  57      KM        ROUTE NON-DIVERTED FLOW THROUGH NEW CHANNEL TO CP 5.1A
  58      RS     1   FLOW     -1
  59      RC   .035   .035   .035   5000  .0150
  60      RX     0     8     9     21    61    73    74    82
  61      RY    10     6     6      0     0     6     6    10

  62      KK    SUB1
  63      KM        RUNOFF FROM SUB-BASIN 1
  64      BA   .3371
  65      LS           75    9.9
  66      UK    255  .0262    .20    100
  67      RK   7160  .0289   .045          TRAP    35     3

  68      KK    SUB2
  69      KM        RUNOFF FROM SUB-BASIN 2
  70      BA  1.2170
  71      LS           83   14.4
  72      UK    337  .0308    .20    100
  73      RK  24000  .0196   .045          TRAP    35     3

  74      KK    SUB3
  75      KM        RUNOFF FROM SUB-BASIN 3
  76      BA   .5448
  77      LS           81   10.3
  78      UK    255  .0262    .20    100
  79      RK  16400  .0201   .045          TRAP    35     3

  80      KK     CP4
  81      KM        COMBINE HYDROGRAPHS SUB1, SUB2, & SUB3
  82      HC      3

  83      KK    SUB4
  84      KM        RUNOFF FROM SUB-BASIN 4 & ROUTE CP 4
  85      BA  1.5034
  86      LS           73   16.1
  87      UK     84  .0213    .10    100
  88      RK  10633  .0191   .045          TRAP    50   100    YES

  89      KK     5.1     SUB
  90      KM        RUNOFF FROM SUB 5.1 & ROUTE SUB 4
  91      BA   .3695
  92      LS           74   12.2
  93      UK     81  .0213    .10    100
  94      RK   2250  .0175   .045          TRAP    50   130    YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 95       KK    5.2     CP
 96       KM       COMBINE SUB 5.1 & CP 5.1A
 97       HC     2

 98       KK    5.3     DIV
 99       KM       DIVERT LOW-FLOWS TO SUB 5.5
100       DT    5.4
101       DI     0   2664   4000
102       DQ     0    764    825

103       KK   3666     CP
104       KM       ROUTE NON-DIVERTED FLOW (DIV 5.3) TO CP 3666  (NEW CHANNEL)
105       RS     1   FLOW     -1
106       RC  .035   .035   .035   6250  .0157
107       RX     0      8      9     21     81     93     94    102
108       RY    10      6      6      0      0      6      6     10

109       KK   1470     SUB
110       KM       RUNOFF FROM SUB 1470
111       BA  .2977
112       PB   4.63
113       PC     0   .005   .009   .010   .013   .019   .021   .028   .032   .044
114       PC  .057   .100   .660   .745   .776   .800   .816   .830   .840   .850
115       PC  .861   .868   .878   .884   .891   .900   .905   .912   .919   .923
116       PC  .930   .934   .939   .944   .950   .958   .961   .963   .969   .971
117       PC  .974   .979   .981   .985   .989   .991   .993   .996  1.000
118       LS            84  14.70
119       UK   200  .0500    .20    100
120       RK 15000  .0293    .045          TRAP     20      3

121       KK   1475     SUB
122       KM       RUNOFF FROM SUB 1475 AND ROUTE SUB 1470
123       BA  1.6895
124       LS            84  24.72
125       UK   285  .0419    .20    100
126       RK 17600  .0188    .045          TRAP     25      3    YES

127       KK   1480     SUB
128       KM       RUNOFF FROM SUB 1480 AND ROUTE SUB 1475
129       BA  1.0015
130       LS            83  14.10
131       UK   300  .0167    .20    100
132       RK  7500  .0213    .045          TRAP     25      3    YES

133       KK   1482     DIV
134       KM       DIVERT FLOW FROM SUB 1480 TO SUB 3510
135       DT   1481
136       DI     0   8000
137       DQ     0      0
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 138      KK   3660     SUB
 139      KM        RUNOFF FROM SUB 3660 & ROUTE DIV 1482
 140      BA   .7554
 141      PB   4.14
 142      PC      0   .005   .009   .010   .013   .019   .021   .028   .032   .044
 143      PC   .057   .100   .660   .745   .776   .800   .816   .830   .840   .850
 144      PC   .861   .868   .878   .884   .891   .900   .905   .912   .919   .923
 145      PC   .930   .934   .939   .944   .950   .958   .961   .963   .969   .971
 146      PC   .974   .979   .981   .985   .989   .991   .993   .996  1.000
 147      LS           76     21
 148      UK    224  .0212    .15    100
 149      RK  18600  .0184    .045          TRAP     30     30    YES

 150      KK   3665     SUB
 151      KM        RUNOFF FROM SUB 3665 & ROUTE SUB 3660
 152      BA   .8932
 153      LS           74   24.7
 154      UK    100  .0213    .10    100
 155      RK   7400  .0183    .045          TRAP     40     50    YES

 156      KK   3667      CP
 157      KM        COMBINE CP 3666 & SUB 3665
 158      HC      2

 159      KK   3668     DIV
 160      KM        DIVERT LOW-FLOWS TO SUB 3675
 161      DT   3669
 162      DI      0   6093   7500
 163      DQ      0    617    675

 164      KK   SPJ1      CP
 165      KM        ROUTE NON-DIVERTED FLOW THROUGH NEW CHANNEL TO SQUAW PEAK PARKWAY
 166      RS      1   FLOW     -1
 167      RC   .035   .035   .035   6250  .0157
 168      RX      0      8      9     21     81     93     94    102
 169      RY     10      6      6      0      0      6      6     10

 170      KK  3680A1      CP
 171      KM        ROUTE SPJ1 DOWN SQUAW PEAK PARKWAY CHANNEL TO CP 3680A1
 172      RS      1   FLOW     -1
 173      RC   .035   .035   .035   3000  .0100
 174      RX      0      8      9     21     81     93     94    102
 175      RY     10      6      6      0      0      6      6     10

 176      KK   3669     RET
 177      KM        RETRIEVE LOW-FLOW DIVERTS FROM SUB 3665
 178      DR   3669

 179      KK   3675     SUB
 180      KM        RUNOFF FROM SUB 3675 & ROUTE RET 3669
 181      BA   .5632
 182      LS           74   31.6
 183      UK    100  .0213    .10    100
 184      RK   3900  .0183    .045          TRAP     40     50    YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

185       KK  3675A     DIV
186       KM        RATIO RUNOFF FROM SUB 3675 TO SUB 3680A & 3680B.  DIVERT RATIO IS BASED
187       KM        ON THE APPROXIMATE D.A. INTERCEPTED BY EACH SUB-BASIN.
188       DT  3675B
189       DI     0    100   1000  10000
190       DQ     0     60    600   6000

191       KK  3680A     SUB
192       KM        RUNOFF FROM SUB 3680A & ROUTE DIV 3675A
193       BA  .3702
194       PB  4.14
195       PC     0   .005   .009   .010   .013   .019   .021   .028   .032   .044
196       PC  .057   .100   .660   .745   .776   .800   .816   .830   .840   .850
197       PC  .861   .868   .878   .884   .891   .900   .905   .912   .919   .923
198       PC  .930   .934   .939   .944   .950   .958   .961   .963   .969   .971
199       PC  .974   .979   .981   .985   .989   .991   .993   .996  1.000
200       LS            74   35.9
201       UK   150  .0213    .10    100
202       RK  3200  .0139    .045          TRAP     40     75    YES

203       KK  3680A2     CP
204       KM        COMBINE SUB 3680A & CP 3680A1
205       HC     2

206       KK  3680A3     DIV
207       KM        DIVERT LOW-FLOWS TO SUB 3680C
208       DT  3680A4
209       DI     0   6134   7500
210       DQ     0    647    675

211       KK    SP3     CP
212       KM        ROUTE DIV 3680A3 DOWN SQUAW PEAK PARKWAY CHANNEL TO PINNACLE PEAK ROAD
213       RS     1   FLOW     -1
214       RC  .035   .035   .035   3750  .0135
215       RX     0     8     9     21    81    93    94   102
216       RY    10     6     6      0     0     6     6    10

217       KK    8A2     RET
218       KM        RETRIEVE LOW-FLOW DIVERTS FROM SUB 8A
219       DR    8A2

220       KK  SUB9A
221       KM        RUNOFF FROM SUB-BASIN 9A & ROUTE RET 8A2
222       BA  1.0359
223       PB  4.25
224       PC     0   .005   .009   .010   .013   .019   .021   .028   .032   .044
225       PC  .057   .100   .660   .745   .776   .800   .816   .830   .840   .850
226       PC  .861   .868   .878   .884   .891   .900   .905   .912   .919   .923
227       PC  .930   .934   .939   .944   .950   .958   .961   .963   .969   .971
228       PC  .974   .979   .981   .985   .989   .991   .993   .996  1.000
229       LS            74   26.0
230       UK    95  .0213    .10    100
231       RK 12100  .0192    .045          TRAP     30    130    YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

232       KK    9A3     DIV
233       KM       DIVERT LOW-FLOWS TO SUB 10A
234       DT    9A4
235       DI     0    977    2000
236       DQ     0    294     325

237       KK    6A1     CP
238       KM       ROUTE NON-DIVERTED FLOW THROUGH NEW CHANNEL TP CP 6A1
239       RS     1   FLOW     -1
240       RC  .035   .035   .035   4750  .0091
241       RX     0     8     9     21    61    73    74    82
242       RY    10     6     6      0     0     6     6    10

243       KK    5.4     RET
244       KM       RETRIEVE LOW-FLOW DIVERTS FROM SUB 5.1
245       DR    5.4

246       KK    5.5     SUB
247       KM       RUNOFF FROM SUB 5.5 & ROUTE RET 5.4
248       BA  1.5084
249       LS           74   25.4
250       UK    81  .0213    .10    100
251       RK  8850  .0175   .045          TRAP    50   130    YES

252       KK     6A     SUB
253       KM       RUNOFF FROM SUB 6A & ROUTE SUB 5
254       BA   .5395
255       LS           74   36.3
256       UK   146  .0213    .10    100
257       RK  3000  .0179   .045          TRAP    50   150    YES

258       KK    6A2     CP
259       KM       COMBINE SUB 6A & CP 6A1
260       HC     2

261       KK    6A3     DIV
262       KM       DIVERT LOW-FLOWS TO SUB 6B
263       DT    6A4
264       DI     0   3147   4500
265       DQ     0    559    600

266       KK    SP1     CP
267       KM       ROUTE NON-DIVERTED FLOW THROUGH NEW CHANNEL TO CP SP1
268       RS     1   FLOW     -1
269       RC  .035   .035   .035   5500  .0081
270       RX     0     8     9     21   101   113   114   122
271       RY    10     6     6      0     0     6     6    10

272       KK  3675B     RET
273       KM       RETRIEVE PRO-RATED FLOW FROM SUB 3675
274       DR  3675B
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

275       KK  3680B    SUB
276       KM       RUNOFF FROM SUB 3680B & ROUTE PARTIAL RUNOFF FROM SUB 3675
277       BA  .3609
278       PB  4.14
279       PC     0  .005  .009  .010  .013  .019  .021  .028  .032  .044
280       PC  .057  .100  .660  .745  .776  .800  .816  .830  .840  .850
281       PC  .861  .868  .878  .884  .891  .900  .905  .912  .919  .923
282       PC  .930  .934  .939  .944  .950  .958  .961  .963  .969  .971
283       PC  .974  .979  .981  .985  .989  .991  .993  .996 1.000
284       LS          74   45.3
285       UK   150 .0213   .10   100
286       RK  6000 .0143  .045 .18045  TRAP   40   75
287       RK  2200 .0133  .035        TRAP   80    2   YES

288       KK   SP2    CP
289       KM       COMBINE SUB 3680B & SP1
290       KM       THIS IS THE INFLOW TO THE SQUAW PEAK PARKWAY CHANNEL FROM THE
291       KM       PINNACLE PEAK ROAD CHANNEL
292       HC     2

293       KK   SP4    CP
294       KM       COMBINE SP2 & SP3
295       KM       THIS IS THE COMBINED FLOW FROM THE SQUAW PEAK & PINNACLE PEAK ROAD
296       KM       CHANNELS.
297       HC     2

298       KK 3680E1    CP
299       KM       ROUTE CP SP4 DOWN SQUAW PEAK PARKWAY CHANNEL TO CP 3680E1
300       RS     1  FLOW    -1
301       RC  .035  .035  .035  5900 .0114
302       RX     0    8    9   21  121  133  134  142
303       RY    10    6    6    0    0    6    6   10

304       KK  3680E    SUB
305       KM       RUNOFF FROM SUB 3680E
306       BA  .2396
307       LS          74   38.3
308       UK   150 .0213   .10   100
309       RK  1500 .0133  .035  .048  TRAP    8    2
310       RK  5900 .0114  .035        TRAP   80    2

311       KK 3680E2    CP
312       KM       COMBINE SUB 3680E & CP 3680E1
313       HC     2

314       KK   6B1    CP
315       KM       ROUTE CP 3680E2 DOWN SQUAW PEAK PARKWAY CHANNEL TO CP 6B1
316       RS     1  FLOW    -1
317       RC  .035  .035  .035  4400 .0114
318       RX     0    8    9   21  121  133  134  142
319       RY    10    6    6    0    0    6    6   10
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

320       KK    6A4     RET
321       KM       RETRIEVE LOW-FLOW DIVERTS FROM SUB 6A
322       DR    6A4

323       KK     6B     SUB
324       KM       RUNOFF FROM SUB 6B & ROUTE RET 6A4
325       BA  2.3767
326       PB   4.25
327       PC     0   .005   .009   .010   .013   .019   .021   .028   .032   .044
328       PC   .057   .100   .660   .745   .776   .800   .816   .830   .840   .850
329       PC   .861   .868   .878   .884   .891   .900   .905   .912   .919   .923
330       PC   .930   .934   .939   .944   .950   .958   .961   .963   .969   .971
331       PC   .974   .979   .981   .985   .989   .991   .993   .996  1.000
332       LS           74    56.4
333       UK    146  .0213    .10    100
334       RK  11400  .0124    .045          TRAP     50    150    YES

335       KK    6B2     DIV
336       KM       RATIO RUNOFF FROM SUB 6B TO SQUAW PEAK PARKWAY CHANNEL BETWEEN CP 6B1 &
337       KM       CP 3680E2.  DIVERT RATIO IS BASED ON SUB 6B WIDTH (PERPENDICULAR TO
338       KM       FLOW) AT CP 6B1.
339       DT    6B3
340       DI     0   1000   10000
341       DQ     0    240    2404

342       KK    6B4      CP
343       KM       COMBINE CP 6B1 & PRO-RATED FLOW FROM SUB 6B (DIV 6B2)
344       HC     2

345       KK   6.1A      CP
346       KM       ROUTE CP 6B4 DOWN SQUAW PEAK PARKWAY CHANNEL TO CAP DIKE No.1
347       RS     1   FLOW     -1
348       RC   .035   .035   .035   3300  .0114
349       RX     0     8     9     21    121    133    134    142
350       RY    10     6     6      0      0      6      6     10

351       KK     6C     SUB
352       KM       RUNOFF FROM SUB 6C
353       BA   .1507
354       LS           74    58.5
355       UK    146  .0213    .10    100
356       RK   4000  .0110    .045          TRAP     10     30

357       KK    6C1      CP
358       KM       ROUTE SUB 6C TO CAP DIKE No.1
359       RK   1800  .0110    .045          TRAP     10     50

360       KK    6B3     RET
361       KM       RETRIEVE PRO-RATED FLOW FROM SUB 6B
362       DR    6B3
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

363       KK    6.1     SUB
364       KM        RUNOFF FROM SUB 6.1 & ROUTE RET 6B3
365       BA   .8659
366       LS            74    47.2
367       UK    146   .0213    .10     100
368       RK   3400   .0094   .045          TRAP     50     160     YES

369       KK   6.1B     CP
370       KM        COMBINE CP 6C1, CP 6.1A, & SUB 6.1
371       KM        THIS IS THE TOTAL DISCHARGE TO CAP DIKE No.1 THROUGH SUB 6.1
372       HC      3

373       KK  3680A4     RET
374       KM        RETRIEVE LOW-FLOW DIVERTS FROM SUB 3680A
375       DR  3680A4

376       KK   3680C     SUB
377       KM        RUNOFF FROM SUB 3680C & ROUTE RET 3680A4
378       BA   .7490
379       PB    4.14
380       PC      0   .005   .009   .010   .013   .019   .021   .028   .032   .044
381       PC   .057   .100   .660   .745   .776   .800   .816   .830   .840   .850
382       PC   .861   .868   .878   .884   .891   .900   .905   .912   .919   .923
383       PC   .930   .934   .939   .944   .950   .958   .961   .963   .969   .971
384       PC   .974   .979   .981   .985   .989   .991   .993   .996  1.000
385       LS            74    37.6
386       UK    150   .0213    .10     100
387       RK   5500   .0139   .045          TRAP     40      75     YES

388       KK  3680C1     DIV
389       KM        DIVERT LOW-FLOWS TO SUB 3680D
390       DT  3680C2
391       DI      0    1362    2000
392       DQ      0     470     500

393       KK   3641     CP
394       KM        ROUTE NON-DIVERTED FLOW FROM SUB 3680C TO CP 3641
395       RS      1    FLOW      -1
396       RC   .035    .035    .035    4000   .0077
397       RX      0       8       9      21      81      93      94     102
398       RY     10       6       6       0       0       6       6      10

399       KK   3620     SUB
400       KM        RUNOFF FROM SUB 3620
401       BA   .6858
402       LS            77      19
403       UK    224   .0212    .15     100
404       RK  16000   .0194   .045          TRAP     15      30
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

405       KK   3630     SUB
406       KM        RUNOFF FROM SUB 3630 & ROUTE SUB 3620
407       BA   .8300
408       LS            74      31
409       UK    100  .0213    .10     100
410       RK  11300  .0177   .045          TRAP     30     30    YES

411       KK   3640     SUB
412       KM        RUNOFF FROM SUB 3640 & ROUTE SUB 3630
413       BA  1.6127
414       LS            74    30.1
415       UK    150  .0213    .10     100
416       RK  11600  .0129   .045          TRAP     40     50    YES

417       KK   3640A     DIV
418       KM        RATIO FLOW FROM SUB 3640 TO CP 3641.  DIVERT RATIO IS BASED ON THE
419       KM        WIDTH AT THE BOTTOM OF SUB 3640.
420       DT   3640B
421       DI      0   1000   10000
422       DQ      0    773    7727

423       KK   3642      CP
424       KM        COMBINE CP 3641 & DIV 3640A
425       HC      2

426       KK  3650A1      CP
427       KM        ROUTE CP 3642 DOWN PINNACLE PEAK ROAD CHANNEL TO CAVE CREEK ROAD.
428       RS      1   FLOW     -1
429       RC   .035   .035   .035   3600  .0080
430       RX      0      8      9     21     81     93     94    102
431       RY     10      6      6      0      0      6      6     10

432       KK   3640B     RET
433       KM        RETRIEVE PRO-RATED FLOW FROM SUB 3640
434       DR   3640B

435       KK   3650A     SUB
436       KM        RUNOFF FROM SUB 3650A & ROUTE RET 3640B
437       BA   .1679
438       LS            74    32.2
439       UK    150  .0213    .10     100
440       RK   1900  .0100   .045    .084   TRAP    100     50
441       RK   3600  .0080   .035          TRAP     60      2    YES

442       KK  3650A2      CP
443       KM        COMBINE SUB 3650A & CP 3650A1
444       HC      2

445       KK  3650A3     DIV
446       KM        DIVERT LOW-FLOWS TO SUB 3650B
447       DT  3650A4
448       DI      0   3169   4000
449       DQ      0    412    475
```

1

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

450       KK 3650B1     CP
451       KM       ROUTE NON-DIVERTED FLOW THROUGH NEW CHANNEL TO CAP DIKE No.1 (CP 3650B1)
452       RS     1   FLOW     -1
453       RC   .035   .035   .035   7700   .0080
454       RX     0     8     9     21     81     93     94    102
455       RY    10     6     6      0      0      6      6     10

456       KK 3650A4     RET
457       KM       RETRIEVE LOW-FLOW DIVERTS FROM SUB 3650A
458       DR 3650A4

459       KK  3650B     SUB
460       KM       RUNOFF FROM SUB 3650B & ROUTE RET 3650A4
461       BA 1.0273
462       LS            74    19.7
463       UK    150  .0213    .10    100
464       RK   7200  .0082   .045          TRAP    100     50    YES

465       KK 3650B2     CP
466       KM       COMBINE SUB 3650B & CP 3650B1
467       KM       THIS IS THE TOTAL DISCHARGE TO CAP DIKE No.1 THROUGH SUB 3650B
468       HC     2

469       KK 3680C2     RET
470       KM       RETRIEVE LOW-FLOW DIVERTS FROM SUB 3680C
471       DR 3680C2

472       KK  3680D     SUB
473       KM       RUNOFF FROM SUB 3680D & ROUTE RET 3680C2
474       BA  .5251
475       LS            74    38.3
476       UK    150  .0213    .10    100
477       RK   3000  .0134   .045          TRAP     40     75    YES

478       KK   3690     SUB
479       KM       RUNOFF FROM SUB 3690 & ROUTE SUB 3680D
480       BA 1.4670
481       LS            74    20.5
482       UK    150  .0213    .10    100
483       RK   7300  .0110   .045          TRAP     50    100    YES

484       KK    9A4     RET
485       KM       RETRIEVE LOW-FLOW DIVERTS FROM SUB 9A
486       DR    9A4

487       KK SUB10A
488       KM       RUNOFF FROM SUB-BASIN 10A ROUTE RET 9A4
489       BA  .7895
490       PB   4.25
491       PC     0   .005   .009   .010   .013   .019   .021   .028   .032   .044
492       PC   .057   .100   .660   .745   .776   .800   .816   .830   .840   .850
493       PC   .861   .868   .878   .884   .891   .900   .905   .912   .919   .923
494       PC   .930   .934   .939   .944   .950   .958   .961   .963   .969   .971
495       PC   .974   .979   .981   .985   .989   .991   .993   .996  1.000
```

1

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

496       LS            74    39.7
497       UK    107   .0213    .10     100
498       RK   11300  .0142   .045          TRAP     30     175     YES

499       KK   10.1A     SUB
500       KM       RUNOFF FROM SUB 10.1A & ROUTE SUB 10A
501       BA   .5933
502       LS            74    43.0
503       UK    107   .0213    .10     100
504       RK   5500   .0100   .045          TRAP     30     190     YES

505       KK    1IN      CP
506       KM       COMBINE CP 3650B2, SUB 3690, CP 6.1B, & SUB 10.1A
507       KM       THIS IS THE TOTAL INFLOW TO CAP DIKE No.1
508       HC      4

509       KK   DIKE1     DAM
510       KM       ROUTE CP 1IN THROUGH CAP DIKE No.1
511       RS      1    STOR
512       SV      0      10      68     209     429     740    1167    1750    2522    3486
513       SV   4640    5986    7534    9280   11210   13332   15646   15900   18145
514       SE   1518    1520    1522    1524    1526    1528    1530    1532    1534    1536
515       SE   1538    1540    1542    1544    1546    1548    1550  1550.2    1552
516       SS 1550.2     100     2.9     1.5
517       ST   1552     100     2.9     1.5
518       ZZ
```

SCHEMATIC DIAGRAM OF STREAM NETWORK

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

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

  33     SUB7A
           V
           V
  45     SUB8A ***
           .
           .
  53       .------->    8A2
  51     8A1
           V
           V
  56     5.1A
           .
           .
  62       .      SUB1
           .        .
           .        .
  68       .        .      SUB2
           .        .        .
           .        .        .
  74       .        .        .      SUB3
           .        .        .        .
           .        .        .        .
  80       .      CP4.......................
           .        V
           .        V
  83       .      SUB4 ***
           .        V
           .        V
  89       .      5.1 ***
           .        .
           .        .
  95     5.2............
           .
           .
 100       .------->    5.4
  98     5.3
           V
           V
 103     3666
           .
           .
 109       .      1470
           .        V
           .        V
 121       .      1475 ***
           .        V
           .        V
 127       .      1480 ***
           .        .
           .        .
 135       .        .------->   1481
 133       .      1482
           .        V
           .        V
 138       .      3660 ***
           .        V
           .        V
 150       .      3665 ***
```

```
        .         .
        .         .
156   3667............
        .
        .
161     .-------> 3669
159   3668
       V
       V
164   SPJ1
       V
       V
170  3680A1
        .
        .
178     .         .<-------   3669
176     .       3669
        .         V
        .         V
179     .       3675 ***
        .         .
        .         .
188     .         .-------> 3675B
185     .       3675A
        .         V
        .         V
191     .       3680A ***
        .         .
        .         .
203  3680A2............
        .
        .
208     .-------> 3680A4
206  3680A3
       V
       V
211   SP3
        .
        .
219     .         .<-------   8A2
217     .       8A2
        .         V
        .         V
220     .       SUB9A ***
        .         .
        .         .
234     .         .-------> 9A4
232     .       9A3
        .         V
        .         V
237     .       6A1
        .         .
        .         .
245     .         .         .<-------   5.4
243     .         .       5.4
        .         .       V
        .         .       V
246     .         .       5.5 ***
        .         .       V
        .         .       V
252     .         .       6A ***
        .         .       .
        .         .       .
258     .       6A2............
        .         .
```

```
          .         .
263       .         .-------->   6A4
261       .       6A3
          .       V
          .       V
266       .       SP1
          .       .
          .       .
274       .         .       .<-------   3675B
272       .         .     3675B
          .         .       V
          .         .       V
275       .         .     3680B ***
          .         .       .
          .         .       .
288       .       SP2............
          .         .
          .         .
293     SP4............
        V
        V
298   3680E1
        .
        .
304       .     3680E
          .         .
          .         .
311   3680E2.............
        V
        V
314     6B1
        .
        .
322       .         .<-------   6A4
320       .       6A4
          .       V
          .       V
323       .       6B ***
          .         .
          .         .
339       .         .-------->   6B3
335       .       6B2
          .         .
          .         .
342     6B4............
        V
        V
345     6.1A
        .
        .
351       .       6C
          .       V
          .       V
357       .       6C1
          .         .
          .         .
362       .         .       .<-------   6B3
360       .         .     6B3
          .         .       V
          .         .       V
363       .         .     6.1 ***
          .         .       .
          .         .       .
369     6.1B........................
        .
```

```
          .
375       .        .<-------  3680A4
373       .     3680A4
          .        V
          .        V
376       .     3680C ***
          .        .
          .        .
390       .        .-------> 3680C2
388       .     3680C1
          .        V
          .        V
393       .     3641
          .        .
          .        .
399       .        .     3620
          .        .       V
          .        .       V
405       .        .     3630 ***
          .        .       V
          .        .       V
411       .        .     3640 ***
          .        .       .
          .        .       .
420       .        .       .-------> 3640B
417       .        .     3640A
          .        .       .
          .        .       .
423       .     3642.........
          .        V
          .        V
426       .     3650A1
          .        .
          .        .
434       .        .       .<-------  3640B
432       .        .     3640B
          .        .       V
          .        .       V
435       .        .     3650A ***
          .        .       .
          .        .       .
442       .     3650A2............
          .        .
          .        .
447       .        .-------> 3650A4
445       .     3650A3
          .        V
          .        V
450       .     3650B1
          .        .
          .        .
458       .        .       .<-------  3650A4
456       .        .     3650A4
          .        .       V
          .        .       V
459       .        .     3650B ***
          .        .       .
          .        .       .
465       .     3650B2............
          .        .
          .        .
471       .        .       .<-------  3680C2
469       .        .     3680C2
          .        .       V
          .        .       V
```

```
472      .        .      3680D ***
         .        .       V
         .        .       V
478      .        .      3690 ***
         .        .       .
         .        .       .
486      .        .       .        .<-------     9A4
484      .        .       .      9A4
         .        .       .       V
         .        .       .       V
487      .        .       .    SUB10A ***
         .        .       .       V
         .        .       .       V
499      .        .       .    10.1A ***
         .        .       .       .
         .        .       .       .
505     1IN.....................................
        V
        V
509     DIKE1
```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

1 ****

FLOOD HYDROGRAPH PACKAGE HEC-1 (IBM XT 512K VERSION) -FEB 1,1985
U.S. ARMY CORPS OF ENGINEERS, THE HYDROLOGIC ENGINEERING CENTER, 609 SECOND STREET, DAVIS, CA. 95616
****

UPPER INDIAN BEND WASH REGIONAL FLOOD CONTROL & DRAINAGE PLAN

MODEL PSJ5.24I

FUTURE CONDITION LAND-USE
THIS MODEL SIMULATES A PROPOSED CHANNEL ALONG PINNACLE PEAK ROAD FROM
SUB-BASIN 9A TO THE SQUAW PEAK PARKWAY & THEN SOUTH TO CAP DIKE No.1.
A SECOND CHANNEL RUNS ALONG PINNACLE PEAK ROAD FROM THE WEST SIDE OF
THE SQUAW PEAK PARKWAY TO CAVE CREEK ROAD, & THEN SOUTH TO CAP DIKE No.1
A THIRD CHANNEL EXTENDS FROM SUB-BASIN 8A TO THE SQUAW PEAK PARKWAY &
THEN SOUTH ALONG THE PARKWAY TO JOIN THE PINNACLE PEAK ROAD CHANNEL.
NO OTHER UPSTREAM DRAINAGE IMPROVEMENTS ARE IN-PLACE.

LOW-FLOW CULVERT DIVERTS ARE ACTIVATED.

DIVERSION FROM SUB 1480 DIRECTS 100% OF FLOW TO SUB 3660.

RESERVOIR ROUTING OPERATIONS ARE IN-PLACE FOR CAP DIKE 1

THIS MODEL REFLECTS D.A. ADJUSTMENTS MADE TO MODEL F3.24I

100-YR, 24-HR STORM, USING SCS TYPE IIA RAINFALL DISTRIBUTION
RAINFALL FROM NOAA ATLAS, USING 25 SQ MI AREAL REDUCTION FACTOR (.968)

FUTURE LAND-USE DENSITIES FROM OCT 1987 GENERAL PLAN, BRW PLANS, AND
THE TONTO FOOTHILLS PLAN, ALL SCOTTSDALE RESIDENTIAL AREAS HAVE THE
PERCENT OF IMPERVIOUS COVER ADJUSTED FOR NAOS REQUIREMENTS.

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

  IT       HYDROGRAPH TIME DATA
             NMIN         5  MINUTES IN COMPUTATION INTERVAL
            IDATE    28APR90  STARTING DATE
            ITIME      0000  STARTING TIME
               NQ       289  NUMBER OF HYDROGRAPH ORDINATES
           NDDATE    29APR90  ENDING DATE
           NDTIME      0000  ENDING TIME

          COMPUTATION INTERVAL     .08 HOURS
             TOTAL TIME BASE   24.00 HOURS

      ENGLISH UNITS

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN     5921. TO    14254.
          THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
          THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN     8028. TO    16562.
          THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
          THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN    21400. TO    23615.
```

THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 8735. TO 23615.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

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 STAGE	AREA	MAXIMUM MAX STAGE	TIME OF
+	HYDROGRAPH AT	SUB7A	203.	6.17	25.	8.	8.	.14			
+	HYDROGRAPH AT	SUB8A	408.	6.25	104.	33.	33.	.58			
+	DIVERSION TO	8A2	272.	6.25	69.	22.	22.	.58			
+	HYDROGRAPH AT	8A1	135.	6.25	34.	11.	11.	.58			
+	ROUTED TO	5.1A	111.	6.58	34.	11.	11.	.58			
+								.66		6.58	
+	HYDROGRAPH AT	SUB1	402.	6.17	56.	18.	18.	.34			
+	HYDROGRAPH AT	SUB2	1055.	6.33	266.	83.	83.	1.22			
+	HYDROGRAPH AT	SUB3	437.	6.33	108.	34.	34.	.54			
+	3 COMBINED AT	CP4	1830.	6.25	429.	134.	134.	2.10			
+	HYDROGRAPH AT	SUB4	2045.	6.58	676.	215.	215.	3.60			
+	HYDROGRAPH AT	5.1	2118.	6.67	736.	234.	234.	3.97			
+	2 COMBINED AT	5.2	2229.	6.67	770.	245.	245.	4.56			
+	DIVERSION TO	5.4	639.	6.67	221.	70.	70.	4.56			
+	HYDROGRAPH AT	5.3	1590.	6.67	549.	175.	175.	4.56			
+	ROUTED TO	3666	1543.	6.75	542.	174.	174.	4.56			
+								2.53		6.75	
+	HYDROGRAPH AT	1470	507.	6.17	78.	24.	24.	.30			
+	HYDROGRAPH AT	1475	3520.	6.17	552.	168.	168.	1.99			
+	HYDROGRAPH AT	1480	4923.	6.17	813.	247.	247.	2.99			

```
     DIVERSION TO
+                1481    0.  6.17     0.     0.     0.   2.99

     HYDROGRAPH AT
+                1482 4923.  6.17   813.   247.   247.   2.99

     HYDROGRAPH AT
+                3660 3237.  6.67   926.   288.   288.   3.74

     HYDROGRAPH AT
+                3665 3290.  6.83  1077.   340.   340.   4.64

     2 COMBINED AT
+                3667 4826.  6.83  1618.   513.   513.   9.19

     DIVERSION TO
+                3669  489.  6.83   164.    52.    52.   9.19

     HYDROGRAPH AT
+                3668 4338.  6.83  1455.   461.   461.   9.19

     ROUTED TO
+                 SPJ1 4261.  6.92  1446.   459.   459.   9.19
+                                                        4.61   6.92

     ROUTED TO
+               3680A1 4236.  7.00  1443.   458.   458.   9.19
+                                                        5.24   7.00

     HYDROGRAPH AT
+                3669  489.  6.83   164.    52.    52.    .00

     HYDROGRAPH AT
+                3675 1192.  6.08   279.    88.    88.    .56

     DIVERSION TO
+                3675B  715.  6.08   168.    53.    53.    .56

     HYDROGRAPH AT
+                3675A  477.  6.08   112.    35.    35.    .56

     HYDROGRAPH AT
+                3680A 1116.  6.08   191.    60.    60.    .93

     2 COMBINED AT
+               3680A2 4517.  7.00  1619.   518.   518.  10.13

     DIVERSION TO
+               3680A4  476.  7.00   171.    55.    55.  10.13

     HYDROGRAPH AT
+               3680A3 4041.  7.00  1449.   463.   463.  10.13

     ROUTED TO
+                  SP3 4010.  7.00  1444.   462.   462.  10.13
+                                                        4.65   7.00

     HYDROGRAPH AT
+                  8A2  272.  6.25    69.    22.    22.    .00

     HYDROGRAPH AT
+                 SUB9A  854.  6.17   274.    86.    86.   1.04

     DIVERSION TO
+                  9A4  257.  6.17    82.    26.    26.   1.04
```

	HYDROGRAPH AT							
+	9A3	597.	6.17	192.	60.	60.	1.04	
	ROUTED TO							
+	6A1	556.	6.50	189.	60.	60.	1.04	
+							2.06	6.50
	HYDROGRAPH AT							
+	5.4	639.	6.67	221.	70.	70.	.00	
	HYDROGRAPH AT							
+	5.5	1824.	6.17	518.	164.	164.	1.51	
	HYDROGRAPH AT							
+	6A	2197.	6.17	631.	200.	200.	2.05	
	2 COMBINED AT							
+	6A2	2565.	6.25	819.	260.	260.	3.08	
	DIVERSION TO							
+	6A4	456.	6.25	145.	46.	46.	3.08	
	HYDROGRAPH AT							
+	6A3	2110.	6.25	674.	214.	214.	3.08	
	ROUTED TO							
+	SP1	1958.	6.42	666.	213.	213.	3.08	
+							3.00	6.42
	HYDROGRAPH AT							
+	3675B	715.	6.08	168.	53.	53.	.00	
	HYDROGRAPH AT							
+	3680B	1182.	6.17	252.	79.	79.	.36	
	2 COMBINED AT							
+	SP2	2784.	6.25	917.	291.	291.	3.44	
	2 COMBINED AT							
+	SP4	5915.	6.92	2358.	753.	753.	13.57	
	ROUTED TO							
+	3680E1	5845.	7.08	2343.	749.	749.	13.57	
+							4.56	7.08
	HYDROGRAPH AT							
+	3680E	402.	6.08	51.	16.	16.	.24	
	2 COMBINED AT							
+	3680E2	5896.	7.08	2389.	765.	765.	13.81	
	ROUTED TO							
+	6B1	5867.	7.08	2379.	762.	762.	13.81	
+							4.57	7.08
	HYDROGRAPH AT							
+	6A4	456.	6.25	145.	46.	46.	.00	
	HYDROGRAPH AT							
+	6B	3169.	6.17	781.	242.	242.	2.38	
	DIVERSION TO							
+	6B3	762.	6.17	188.	58.	58.	2.38	

```
      HYDROGRAPH AT
+                6B2   2408.  6.17    594.   184.   184.   2.38

      2 COMBINED AT
+                6B4   6857.  7.08   2948.   945.   945.  16.19

      ROUTED TO
+                6.1A  6851.  7.08   2943.   943.   943.  16.19
+                                                         5.01    7.08

      HYDROGRAPH AT
+                6C    346.   6.08    41.    13.    13.    .15

      ROUTED TO
+                6C1   327.   6.25    43.    13.    13.    .15

      HYDROGRAPH AT
+                6B3   762.   6.17   188.    58.    58.    .00

      HYDROGRAPH AT
+                6.1   2265.  6.08   406.   125.   125.    .87

      3 COMBINED AT
+                6.1B  7434.  7.08  3379.  1080.  1080.  17.20

      HYDROGRAPH AT
+                3680A4 476.  7.00   171.    55.    55.    .00

      HYDROGRAPH AT
+                3680C 1266.  6.17   330.   105.   105.    .75

      DIVERSION TO
+                3680C2 437.  6.17   114.    36.    36.    .75

      HYDROGRAPH AT
+                3680C1 829.  6.17   216.    69.    69.    .75

      ROUTED TO
+                3641  690.   6.25   214.    68.    68.    .75
+                                                         1.94    6.25

      HYDROGRAPH AT
+                3620  496.   6.42   129.    40.    40.    .69

      HYDROGRAPH AT
+                3630  1021.  6.17   296.    93.    93.   1.52

      HYDROGRAPH AT
+                3640  1920.  6.17   612.   193.   193.   3.13

      DIVERSION TO
+                3640B 1484.  6.17   473.   149.   149.   3.13

      HYDROGRAPH AT
+                3640A 436.   6.17   139.    44.    44.   3.13

      2 COMBINED AT
+                3642  1124.  6.25   353.   112.   112.   3.88

      ROUTED TO
+                3650A1 1023. 6.42   350.   112.   112.   3.88
+                                                         2.42    6.42

      HYDROGRAPH AT
+                3640B 1484.  6.17   473.   149.   149.    .00
```

```
      HYDROGRAPH AT
+                3650A   1608.   6.25     507.     159.     159.     .17

      2 COMBINED AT
+                3650A2  2609.   6.33     856.     271.     271.    4.05

      DIVERSION TO
+                3650A4   339.   6.33     111.      35.      35.    4.05

      HYDROGRAPH AT
+                3650A3  2270.   6.33     745.     236.     236.    4.05

      ROUTED TO
+                3650B1  1983.   6.58     733.     233.     233.    4.05
+                                                                  3.59      6.58

      HYDROGRAPH AT
+                3650A4   339.   6.33     111.      35.      35.     .00

      HYDROGRAPH AT
+                 3650B  1040.   6.17     290.      92.      92.    1.03

      2 COMBINED AT
+                3650B2  2759.   6.58    1019.     326.     326.    5.07

      HYDROGRAPH AT
+                3680C2   437.   6.17     114.      36.      36.     .00

      HYDROGRAPH AT
+                 3680D  1412.   6.08     228.      72.      72.     .53

      HYDROGRAPH AT
+                  3690  2299.   6.17     489.     154.     154.    1.99

      HYDROGRAPH AT
+                   9A4   257.   6.17      82.      26.      26.     .00

      HYDROGRAPH AT
+                SUB10A   675.   6.25     259.      82.      82.     .79

      HYDROGRAPH AT
+                 10.1A  1060.   6.17     394.     125.     125.    1.38

      4 COMBINED AT
+                   1IN 12531.   6.50    5280.    1685.    1685.   25.65

      ROUTED TO
+                 DIKE1     0.    .08       0.       0.       0.   25.65
+                                                                 1535.70     24.00
```

1 SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION DIKE1

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1518.00	1550.20	1552.00
STORAGE	0.	15900.	18145.
OUTFLOW	0.	0.	700.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1535.70	.00	3341.	0.	.00	.00	.00

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

FILE: RP4.24I

(100-Year, 24-Hour, SCS Type IIA Storm)

This model includes the Thompson Peak Parkway channel and a reservoir routing operation for CAP Dike 4. Low-flow culvert diverts are activated and 100 percent of the Reata Pass flows are diverted to CAP Dike 4.

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

  1       ID      UPPER INDIAN BEND WASH REGIONAL FLOOD CONTROL & DRAINAGE PLAN
  2       ID
  3       ID      MODEL RP4.24I -- SUB-BASIN SERIES 2000 TO 2230 & 39 TO 50
  4       ID
  5       ID      REATA PASS CHANNEL ALIGNMENT ALONG THOMPSON PEAK PARKWAY
  6       ID      100% OF FLOW FROM THE REATA PASS APEX IS DIVERTED SOUTH TO CAP DIKE 4
  7       ID
  8       ID      A RESERVOIR ROUTING OPERATION IS IN-PLACE FOR CAP DIKE 4.
  9       ID
 10       ID      FUTURE LAND USE CONDITIONS WITH EXISTING DRAINAGE PATTERN
 11       ID
 12       ID      LOW-FLOW CULVERT DIVERTS ARE ACTIVATED
 13       ID
 14       ID      100-YEAR, 24-HOUR STORM, USING SCS TYPE IIA RAINFALL DISTRIBUTION
 15       ID      RAINFALL FROM NOAA ATLAS, USING 25 SQ MI AREAL REDUCTION FACTOR (.968)
 16       ID
 17       ID      LAND USE DENSITIES FROM GENERAL PLAN & TONTO FOOTHILLS PLAN.
 18       ID      PERCENT OF IMPERVIOUS COVER HAS BEEN ADJUSTED TO REFLECT
 19       ID      CITY OF SCOTTSDALE NAOS REQUIREMENTS.
         *DIAGRAM
 20       IT      5 25APR90      0    289
 21       IO      5      0
 22       IN     30 25APR90      0

 23       KK   SUB39
 24       KM       RUNOFF FROM SUB-BASIN 39
 25       BA  1.9302
 26       PB   4.25
 27       PC     0   .005   .009   .010   .013   .019   .021   .028   .032   .044
 28       PC  .057   .100   .660   .745   .776   .800   .816   .830   .840   .850
 29       PC  .861   .868   .878   .884   .891   .900   .905   .912   .919   .923
 30       PC  .930   .934   .939   .944   .950   .958   .961   .963   .969   .971
 31       PC  .974   .979   .981   .985   .989   .991   .993   .996  1.000
 32       LS          85   23.4
 33       UK   330  .0433    .20    100
 34       RK 11240  .0253    .045          TRAP     30      3

 35       KK   SUB40
 36       KM       RUNOFF FROM SUB-BASIN 40
 37       BA   .5844
 38       LS          83     9.9
 39       UK   160  .0627    .20    100
 40       RK  7000  .0350    .045          TRAP     20      3

 41       KK   CP41
 42       KM       COMBINE HYDROGRAPHS SUB39 & SUB40
 43       HC     2

 44       KK   SUB41
 45       KM       RUNOFF FROM SUB-BASIN 41 & ROUTE CP 41
 46       BA   .7911
 47       LS          74    10.1
 48       UK   280  .2386    .20    100
 49       RK  9400  .0282    .045          TRAP     50      3    YES
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  50        KK  SUB42
  51        KM      RUNOFF FROM SUB-BASIN 42
  52        BA  .5844
  53        LS          78   23.3
  54        UK   280  .2386   .20   100
  55        RK  8750  .0573   .045        TRAP    20     3

  56        KK  SUB43
  57        KM      RUNOFF FROM SUB-BASIN 43
  58        BA 1.0665
  59        LS          85   10.5
  60        UK   260  .0515   .20   100
  61        RK  7400  .0255   .045        TRAP    25     3

  62        KK  SUB44
  63        KM      RUNOFF FROM SUB-BASIN 44
  64        BA  .8389
  65        LS          85    8.1
  66        UK   260  .0515   .20   100
  67        RK  9840  .0622   .045        TRAP    25     3

  68        KK   CP45
  69        KM      COMBINE HYDROGRAPHS SUB43 & SUB44
  70        HC     2

  71        KK  SUB45
  72        KM      RUNOFF FROM SUB-BASIN 45 & ROUTE CP 45
  73        BA  .2037
  74        LS          81   14.5
  75        UK   125  .1166   .20   100
  76        RK  3600  .0366   .045        TRAP    30     3   YES

  77        KK SUB45A
  78        KM      RUNOFF FROM SUB 45A
  79        BA  .1720
  80        LS          86    6.9
  81        UK   275  .2200   .20   100
  82        RK  5400  .0411   .045        TRAP    15     3

  83        KK  SUB46
  84        KM      RUNOFF FROM SUB-BASIN 46
  85        BA  .9268
  86        LS          86    3.7
  87        UK   265  .4958   .20   100
  88        RK  3300  .2271   .045  .111   TRAP    10     3
  89        RK  7100  .0535   .045        TRAP    25     3

  90        KK   CP47
  91        KM      COMBINE HYDROGRAPHS SUB45, SUB45A, & SUB46
  92        HC     3
```

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

  93      KK  SUB47
  94      KM      RUNOFF FROM SUB-BASIN 47 & ROUTE CP 47
  95      BA  .3757
  96      LS          77    8.6
  97      UK   375  .1000    .20    100
  98      RK  9600  .0217   .045          TRAP     50     3    YES

  99      KK  CP48
 100      KM      COMBINE HYDROGRAPHS SUB41, SUB42, & SUB47
 101      HC     3

 102      KK  SUB48
 103      KM      RUNOFF FROM SUB-BASIN 48 & ROUTE CP 48
 104      BA  .0438
 105      LS          73    6.9
 106      UK   150  .0733    .20    100
 107      RK  1300  .0338   .045          TRAP     75     3    YES

 108      KK  SUB50
 109      KM      RUNOFF FROM SUB-BASIN 50
 110      BA  .3580
 111      LS          84    2.8
 112      UK   300  .3555    .20    100
 113      RK   730  .1506   .045   .036   TRAP     10     3
 114      RK  6400  .0453   .045          TRAP     25     3

 115      KK  CP51
 116      KM      COMBINE HYDROGRAPHS SUB48 & SUB50
 117      HC     2

 118      KK  2004    DIV
 119      KM      DIVERT FLOW TO SUB 2005
 120      KM      THIS DIVERT OCCURS AT A BRAIDED CHANNEL BIFURCATION LOCATED 1000 FEET
 121      KM      SOUTH OF THE EAST END OF PINNACLE PEAK ROAD.
 122      KM      THIS IS AN ACTIVE ALLUVIAL FAN APEX.
 123      DT  2003
 124      DI     0  15000  25000
 125      DQ     0  15000  25000

 126      KK  2000    SUB
 127      KM      RUNOFF FROM SUB 2000
 128      KM      RAINFALL AMOUNT IS CHANGED TO REFLECT TRANSITION INTO A DIFFERENT
 129      KM      GEOGRAPHICAL AREA
 130      BA  .7999
 131      PB  4.15
 132      PC     0   .005   .009   .010   .013   .019   .021   .028   .032   .044
 133      PC  .057   .100   .660   .745   .776   .800   .816   .830   .840   .850
 134      PC  .861   .868   .878   .884   .891   .900   .905   .912   .919   .923
 135      PC  .930   .934   .939   .944   .950   .958   .961   .963   .969   .971
 136      PC  .974   .979   .981   .985   .989   .991   .993   .996  1.000
 137      LS          84    2.6
 138      UK   400  .2750    .25    100
 139      RK  2625  .0785   .045   .072   TRAP     10     3
 140      RK  2300  .0217   .045          TRAP     25     3
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  141     KK   2010     SUB
  142     KM        RUNOFF FROM SUB 2010 & ROUTE SUB 2000
  143     BA   .0933
  144     LS            83     3.7
  145     UK    800  .6425    .30     100
  146     RK   3000  .0213   .045          TRAP     50      3    YES

  147     KK   2003     RET
  148     KM        RETRIEVE DIVERTED FLOW FROM DIV 2004
  149     DR   2003

  150     KK  2003A      CP
  151     KM        ROUTE DIVERTED FLOW TO UPSTREAM END OF SUB 2005
  152     RS      1    FLOW      -1
  153     RC   .055   .045   .055    700  .0200
  154     RX      0     35    135    150    225    240    340    375
  155     RY     10      3      3      0      0      3      3     10

  156     KK   2005     SUB
  157     KM        RUNOFF FROM 2005 & ROUTE CP 2003A
  158     BA   .1363
  159     LS            72    6.70
  160     UK    175  .1400    .15     100
  161     RK   2600  .0200   .045          TRAP    150      5    YES

  162     KK   2011      CP
  163     KM        ROUTE SUB 2005 TO CP 2011
  164     RS      1    FLOW      -1
  165     RC   .055   .045   .055   2200  .0200
  166     RX      0     35    135    150    225    240    340    375
  167     RY     10      3      3      0      0      3      3     10

  168     KK   2012      CP
  169     KM        COMBINE SUB 2010 & CP 2011
  170     HC      2

  171     KK  2015A     SUB
  172     KM        RUNOFF FROM SUB 2015A & ROUTE CP 2012
  173     BA   .3587
  174     LS            82     7.7
  175     UK    500  .2800    .25     100
  176     RK   2400  .1358   .045    .061   TRAP     10      3
  177     RK   4700  .0200   .045          TRAP    150      5    YES

  178     KK  2015B     SUB
  179     KM        RUNOFF FROM SUB 2015B
  180     BA   .0416
  181     LS            60    15.4
  182     UK    500  .2800    .25     100
  183     RK   2000  .0500   .045          TRAP     25      5
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  184     KK   2020     SUB
  185     KM        RUNOFF FROM SUB 2020
  186     BA   .1090
  187     LS            85    4.05
  188     UK    205  .6969    .30    100
  189     RK    900  .3889   .045   .011   TRAP     10      3
  190     RK   2800  .1428   .045          TRAP     20      3

  191     KK   2016      CP
  192     KM        ROUTE SUB 2020 TO CP 2016
  193     RK   1400  .0343   .045          TRAP     20      3

  194     KK   2017      CP
  195     KM        COMBINE SUB 2015A, SUB 2015B, & CP 2016
  196     HC      3

  197     KK   2018     DIV
  198     KM        DIVERT LOW-FLOWS TO SUB 2030A
  199     DT   2019
  200     DI      0    200    800  20000
  201     DQ      0    200    600    700

  202     KK  2030B1      CP
  203     KM        ROUTE NON-DIVERTED FLOW FROM CP 2017 TO CP 2030B1
  204     RS      1   FLOW     -1
  205     RC   .055   .045   .055    850  .0200
  206     RX      0     35    135    150    225    240    340    375
  207     RY     10      3      3      0      0      3      3     10

  208     KK   2030B     SUB
  209     KM        RUNOFF FROM SUB 2030B
  210     BA   .0098
  211     LS            74    32.1
  212     UK    155  .0614    .15    100
  213     RK    800  .0308   .045  .0049   TRAP     10      2
  214     RK    400  .0200   .045          TRAP    150      5

  215     KK  2030B2      CP
  216     KM        COMBINE SUB 2030B & CP 2030B1
  217     HC      2

  218     KK  2080B1      CP
  219     KM        ROUTE CP 2030B2 TO 2080B1
  220     RS      1   FLOW     -1
  221     RC   .055   .045   .055    200  .0200
  222     RX      0     35    135    150    225    240    340    375
  223     RY     10      3      3      0      0      3      3     10

  224     KK   2040     SUB
  225     KM        RUNOFF FROM SUB 2040
  226     BA   .9290
  227     LS            82      8.3
  228     UK    463  .4072    .25    100
  229     RK   2700  .1878   .045   .056   TRAP     10      3
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Not shown on the map

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

  230     RK   6800  .0485   .045          TRAP    25     3

  231     KK   2050    SUB
  232     KM       RUNOFF FROM SUB 2050
  233     BA  .8580
  234     LS           81    9.8
  235     UK    530  .5726    .25    100
  236     RK   3400  .2067   .045   .086   TRAP    10     3
  237     RK   6200  .0693   .045          TRAP    25     5

  238     KK   2051     CP
  239     KM       COMBINE SUB 2040 & SUB 2050
  240     HC      2

  241     KK   2060    SUB
  242     KM       RUNOFF FROM SUB 2060 & ROUTE CP 2051
  243     BA  .1542
  244     LS           77   17.80
  245     UK    217  .1667    .20    100
  246     RK   2275  .0929   .045   .031   TRAP    10     5
  247     RK   2400  .0321   .055          TRAP    30    15    YES

  248     KK   2070    SUB
  249     KM       RUNOFF FROM SUB 2070
  250     BA 1.4649
  251     LS           84    4.05
  252     UK    400  .5174    .30    100
  253     RK   1750  .2962   .045   .048   TRAP     5     3
  254     RK   3500  .1236   .045   .483   TRAP    10     3
  255     RK   3400  .0882   .045          TRAP    30    10

  256     KK   2071    DIV
  257     KM       DIVERT FLOW FROM SUB 2070 TO SUB 2130
  258     DT   2072
  259     DI      0   6000
  260     DQ      0   4000

  261     KK   2065    SUB
  262     KM       RUNOFF FROM SUB 2065 & ROUTE NON-DIVERTED FLOW FROM DIV 2071
  263     BA  .1664
  264     LS           73    31.5
  265     UK    200  .0500    .20    100
  266     RK   6800  .0471   .055          TRAP    30    15    YES

  267     KK   2072    RET
  268     KM       RETRIEVE DIVERTED FLOW FROM DIV 2071
  269     DR   2072

  270     KK   2131     CP
  271     KM       ROUTE RET 2072 TO CP 2131
  272     RK   3600  .0555   .045          TRAP   200     1
```

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

  273     KK   2130     SUB
  274     KM        RUNOFF FROM SUB 2130
  275     BA   .2992
  276     LS            83     7.1
  277     UK    267   .3126    .20     100
  278     RK   9240   .0941    .045          TRAP     30     20

  279     KK   2132     CP
  280     KM        COMBINE SUB 2130 & CP 2131
  281     HC       2

  282     KK   2133     DIV
  283     KM        DIVERT FLOW TO SUB 2135
  284     DT   2134
  285     DI      0    500    1000    6000
  286     DQ      0    500     850    4350

  287     KK   2066     CP
  288     KM        ROUTE NON-DIVERTED FLOW FROM DIV 2133 TO CP 2066
  289     RK   2850   .0421    .045          TRAP     30     15

  290     KK   2067     CP
  291     KM        COMBINE SUB 2060, SUB 2065, & CP 2066
  292     HC       3

  293     KK  2080B     SUB
  294     KM        RUNOFF FROM SUB 2080B & ROUTE CP 2067
  295     BA   .0466
  296     LS            70    32.1
  297     UK    175   .0571    .15     100
  298     RK    900   .0325    .045          TRAP     30     15     YES

  299     KK  2080B2     CP
  300     KM        COMBINE SUB 2080B & CP 2080B1
  301     HC       2

  302     KK  2080B3     DIV
  303     KM        DIVERT LOW-FLOWS TO SUB 2080A
  304     DT  2080B4
  305     DI      0    200     600   20000
  306     DQ      0    200     400     500

  307     KK  2140B1     CP
  308     KM        ROUTE NON-DIVERTED FLOW FROM SUB 2080B TO CP 2140B1
  309     RS       1   FLOW      -1
  310     RC    .055   .045    .055    2720   .0200
  311     RX       0     35     135     150     225     240     340     375
  312     RY      10      3       3       0       0       3       3      10
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  313     KK   2134    RET
  314     KM        RETIEVE DIVERTED FLOW FROM DIV 2133
  315     DR   2134

  316     KK   2135    SUB
  317     KM        RUNOFF FROM SUB 2135 & ROUTE RET 2134
  318     BA  .1083
  319     LS           86   19.3            74   19.3
  320     UK    800  .4000    .30     40
  321     UK    200  .0500    .15     60
  322     RK   2700  .0444   .045          TRAP     20      2     YES

  323     KK  2140B    SUB
  324     KM        RUNOFF FROM SUB 2140B & ROUTE SUB 2135
  325     BA  .0768
  326     LS           74   32.1
  327     UK    200  .0500    .15    100
  328     RK   1820  .0461   .045          TRAP     20     10     YES

  329     KK 2140B2     CP
  330     KM        COMBINE SUB 2140B & CP 2140B1
  331     HC      2

  332     KK 2140B3    DIV
  333     KM        DIVERT LOW-FLOWS TO SUB 2160A
  334     DT 2140B4
  335     DI      0     88   1000  20000
  336     DQ      0     88    100    150

  337     KK 2140A1     CP
  338     KM        ROUTE NON-DIVERTED FLOW TO CP 2140A1
  339     RS      1   FLOW     -1
  340     RC   .055   .045   .055   3600  .0200
  341     RX      0     35    135    150    225    240    340    375
  342     RY     10      3      3      0      0      3      3     10

  343     KK  2140A    SUB
  344     KM        RUNOFF FROM SUB 2140A
  345     BA  .1220
  346     LS           74   32.1
  347     UK    200  .0500    .15    100
  348     RK    800  .0500   .045  .0244   TRAP     15      3
  349     RK   3600  .0200   .045          TRAP    150      5

  350     KK 2140A2     CP
  351     KM        COMBINE SUB 2140 & CP 2140A1
  352     HC      2

  353     KK   2150    SUB
  354     KM        RUNOFF FROM SUB 2150
  355     BA  .6873
  356     LS           86   15.0            74   15.0
  357     UK    350  .3428    .30     50
  358     UK    180  .0555    .15     50
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  359     RK   1785  .1313   .045   .027   TRAP    10     3
  360     RK   6400  .0312   .045          TRAP    20    10

  361     KK  2140A3     CP
  362     KM       COMBINE SUB 2150 & CP 2140A2
  363     HC      2

  364     KK  2160C1     CP
  365     KM       ROUTE CP 2140A3 TO CP 2160C1
  366     RS      1   FLOW     -1
  367     RC   .055   .045   .055   900  .0200
  368     RX      0    35   135   150   225   240   340   375
  369     RY     10     3     3     0     0     3     3    10

  370     KK   2160C    SUB
  371     KM       RUNOFF FROM SUB 2160C
  372     BA   .0352
  373     LS           74   32.1
  374     UK    337  .0324    .15   100
  375     RK   2200  .0364   .045          TRAP    15     5

  376     KK   2160B    SUB
  377     KM       RUNOFF FROM SUB 2160B
  378     BA   .1442
  379     LS           75   19.3
  380     UK    337  .0324    .15   100
  381     RK   2275  .0527   .045  .0361   TRAP    15     3
  382     RK    900  .0200   .045          TRAP   150     5

  383     KK  2160C2     CP
  384     KM       COMBINE SUB 2160B, SUB 2160C, & CP 2160C1
  385     HC      3

  386     KK  2160C3    DIV
  387     KM       DIVERT LOW-FLOWS TO SUB 2160A
  388     DT  2160C4
  389     DI      0   200   600  20000
  390     DQ      0   200   400   500

  391     KK  2170B1     CP
  392     KM       ROUTE NON-DIVERTED FLOW TO CP 2170B1
  393     RS      1   FLOW     -1
  394     RC   .055   .045   .055  2760  .0200
  395     RX      0    35   135   150   225   240   340   375
  396     RY     10     3     3     0     0     3     3    10

  397     KK   2170B    SUB
  398     KM       RUNOFF FROM SUB 2170B
  399     BA   .1284
  400     LS           76   34.5
  401     UK    250  .0266    .15   100
  402     RK   4800  .0417   .045          TRAP    20     5
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  403     KK  2170B2     CP
  404     KM       COMBINE SUB 2170B & CP 2170B1
  405     HC      2

  406     KK  2170B3     DIV
  407     KM       DIVERT LOW-FLOWS TO SUB 2170A
  408     DT  2170B4
  409     DI      0    500   20000
  410     DQ      0    265     350

  411     KK  2190A      CP
  412     KM       ROUTE NON-DIVERTED FLOW TO CP 2190A
  413     RS      1   FLOW     -1
  414     RC   .055   .045    .055     580   .0200
  415     RX      0     35     135     150     225     240     340     375
  416     RY     10      3       3       0       0       3       3      10

  417     KK   2180     SUB
  418     KM       RUNOFF FROM SUB 2180
  419     BA  1.0044
  420     LS           86     2.1
  421     UK    468  .4496     .30     100
  422     RK   3100  .2558    .045    .121    TRAP      10       3
  423     RK   8200  .0731    .045            TRAP      20       5

  424     KK   2190     SUB
  425     KM       RUNOFF FROM SUB 2190 & ROUTE SUB 2180
  426     BA   .1227
  427     LS           79    16.7
  428     UK    190  .0915     .15     100
  429     RK   4100  .0390    .045            TRAP      30      10     YES

  430     KK   2190B     CP
  431     KM       COMBINE SUB 2190 & CP 2190A
  432     HC      2

  433     KK   2200     SUB
  434     KM       RUNOFF FROM SUB 2200
  435     BA   .2532
  436     LS           81     7.7
  437     UK    353  .1529     .20     100
  438     RK   6150  .0838    .045            TRAP       5      11

  439     KK   2210     SUB
  440     KM       RUNOFF FROM SUB 2210
  441     BA  1.7763
  442     LS           82     2.9
  443     UK    248  .3717     .30     100
  444     RK   4500  .1875    .045    .107    TRAP      10       3
  445     RK  10000  .0490    .045            TRAP      20      10
```

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

446       KK  2210A     CP
447       KM       COMBINE CP 2190B, SUB 2200, & SUB 2210
448       HC      3

449       KK  2210B     DIV
450       KM       DIVERT LOW-FLOWS TO SUB 2220A
451       DT  2210C
452       DI      0    200    600  20000
453       DQ      0    200    400    500

454       KK  2220C1     CP
455       KM       ROUTE NON-DIVERTED FLOW TO CP 2220C1
456       RS      1   FLOW     -1
457       RC   .055   .045   .055   1400  .0200
458       RX      0     35    135    150    225    240    340    375
459       RY     10      3      3      0      0      3      3     10

460       KK  2220C     SUB
461       KM       RUNOFF FROM SUB 2220C
462       BA  .0717
463       LS            74   21.9
464       UK    200  .0500    .15    100
465       RK   1800  .0444   .045          TRAP     20      5

466       KK  2220C2     CP
467       KM       COMBINE SUB 2220C & CP 2220C1
468       HC      2

469       KK  2220B1     CP
470       KM       ROUTE CP 2220C2 TO CP 2220B1
471       RS      1   FLOW     -1
472       RC   .055   .045   .055   1350  .0200
473       RX      0     35    135    150    225    240    340    375
474       RY     10      3      3      0      0      3      3     10

475       KK  2220B     SUB
476       KM       RUNOFF FROM SUB 2220B
477       BA  .1650
478       LS            74   21.9
479       UK    200  .0500    .15    100
480       RK   5400  .0435   .045          TRAP     20      5

481       KK  2220B2     CP
482       KM       COMBINE SUB 2220B & CP 2220B1
483       HC      2

484       KK  2220B3     DIV
485       KM       DIVERT LOW-FLOWS TO SUB 2220A
486       DT  2220B4
487       DI      0    500  20000
488       DQ      0    323    400
```

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

  489     KK  2230B1     CP
  490     KM       ROUTE NON-DIVERTED FLOW TO CP 2230B1
  491     RS     1   FLOW     -1
  492     RC   .055   .045   .055   1700  .0200
  493     RX     0     35    135    150    225    240    340    375
  494     RY    10      3      3      0      0      3      3     10

  495     KK  2230B    SUB
  496     KM       RUNOFF FROM SUB 2230B
  497     BA  .2317
  498     LS           74   29.3
  499     UK    200  .0500    .15    100
  500     RK   7500  .0413   .050          TRAP     10     10

  501     KK  2230B2     CP
  502     KM       COMBINE SUB 2230B & CP 2230B1
  503     HC     2

  504     KK  2230B3    DIV
  505     KM       DIVERT LOW-FLOWS TO SUB 2230A
  506     DT  2230B4
  507  ?  DI     0    500  20000
  508     DQ     0    235    350

  509     KK  2220A2     CP
  510     KM       ROUTE NON-DIVERTED FLOW TO DOWNSTREAM END OF REATA PASS CHANNEL
  511     RS     1   FLOW     -1
  512     RC   .055   .045   .055   3800  .0200
  513     RX     0     35    135    150    225    240    340    375
  514     RY    10      3      3      0      0      3      3     10

  515     KK   2019    RET
  516     KM       RETRIEVE LOW-FLOW DIVERTS FROM CP 2017
  517     DR   2019

  518     KK  2030A    SUB
  519     KM       RUNOFF FROM SUB 2030A & ROUTE RET 2019
  520     BA  .2317
  521     LS           66   27.3
  522     UK    155  .0614    .15    100
  523     RK   3555  .0355   .045   .047   TRAP     10     10
  524     RK   3300  .0262   .045          TRAP     60     20    YES

  525     KK  2080B4    RET
  526     KM       RETRIEVE LOW-FLOW DIVERT FROM CP 2080B2
  527     DR  2080B4

  528     KK  2080A    SUB
  529     KM       RUNOFF FROM SUB 2080A & ROUTE RET 2080B4
  530     BA  .0897
  531     LS           70   32.1
  532     UK    175  .0571    .15    100
  533     RK   3100  .0325   .045          TRAP     30     15    YES
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What Point is this?

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

  534     KK   2081     CP
  535     KM       COMBINE SUB 2030A & SUB 2080A
  536     HC      2

  537     KK   2090A     SUB
  538     KM       RUNOFF FROM SUB 2090A & ROUTE CP 2081
  539     BA   .3582
  540     LS            71    21.5
  541     UK    140   .0285    .15     100
  542     RK   9400   .0212   .045          TRAP     50      10     YES

  543     KK    2100     SUB
  544     KM       RUNOFF FROM SUB 2100
  545     BA   .3795
  546     LS            73    24.0
  547     UK    140   .0285    .15     100
  548     RK  14600   .0260   .045          TRAP    100      25

  549     KK    2101     CP
  550     KM       COMBINE SUB 2090A & SUB 2100
  551     HC      2

  552     KK    2110     SUB
  553     KM       RUNOFF FROM SUB 2110 & ROUTE CP 2101
  554     BA   .5180
  555     LS            74    26.2
  556     UK    200   .0286    .15     100
  557     RK   5400   .0129   .045          TRAP     60      15     YES

  558     KK  2140B4     RET
  559     KM       RETRIEVE LOW-FLOW DIVERTS FROM SUB 2140B
  560     DR  2140B4

  561     KK  2160A1     CP
  562     KM       ROUTE RET 2140B4 THROUGH UPPER PART OF SUB 2160A TO CP 2160A1
  563     RK   4800   .0313   .045          TRAP     25       5

  564     KK  2160C4     RET
  565     KM       RETRIEVE LOW-FLOW DIVERTS FROM CP 2160C2
  566     DR  2160C4

  567     KK  2160A2     CP
  568     KM       COMBINE CP 2160A1 & RET 2160C4
  569     HC      2

  570     KK   2160A     SUB
  571     KM       RUNOFF FROM SUB 2160A & ROUTE CP 2160A2
  572     BA   .8186
  573     LS            74    32.1
  574     UK    337   .0324    .15     100
  575     RK   4067   .0231   .045   .0819   TRAP      5       3
  576     RK   9700   .0170   .045          TRAP     20      10     YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

577       KK  2170B4     RET
578       KM        RETRIEVE LOW-FLOW DIVERTS FROM SUB 2170B
579       DR  2170B4

580       KK   2170A     SUB
581       KM        RUNOFF FROM SUB 2170A & ROUTE RET 2170B4
582       BA   .3350
583       LS            74    24.2
584       UK    250  .0266    .15     100
585       RK   8400  .0202    .045          TRAP     15     10     YES

586       KK   2210C     RET
587       KM        RETRIEVE LOW-FLOW DIVERTS FROM CP 2210A
588       DR   2210C

589       KK  2220B4     RET
590       KM        RETRIEVE LOW-FLOW DIVERTS FROM SUB 2220B
591       DR  2220B4

592       KK  2220A1      CP
593       KM        COMBINE RET 2210C & RET 2220B4
594       HC       2

595       KK   2220A     SUB
596       KM        RUNOFF FROM SUB 2220A & ROUTE CP 2220A1
597       BA   .3279
598       LS            74    13.8
599       UK    200  .0500    .15     100
600       RK   7600  .0179    .045          TRAP     30     10     YES

601       KK  2230B4     RET
602       KM        RETRIEVE LOW-FLOW DIVERTS FROM SUB 2230B
603       DR  2230B4

604       KK   2230A     SUB
605       KM        RUNOFF FROM SUB 2230A & ROUTE RET 2230B4
606       BA   .0976
607       LS            74    14.0
608       UK    200  .0500    .15     100
609       RK   2200  .0273    .050          TRAP     10     10     YES

610       KK  2230A1      CP
611       KM        ROUTE SUB 2230A TO CAP DIKE No.4
612       RK   1600  .0187    .045          TRAP     10     10

613       KK   2120     SUB
614       KM        RUNOFF FROM SUB 2120
615       BA  1.4255
616       LS            74    28.5
617       UK    115  .0383    .15     100
618       RK  20800  .0234    .045          TRAP    150     50
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

619       KK   2125     SUB
620       KM        RUNOFF FROM SUB-BASIN 2125
621       BA   .0739
622       LS            74      72
623       UK    115   .0383    .15     100
624       RK   3400   .0150    .045           TRAP     15      5

625       KK   2126      CP
626       KM        ROUTE SUB 2125 TO CAP DIKE 4
627       RK   3300   .0130    .030           TRAP     10      3

628       KK  COMB8      CP
629       KM        COMBINE SUB 2120, CP 2126, CP 2230A1, SUB 2220A, SUB 2170A, SUB 2160A,
630       KM        CP 2110, AND CP 2220A2.  THIS COMBINE OPREATION IS PERFORMED IN ORDER
631       KM        TO PROVIDE ADDITIONAL ROUTING SCHEMATIC PLOTTING CAPABILITY FOR THE
632       KM        HEC-1 "DIAGRAM" PLOT.
633       HC       8

634       KK  2240A     SUB
635       KM        RUNOFF FROM SUB 2240A
636       BA   .5919
637       PB   4.15
638       PC      0   .005   .009   .010   .013   .019   .021   .028   .032   .044
639       PC   .057   .100   .660   .745   .776   .800   .816   .830   .840   .850
640       PC   .861   .868   .878   .884   .891   .900   .905   .912   .919   .923
641       PC   .930   .934   .939   .944   .950   .958   .961   .963   .969   .971
642       PC   .974   .979   .981   .985   .989   .991   .993   .996  1.000
643       LS            74   25.80
644       UK    200   .0500    .15     100
645       RK   9600   .0354    .045           TRAP      8     10

646       KK   2260     SUB
647       KM        RUNOFF FROM SUB 2260
648       BA   .2647
649       LS            76   20.90
650       UK    200   .0500    .15     100
651       RK  11130   .0500    .045           TRAP      8     10

652       KK   2255     SUB
653       KM        RUNOFF FROM SUB 2255
654       BA   .2955
655       LS            86   14.60            74   14.60
656       UK    465   .6014    .25      40
657       UK    350   .0628    .15      60
658       RK   1360   .1536    .045    .030   TRAP      5      3
659       RK   4400   .0386    .045           TRAP     10      3

660       KK   2270     SUB
661       KM        RUNOFF FROM SUB 2270
662       BA   .9714
663       LS            86    12.5            74    12.5
664       UK    270   .5185    .30      40
665       UK    300   .2000    .15      60
666       RK   3120   .1137    .045    .097   TRAP     10      3
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

667       RK   4500  .0333   .045          TRAP    15     3

668       KK   2271     CP
669       KM      COMBINE SUB 2255 & SUB 2270
670       HC     2

671       KK   2250    SUB
672       KM      RUNOFF FROM SUB 2250 & ROUTE CP 2271
673       BA  .2239
674       LS           82   18.40
675       UK    130  .1696    .15    100
676       RK   1625  .0867   .045   .027   TRAP     5     3
677       RK   4000  .0200   .045          TRAP    30     5    YES

678       KK   2251     CP
679       KM      COMBINE SUB 2250 & SUB 2260
680       HC     2

681       KK   2280    SUB
682       KM      RUNOFF FROM SUB 2280 & ROUTE CP 2251
683       BA  .1808
684       LS           75    18.1
685       UK    300  .0300    .15    100
686       RK   3200  .0187   .045          TRAP    35     5    YES

687       KK   2290    SUB
688       KM      RUNOFF FROM SUB 2290
689       BA  .6005
690       LS           82   13.90
691       UK    300  .0499    .15    100
692       RK   9000  .0367   .045          TRAP    10     4

693       KK   2300    SUB
694       KM      RUNOFF FROM SUB 2300
695       BA 1.8007
696       LS           84     1.9
697       UK    303  .4881    .30    100
698       RK   1310  .2150   .045   .047   TRAP     5     1
699       RK   2928  .1451   .045   .306   TRAP    10     3
700       RK   9600  .0577   .045          TRAP    75    10

701       KK   2301    DIV
702       KM      DIVERT FLOW AT FAN APEX TO SUB 2330
703       DT   2302
704       DI      0   6000
705       DQ      0   3000

706       KK   2310    SUB
707       KM      RUNOFF FROM SUB 2310 & ROUTE NON-DIVERTED FLOW FROM DIV 2301
708       BA  .3035
709       LS           81    11.2
710       UK    200  .0550    .15    100
711       RK  10300  .0446   .045          TRAP    30     3    YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  712     KK   2320    SUB
  713     KM       RUNOFF FROM SUB 2320
  714     BA  .3723
  715     LS           79   14.0
  716     UK    200  .0500    .15    100
  717     RK   7200  .0416    .045          TRAP     15      3

  718     KK   2321     CP
  719     KM       COMBINE SUB 2240, SUB 2280, SUB 2290, SUB 2310, & SUB 2320
  720     HC      5

  721     KK   2302    RET
  722     KM       RETRIEVE DIVERTED FLOW FROM DIV 2301 (SUB 2300)
  723     DR   2302

  724     KK   2331     CP
  725     KM       ROUTE DIVERTED FLOW FROM SUB 2300 TO CP 2331
  726     RK   3600  .0472    .045          TRAP     30      3

  727     KK   2330    SUB
  728     KM       RUNOFF FROM SUB 2330
  729     BA  .4807
  730     LS           82    6.0
  731     UK    352  .3911     .25    100
  732     RK   1920  .2283    .045   .048   TRAP     10      3
  733     RK   5760  .0738    .045          TRAP     30      3

  734     KK   2332     CP
  735     KM       COMBINE SUB 2330 & CP 2331
  736     HC      2
                  2355                2355
  737     KK   2335    SUB
  738     KM       RUNOFF FROM SUB 2335 & ROUTE CP 2332
  739     BA  .3515
  740     LS           74   34.8
  741     UK    150  .0600     .15    100
  742     RK   7400  .0382    .045          TRAP     30     25    YES

  743     KK   2340    SUB
  744     KM       RUNOFF FROM SUB 2340
  745     BA  .2776
  746     LS           86   44.4            74   44.4
  747     UK    500  .4000     .30     30
  748     UK    160  .0625     .15     70
  749     RK   7050  .0526    .045          TRAP     10      3

  750     KK   2322     CP
  751     KM       COMBINE SUB 2335, SUB 2340, & CP 2321
  752     KM       THIS IS THE TOTAL INFLOW FROM MODEL GN50.24I TO CAP DIKE NO.4
  753     HC      3
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

754         KK    4IN      CP
755         KM       COMBINE CP D1 & CP 2322
756         KM       THIS IS THE TOTAL INFLOW TO CAP DIKE NO. 4
757         HC     2

758         KK   DIKE4     DAM
759         KM       ROUTE CP 4IN THROUGH CAP DIKE NO. 4
760         RS     1    STOR
761         SV     0     2    13    45    98   171   265   404   595   824
762         SV  1098  1420  1800  2253  2782  3381  4069  4854  5728  6686
763         SE  1496  1498  1500  1502  1504  1506  1508  1510  1512  1514
764         SE  1516  1518  1520  1522  1524  1526  1528  1530  1532  1534
765         SS  1533   100   2.9   1.5
766         ST  1534   100   2.9   1.5
767         ZZ
1
          SCHEMATIC DIAGRAM OF STREAM NETWORK
INPUT
 LINE     (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

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

 23       SUB39
           .
           .
 35         .      SUB40
            .        .
            .        .
 41       CP41............
           V
           V
 44       SUB41 ***
           .
           .
 50         .      SUB42
            .        .
            .        .
 56         .        .     SUB43
            .        .       .
            .        .       .
 62         .        .       .      SUB44
            .        .       .        .
            .        .       .        .
 68         .        .     CP45............
            .        .       V
            .        .       V
 71         .        .     SUB45 ***
            .        .       .
            .        .       .
 77         .        .       .     SUB45A
            .        .       .        .
            .        .       .        .
 83         .        .       .        .     SUB46
            .        .       .        .       .
            .        .       .        .       .
 90         .        .     CP47........................
            .        .       V
            .        .       V
 93         .        .     SUB47 ***
            .        .       .
```

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          .        .        .
99      CP48.......................
         V
         V
102     SUB48 ***
          .
          .
108        .     SUB50
          .        .
          .        .
115      CP51............
          .
          .
123        .-------->   2003
118     2004
          .
          .
126        .     2000
          .      V
          .      V
141        .     2010 ***
          .        .
          .        .
149        .        .        .<-------   2003
147        .        .     2003
          .        .       V
          .        .       V
150        .        .     2003A
          .        .       V
          .        .       V
156        .        .     2005 ***
          .        .       V
          .        .       V
162        .        .     2011
          .        .       .
          .        .       .
168        .     2012............
          .      V
          .      V
171        .     2015A ***
          .        .
          .        .
178        .        .     2015B
          .        .       .
          .        .       .
184        .        .        .     2020
          .        .        .      V
          .        .        .      V
191        .        .        .     2016
          .        .        .       .
          .        .        .       .
194        .     2017........................
          .        .
          .        .
199        .        .-------->   2019
197        .     2018
          .      V
          .      V
202        .     2030B1
          .        .
          .        .
208        .        .     2030B
          .        .       .
          .        .       .
215        .     2030B2............
```

```
          .     V
          .     V
218       .   2080B1
          .     .
          .     .
224       .     .     2040
          .     .       .
          .     .       .
231       .     .       .     2050
          .     .       .       .
          .     .       .       .
238       .     .     2051............
          .     .       V
          .     .       V
241       .     .     2060 ***
          .     .       .
          .     .       .
248       .     .       .     2070
          .     .       .       .
          .     .       .       .
258       .     .       .       .-------->   2072
256       .     .       .     2071
          .     .       .       V
          .     .       .       V
261       .     .       .     2065 ***
          .     .       .       .
          .     .       .       .
269       .     .       .       .       .<-------   2072
267       .     .       .       .     2072
          .     .       .       .       V
          .     .       .       .       V
270       .     .       .       .     2131
          .     .       .       .       .
          .     .       .       .       .
273       .     .       .       .       .       2130
          .     .       .       .       .         .
          .     .       .       .       .         .
279       .     .       .       .     2132............
          .     .       .       .       .
          .     .       .       .       .
284       .     .       .       .       .-------->   2134
282       .     .       .       .     2133
          .     .       .       .       V
          .     .       .       .       V
287       .     .       .       .     2066
          .     .       .       .       .
          .     .       .       .       .
290       .     .     2067........................
          .     .       V
          .     .       V
293       .     .     2080B ***
          .     .       .
          .     .       .
299       .   2080B2............
          .     .
          .     .
304       .     .-------> 2080B4
302       .   2080B3
          .     V
          .     V
307       .   2140B1
          .     .
          .     .
315       .     .       .<-------   2134
313       .     .     2134
```

```
          .        .        V
          .        .        V
316       .        .      2135 ***
          .        .        V
          .        .        V
323       .        .      2140B ***
          .        .        .
          .        .        .
329       .      2140B2.............
          .        .
          .        .
334       .        .-------> 2140B4
332       .      2140B3
          .        V
          .        V
337       .      2140A1
          .        .
          .        .
343       .        .      2140A
          .        .        .
          .        .        .
350       .      2140A2.............
          .        .
          .        .
353       .        .      2150
          .        .        .
          .        .        .
361       .      2140A3.............
          .        V
          .        V
364       .      2160C1
          .        .
          .        .
370       .        .      2160C
          .        .        .
          .        .        .
376       .        .        .      2160B
          .        .        .        .
          .        .        .        .
383       .      2160C2........................
          .        .
          .        .
388       .        .-------> 2160C4
386       .      2160C3
          .        V
          .        V
391       .      2170B1
          .        .
          .        .
397       .        .      2170B
          .        .        .
          .        .        .
403       .      2170B2.............
          .        .
          .        .
408       .        .-------> 2170B4
406       .      2170B3
          .        V
          .        V
411       .      2190A
          .        .
          .        .
417       .        .      2180
          .        .        V
          .        .        V
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424     .       .       2190 ***
        .       .       .
        .       .       .
430     .     2190B............
        .       .
        .       .
433     .       .       2200
        .       .       .
        .       .       .
439     .       .       .       2210
        .       .       .       .
        .       .       .       .
446     .     2210A........................
        .       .
        .       .
451     .       .-------> 2210C
449     .     2210B
        .       V
        .       V
454     .     2220C1
        .       .
        .       .
460     .       .       2220C
        .       .       .
        .       .       .
466     .     2220C2............
        .       V
        .       V
469     .     2220B1
        .       .
        .       .
475     .       .       2220B
        .       .       .
        .       .       .
481     .     2220B2............
        .       .
        .       .
486     .       .-------> 2220B4
484     .     2220B3
        .       V
        .       V
489     .     2230B1
        .       .
        .       .
495     .       .       2230B
        .       .       .
        .       .       .
501     .     2230B2............
        .       .
        .       .
506     .       .-------> 2230B4
504     .     2230B3
        .       V
        .       V
509     .     2220A2
        .       .
        .       .
517     .       .       .<-------   2019
515     .       .     2019
        .       .       V
        .       .       V
518     .       .     2030A ***
        .       .       .
        .       .       .
527     .       .       .       .<-------  2080B4
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525     .     .     .     2080B4
        .     .     .       V
        .     .     .       V
528     .     .     .     2080A ***
        .     .     .       .
        .     .     .       .
534     .     .   2081............
        .     .     V
        .     .     V
537     .     .   2090A ***
        .     .     .
        .     .     .
543     .     .     .     2100
        .     .     .       .
        .     .     .       .
549     .     .   2101............
        .     .     V
        .     .     V
552     .     .   2110 ***
        .     .     .
        .     .     .
560     .     .     .       .<-------  2140B4
558     .     .     .     2140B4
        .     .     .       V
        .     .     .       V
561     .     .     .     2160A1
        .     .     .       .
        .     .     .       .
566     .     .     .       .       .<-------  2160C4
564     .     .     .       .     2160C4
        .     .     .       .       .
        .     .     .       .       .
567     .     .     .     2160A2............
        .     .     .       V
        .     .     .       V
570     .     .     .     2160A ***
        .     .     .       .
        .     .     .       .
579     .     .     .       .       .<-------  2170B4
577     .     .     .       .     2170B4
        .     .     .       .       V
        .     .     .       .       V
580     .     .     .       .     2170A ***
        .     .     .       .       .
        .     .     .       .       .
588     .     .     .       .       .       .<-------  2210C
586     .     .     .       .       .     2210C
        .     .     .       .       .       .
        .     .     .       .       .       .
591     .     .     .       .       .       .       .<-------  2220B4
589     .     .     .       .       .       .     2220B4
        .     .     .       .       .       .       .
        .     .     .       .       .       .       .
592     .     .     .       .       .     2220A1............
        .     .     .       .       .       V
        .     .     .       .       .       V
595     .     .     .       .       .     2220A ***
        .     .     .       .       .       .
        .     .     .       .       .       .
603     .     .     .       .       .       .       .<-------  2230B4
601     .     .     .       .       .       .     2230B4
        .     .     .       .       .       .       V
        .     .     .       .       .       .       V
604     .     .     .       .       .       .     2230A ***
        .     .     .       .       .       .       V
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                                                  V
610                                               2230A1
                                                  .
                                                  .
613                                                       2120
                                                          .
                                                          .
619                                                       .      2125
                                                          .      V
                                                          .      V
625                                                       .      2126
                                                          .      .
                                                          .      .
628          COMB8.......................................
                 .
                 .
634              .   2240A
                 .   .
                 .   .
646              .   .   2260
                 .   .   .
                 .   .   .
652              .   .   .   .   2255
                 .   .   .   .   .
                 .   .   .   .   .
660              .   .   .   .   .   2270
                 .   .   .   .   .   .
                 .   .   .   .   .   .
668              .   .   .   .   2271............
                 .   .   .   .   V
                 .   .   .   .   V
671              .   .   .   .   2250 ***
                 .   .   .   .   .
                 .   .   .   .   .
678              .   .   .   2251............
                 .   .   .   V
                 .   .   .   V
681              .   .   .   2280 ***
                 .   .   .   .
                 .   .   .   .
687              .   .   .   .   2290
                 .   .   .   .   .
                 .   .   .   .   .
693              .   .   .   .   .   2300
                 .   .   .   .   .   .
                 .   .   .   .   .   .
703              .   .   .   .   .   .-------> 2302
701              .   .   .   .   .   2301
                 .   .   .   .   .   V
                 .   .   .   .   .   V
706              .   .   .   .   .   2310 ***
                 .   .   .   .   .   .
                 .   .   .   .   .   .
712              .   .   .   .   .   .   2320
                 .   .   .   .   .   .   .
                 .   .   .   .   .   .   .
718              .   .   2321.......................................
                 .   .   .
                 .   .   .
723              .   .   .   .<------- 2302
721              .   .   .   2302
                 .   .   .   V
                 .   .   .   V
724              .   .   .   2331
                 .   .   .   .
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        .       .       .       .
727     .       .       .       .       2330
        .       .       .       .       .
        .       .       .       .       .
734     .       .       .     2332.............
        .       .       .      V
        .       .       .      V
737     .       .       .     2335 ***
        .       .       .       .
        .       .       .       .
743     .       .       .       .       2340
        .       .       .       .       .
        .       .       .       .       .
750     .       .     2322........................
        .       .       .
        .       .       .
754     .     4IN.............
        .      V
        .      V
758     .    DIKE4
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(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

1 ****

FLOOD HYDROGRAPH PACKAGE HEC-1 (IBM XT 512K VERSION) -FEB 1,1985
U.S. ARMY CORPS OF ENGINEERS, THE HYDROLOGIC ENGINEERING CENTER, 609 SECOND STREET, DAVIS, CA. 95616
****

UPPER INDIAN BEND WASH REGIONAL FLOOD CONTROL & DRAINAGE PLAN

MODEL RP4.24I -- SUB-BASIN SERIES 2000 TO 2230 & 39 TO 50

REATA PASS CHANNEL ALIGNMENT ALONG THOMPSON PEAK PARKWAY
100% OF FLOW FROM THE REATA PASS APEX IS DIVERTED SOUTH TO CAP DIKE 4

A RESERVOIR ROUTING OPERATION IS IN-PLACE FOR CAP DIKE 4.

FUTURE LAND USE CONDITIONS WITH EXISTING DRAINAGE PATTERN

LOW-FLOW CULVERT DIVERTS ARE ACTIVATED

100-YEAR, 24-HOUR STORM, USING SCS TYPE IIA RAINFALL DISTRIBUTION
RAINFALL FROM NOAA ATLAS, USING 25 SQ MI AREAL REDUCTION FACTOR (.968)

LAND USE DENSITIES FROM GENERAL PLAN & TONTO FOOTHILLS PLAN.
PERCENT OF IMPERVIOUS COVER HAS BEEN ADJUSTED TO REFLECT
CITY OF SCOTTSDALE NAOS REQUIREMENTS.

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

  IT       HYDROGRAPH TIME DATA
             NMIN         5  MINUTES IN COMPUTATION INTERVAL
            IDATE    25APR90  STARTING DATE
            ITIME       0000  STARTING TIME
               NQ        289  NUMBER OF HYDROGRAPH ORDINATES
           NDDATE    26APR90  ENDING DATE
           NDTIME       0000  ENDING TIME

          COMPUTATION INTERVAL     .08 HOURS
             TOTAL TIME BASE   24.00 HOURS

      ENGLISH UNITS
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*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 122. TO 42087.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 9817. TO 42087.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
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*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 122. TO 42087.
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*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 0. TO 42087.
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*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 18313. TO 42087.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
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*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 122. TO 42087.
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*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 780. TO 42087.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 780. TO 42087.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 1278. TO 42087.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

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	AREA	BASIN STAGE	MAXIMUM MAX STAGE	TIME OF
+	HYDROGRAPH AT SUB39	4477.	6.08	489.	148.	148.	1.93				
+	HYDROGRAPH AT SUB40	1343.	6.08	132.	40.	40.	.58				
+	2 COMBINED AT CP41	5821.	6.08	622.	187.	187.	2.51				
+	HYDROGRAPH AT SUB41	6325.	6.17	775.	234.	234.	3.31				
+	HYDROGRAPH AT SUB42	1252.	6.08	126.	38.	38.	.58				
+	HYDROGRAPH AT SUB43	2512.	6.08	255.	77.	77.	1.07				
+	HYDROGRAPH AT SUB44	1951.	6.08	198.	60.	60.	.84				
+	2 COMBINED AT CP45	4463.	6.08	453.	137.	137.	1.91				
+	HYDROGRAPH AT SUB45	4602.	6.08	498.	150.	150.	2.11				
+	HYDROGRAPH AT SUB45A	425.	6.08	43.	13.	13.	.17				
+	HYDROGRAPH AT SUB46	2271.	6.08	230.	68.	68.	.93				
+	3 COMBINED AT CP47	7298.	6.08	771.	231.	231.	3.21				
+	HYDROGRAPH AT SUB47	7150.	6.17	870.	261.	261.	3.58				
+	3 COMBINED AT CP48	14513.	6.17	1769.	533.	533.	7.47				
+	HYDROGRAPH AT SUB48	14273.	6.17	1774.	535.	535.	7.52				
+	HYDROGRAPH AT SUB50	824.	6.08	81.	24.	24.	.36				
+	2 COMBINED AT CP51	14935.	6.17	1855.	560.	560.	7.88				
+	DIVERSION TO 2003	14935.	.08	1855.	560.	560.	7.88				
+	HYDROGRAPH AT 2004	0.	.08	0.	0.	0.	7.88				

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      HYDROGRAPH AT
+                2000    1745.  6.08     173.     52.     52.    .80

      HYDROGRAPH AT
+                2010    1729.  6.08     196.     59.     59.    .89

      HYDROGRAPH AT
+                2003   14935.  6.17    1855.    560.    560.    .00

      ROUTED TO
+               2003A   14330.  6.17    1854.    559.    559.    .00
+                                                          6.15   6.17

      HYDROGRAPH AT
+                2005   14272.  6.25    1876.    566.    566.    .14

      ROUTED TO
+                2011   14144.  6.25    1871.    565.    565.    .14
+                                                          6.12   6.25

      2 COMBINED AT
+                2012   15403.  6.25    2065.    624.    624.   1.03

      HYDROGRAPH AT
+               2015A   14903.  6.33    2139.    646.    646.   1.39

      HYDROGRAPH AT
+               2015B      33.  6.08       4.      1.      1.    .04

      HYDROGRAPH AT
+                2020     256.  6.08      25.      8.      8.    .11

      ROUTED TO
+                2016     247.  6.08      26.      8.      8.    .11

      3 COMBINED AT
+                2017   14986.  6.33    2166.    655.    655.   1.54

      DIVERSION TO
+                2019     674.  6.33     499.    232.    232.   1.54

      HYDROGRAPH AT
+                2018   14312.  6.33    1667.    424.    424.   1.54

      ROUTED TO
+               2030B1  14337.  6.33    1667.    424.    424.   1.54
+                                                          6.15   6.33

      HYDROGRAPH AT
+               2030B      20.  6.08       2.      1.      1.    .01

      2 COMBINED AT
+               2030B2  14341.  6.33    1668.    424.    424.   1.55

      ROUTED TO
+               2080B1  14363.  6.33    1668.    424.    424.   1.55
+                                                          6.16   6.33

      HYDROGRAPH AT
+                2040    1945.  6.08     193.     58.     58.    .93

      HYDROGRAPH AT
+                2050    1757.  6.08     174.     53.     53.    .86
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	2 COMBINED AT							
+	2051	3702.	6.08	367.	111.	111.	1.79	
	HYDROGRAPH AT							
+	2060	3569.	6.08	398.	120.	120.	1.94	
	HYDROGRAPH AT							
+	2070	3255.	6.08	320.	97.	97.	1.46	
	DIVERSION TO							
+	2072	2170.	6.08	214.	64.	64.	1.46	
	HYDROGRAPH AT							
+	2071	1085.	6.08	107.	32.	32.	1.46	
	HYDROGRAPH AT							
+	2065	1309.	6.17	139.	42.	42.	1.63	
	HYDROGRAPH AT							
+	2072	2170.	6.08	214.	64.	64.	.00	
	ROUTED TO							
+	2131	2081.	6.17	218.	66.	66.	.00	
	HYDROGRAPH AT							
+	2130	567.	6.08	64.	19.	19.	.30	
	2 COMBINED AT							
+	2132	2591.	6.17	281.	85.	85.	.30	
	DIVERSION TO							
+	2134	1964.	6.17	246.	76.	76.	.30	
	HYDROGRAPH AT							
+	2133	627.	6.17	36.	9.	9.	.30	
	ROUTED TO							
+	2066	628.	6.25	37.	9.	9.	.30	
	3 COMBINED AT							
+	2067	5455.	6.17	574.	172.	172.	3.87	
	HYDROGRAPH AT							
+	2080B	5455.	6.17	582.	175.	175.	3.92	
	2 COMBINED AT							
+	2080B2	17638.	6.25	2249.	599.	599.	5.47	
	DIVERSION TO							
+	2080B4	488.	6.25	305.	113.	113.	5.47	
	HYDROGRAPH AT							
+	2080B3	17150.	6.25	1944.	486.	486.	5.47	
	ROUTED TO							
+	2140B1	16950.	6.33	1944.	486.	486.	5.47	
+							6.61	6.33
	HYDROGRAPH AT							
+	2134	1964.	6.17	246.	76.	76.	.00	
	HYDROGRAPH AT							
+	2135	2038.	6.17	267.	83.	83.	.11	
	HYDROGRAPH AT							

+	2140B	2106.	6.17	282.	88.	88.	.19	
	2 COMBINED AT							
+	2140B2	18381.	6.33	2227.	574.	574.	5.65	
	DIVERSION TO							
+	2140B4	146.	6.33	91.	40.	40.	5.65	
	HYDROGRAPH AT							
+	2140B3	18235.	6.33	2136.	534.	534.	5.65	
	ROUTED TO							
+	2140A1	17273.	6.42	2136.	534.	534.	5.65	
+							6.67	6.42
	HYDROGRAPH AT							
+	2140A	192.	6.17	25.	8.	8.	.12	
	2 COMBINED AT							
+	2140A2	17351.	6.42	2160.	542.	542.	5.77	
	HYDROGRAPH AT							
+	2150	1357.	6.08	142.	43.	43.	.69	
	2 COMBINED AT							
+	2140A3	17656.	6.42	2302.	585.	585.	6.46	
	ROUTED TO							
+	2160C1	17697.	6.42	2302.	585.	585.	6.46	
+							6.74	6.42
	HYDROGRAPH AT							
+	2160C	64.	6.08	7.	2.	2.	.04	
	HYDROGRAPH AT							
+	2160B	225.	6.08	26.	8.	8.	.14	
	3 COMBINED AT							
+	2160C2	17796.	6.42	2336.	595.	595.	6.64	
	DIVERSION TO							
+	2160C4	489.	6.42	243.	72.	72.	6.64	
	HYDROGRAPH AT							
+	2160C3	17307.	6.42	2093.	523.	523.	6.64	
	ROUTED TO							
+	2170B1	16690.	6.50	2093.	523.	523.	6.64	
+							6.57	6.50
	HYDROGRAPH AT							
+	2170B	259.	6.08	28.	9.	9.	.13	
	2 COMBINED AT							
+	2170B2	16749.	6.50	2121.	532.	532.	6.77	
	DIVERSION TO							
+	2170B4	336.	6.50	123.	32.	32.	6.77	
	HYDROGRAPH AT							
+	2170B3	16413.	6.50	1998.	500.	500.	6.77	
	ROUTED TO							
+	2190A	16526.	6.50	1998.	500.	500.	6.77	
+							6.54	6.50

	HYDROGRAPH AT							
+	2180	2279.	6.08	231.	69.	69.	1.00	
	HYDROGRAPH AT							
+	2190	2262.	6.17	260.	78.	78.	1.13	
	2 COMBINED AT							
+	2190B	17165.	6.50	2258.	578.	578.	7.90	
	HYDROGRAPH AT							
+	2200	508.	6.08	50.	15.	15.	.25	
	HYDROGRAPH AT							
+	2210	3417.	6.08	349.	106.	106.	1.78	
	3 COMBINED AT							
+	2210A	17940.	6.50	2657.	700.	700.	9.93	
	DIVERSION TO							
+	2210C	489.	6.50	269.	103.	103.	9.93	
	HYDROGRAPH AT							
+	2210B	17451.	6.50	2388.	597.	597.	9.93	
	ROUTED TO							
+	2220C1	17506.	6.50	2388.	597.	597.	9.93	
+							6.71	6.50
	HYDROGRAPH AT							
+	2220C	134.	6.08	13.	4.	4.	.07	
	2 COMBINED AT							
+	2220C2	17529.	6.50	2401.	601.	601.	10.00	
	ROUTED TO							
+	2220B1	17322.	6.50	2401.	601.	601.	10.00	
+							6.67	6.50
	HYDROGRAPH AT							
+	2220B	299.	6.08	30.	9.	9.	.17	
	2 COMBINED AT							
+	2220B2	17378.	6.50	2432.	611.	611.	10.16	
	DIVERSION TO							
+	2220B4	390.	6.50	143.	38.	38.	10.16	
	HYDROGRAPH AT							
+	2220B3	16988.	6.50	2288.	573.	573.	10.16	
	ROUTED TO							
+	2230B1	16859.	6.58	2288.	573.	573.	10.16	
+							6.60	6.58
	HYDROGRAPH AT							
+	2230B	370.	6.08	46.	14.	14.	.23	
	2 COMBINED AT							
+	2230B2	16955.	6.58	2334.	587.	587.	10.39	
	DIVERSION TO							
+	2230B4	332.	6.58	105.	28.	28.	10.39	
	HYDROGRAPH AT							

+	2230B3	16623.	6.58	2229.	559.	559.	10.39	
	ROUTED TO							
+	2220A2	15756.	6.67	2228.	559.	559.	10.39	
+							6.41	6.67
	HYDROGRAPH AT							
+	2019	674.	6.33	499.	232.	232.	.00	
	HYDROGRAPH AT							
+	2030A	924.	6.17	529.	242.	242.	.23	
	HYDROGRAPH AT							
+	2080B4	488.	6.25	305.	113.	113.	.00	
	HYDROGRAPH AT							
+	2080A	579.	6.08	319.	118.	118.	.09	
	2 COMBINED AT							
+	2081	1483.	6.17	848.	360.	360.	.32	
	HYDROGRAPH AT							
+	2090A	1492.	6.33	887.	375.	375.	.68	
	HYDROGRAPH AT							
+	2100	245.	6.42	68.	21.	21.	.38	
	2 COMBINED AT							
+	2101	1734.	6.33	954.	396.	396.	1.06	
	HYDROGRAPH AT							
+	2110	1941.	6.42	1028.	425.	425.	1.58	
	HYDROGRAPH AT							
+	2140B4	146.	6.33	91.	40.	40.	.00	
	ROUTED TO							
+	2160A1	140.	6.50	90.	40.	40.	.00	
	HYDROGRAPH AT							
+	2160C4	489.	6.42	243.	72.	72.	.00	
	2 COMBINED AT							
+	2160A2	626.	6.42	331.	111.	111.	.00	
	HYDROGRAPH AT							
+	2160A	1475.	6.25	490.	161.	161.	.82	
	HYDROGRAPH AT							
+	2170B4	336.	6.50	123.	32.	32.	.00	
	HYDROGRAPH AT							
+	2170A	580.	6.25	187.	51.	51.	.34	
	HYDROGRAPH AT							
+	2210C	489.	6.50	269.	103.	103.	.00	
	HYDROGRAPH AT							
+	2220B4	390.	6.50	143.	38.	38.	.00	
	2 COMBINED AT							
+	2220A1	879.	6.50	412.	140.	140.	.00	
	HYDROGRAPH AT							
+	2220A	1160.	6.17	461.	156.	156.	.33	

	HYDROGRAPH AT						
+	2230B4	332.	6.58	105.	28.	28.	.00
	HYDROGRAPH AT						
+	2230A	391.	6.17	122.	33.	33.	.10
	ROUTED TO						
+	2230A1	387.	6.17	122.	33.	33.	.10
	HYDROGRAPH AT						
+	2120	912.	6.50	278.	87.	87.	1.43
	HYDROGRAPH AT						
+	2125	191.	6.08	22.	7.	7.	.07
	ROUTED TO						
+	2126	182.	6.17	23.	7.	7.	.07
	8 COMBINED AT						
+	COMB8	21287.	6.58	4812.	1479.	1479.	15.05
	HYDROGRAPH AT						
+	2240A	917.	6.08	113.	35.	35.	.59
	HYDROGRAPH AT						
+	2260	366.	6.17	50.	16.	16.	.26
	HYDROGRAPH AT						
+	2255	550.	6.00	59.	18.	18.	.30
	HYDROGRAPH AT						
+	2270	1868.	6.00	193.	58.	58.	.97
	2 COMBINED AT						
+	2271	2418.	6.00	252.	76.	76.	1.27
	HYDROGRAPH AT						
+	2250	2806.	6.08	309.	93.	93.	1.49
	2 COMBINED AT						
+	2251	3149.	6.08	359.	109.	109.	1.76
	HYDROGRAPH AT						
+	2280	3172.	6.17	393.	119.	119.	1.94
	HYDROGRAPH AT						
+	2290	1192.	6.08	128.	39.	39.	.60
	HYDROGRAPH AT						
+	2300	3893.	6.08	380.	115.	115.	1.80
	DIVERSION TO						
+	2302	1947.	6.08	190.	58.	58.	1.80
	HYDROGRAPH AT						
+	2301	1947.	6.08	190.	58.	58.	1.80
	HYDROGRAPH AT						
+	2310	2215.	6.08	264.	80.	80.	2.10
	HYDROGRAPH AT						
+	2320	746.	6.08	73.	22.	22.	.37
	5 COMBINED AT						

+	2321	8170.	6.08	970.	296.	296.	5.61	
	HYDROGRAPH AT							
+	2302	1947.	6.08	190.	58.	58.	.00	
	ROUTED TO							
+	2331	1874.	6.17	192.	58.	58.	.00	
	HYDROGRAPH AT							
+	2330	1015.	6.08	100.	30.	30.	.48	
	2 COMBINED AT							
+	2332	2721.	6.17	292.	88.	88.	.48	
	HYDROGRAPH AT							
+	2335	3275.	6.17	375.	114.	114.	.83	
	HYDROGRAPH AT							
+	2340	628.	6.00	70.	21.	21.	.28	
	3 COMBINED AT							
+	2322	11552.	6.17	1413.	431.	431.	6.71	
	2 COMBINED AT							
+	4IN	24180.	6.58	6215.	1910.	1910.	21.76	
	ROUTED TO							
+	DIKE4	0.	.08	0.	0.	0.	21.76	
+							1527.19	24.00

SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION DIKE4

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1496.00	1533.00	1534.00
STORAGE	0.	6207.	6686.
OUTFLOW	0.	0.	290.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1527.19	.00	3789.	0.	.00	.00	.00

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

FILE: RP5.24I

(100-Year, 24-Hour, SCS Type IIA Storm)

This model includes the Thompson Peak parkway channel and a reservoir routing operation for CAP Dike 4. Low-flow culvert diverts are de-activated and 100 percent of the Reata Pass flows are diverted to CAP Dike 4.

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

  1       ID      UPPER INDIAN BEND WASH REGIONAL DRAINAGE & FLOOD CONTROL PLAN
  2       ID
  3       ID      MODEL RP5.24I -- SUB-BASIN SERIES 2000 TO 2230 & 39 TO 50
  4       ID
  5       ID      REATA PASS CHANNEL ALIGNMENT ALONG THOMPSON PEAK PARKWAY
  6       ID      100% OF FLOW FROM THE REATA PASS APEX IS DIVERTED SOUTH TO CAP DIKE 4
  7       ID
  8       ID      A RESERVOIR ROUTING OPERATION IS IN-PLACE FOR CAP DIKE 4.
  9       ID      SUB 2125 IS INCLUDED
 10       ID
 11       ID      ALL LOW-FLOW CULVERT DIVERTS ARE SET TO ZERO.
 12       ID
 13       ID      FUTURE LAND USE CONDITIONS WITH EXISTING DRAINAGE PATTERN
 14       ID
 15       ID      100-YEAR, 24-HOUR STORM, USING SCS TYPE IIA RAINFALL DISTRIBUTION
 16       ID      RAINFALL FROM NOAA ATLAS, USING 25 SQ MI AREAL REDUCTION FACTOR (.968)
 17       ID
 18       ID      LAND USE DENSITIES FROM GENERAL PLAN & TONTO FOOTHILLS PLAN.
 19       ID      PERCENT OF IMPERVIOUS COVER HAS BEEN ADJUSTED TO REFLECT
 20       ID      CITY OF SCOTTSDALE NAOS REQUIREMENTS.
         *DIAGRAM
 21       IT      5 25APR90      0    300
 22       IO      5      0
 23       IN     30 25APR90      0

 24       KK  SUB39
 25       KM      RUNOFF FROM SUB-BASIN 39
 26       BA  1.9302
 27       PB   4.25
 28       PC     0   .005   .009   .010   .013   .019   .021   .028   .032   .044
 29       PC  .057   .100   .660   .745   .776   .800   .816   .830   .840   .850
 30       PC  .861   .868   .878   .884   .891   .900   .905   .912   .919   .923
 31       PC  .930   .934   .939   .944   .950   .958   .961   .963   .969   .971
 32       PC  .974   .979   .981   .985   .989   .991   .993   .996  1.000
 33       LS          85   23.4
 34       UK   330  .0433    .20    100
 35       RK  11240  .0253   .045          TRAP     30      3

 36       KK  SUB40
 37       KM      RUNOFF FROM SUB-BASIN 40
 38       BA  .5844
 39       LS          83     9.9
 40       UK   160  .0627    .20    100
 41       RK  7000  .0350   .045          TRAP     20      3

 42       KK   CP41
 43       KM      COMBINE HYDROGRAPHS SUB39 & SUB40
 44       HC     2

 45       KK  SUB41
 46       KM      RUNOFF FROM SUB-BASIN 41 & ROUTE CP 41
 47       BA  .7911
 48       LS          74    10.1
 49       UK   280  .2386    .20    100
 50       RK  9400  .0282   .045          TRAP     50      3    YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  51      KK  SUB42
  52      KM      RUNOFF FROM SUB-BASIN 42
  53      BA  .5844
  54      LS          78   23.3
  55      UK   280  .2386   .20   100
  56      RK  8750  .0573  .045        TRAP    20     3

  57      KK  SUB43
  58      KM      RUNOFF FROM SUB-BASIN 43
  59      BA 1.0665
  60      LS          85   10.5
  61      UK   260  .0515   .20   100
  62      RK  7400  .0255  .045        TRAP    25     3

  63      KK  SUB44
  64      KM      RUNOFF FROM SUB-BASIN 44
  65      BA  .8389
  66      LS          85    8.1
  67      UK   260  .0515   .20   100
  68      RK  9840  .0622  .045        TRAP    25     3

  69      KK   CP45
  70      KM      COMBINE HYDROGRAPHS SUB43 & SUB44
  71      HC     2

  72      KK  SUB45
  73      KM      RUNOFF FROM SUB-BASIN 45 & ROUTE CP 45
  74      BA  .2037
  75      LS          81   14.5
  76      UK   125  .1166   .20   100
  77      RK  3600  .0366  .045        TRAP    30     3    YES

  78      KK SUB45A
  79      KM      RUNOFF FROM SUB 45A
  80      BA  .1720
  81      LS          86    6.9
  82      UK   275  .2200   .20   100
  83      RK  5400  .0411  .045        TRAP    15     3

  84      KK  SUB46
  85      KM      RUNOFF FROM SUB-BASIN 46
  86      BA  .9268
  87      LS          86    3.7
  88      UK   265  .4958   .20   100
  89      RK  3300  .2271  .045  .111  TRAP    10     3
  90      RK  7100  .0535  .045        TRAP    25     3

  91      KK   CP47
  92      KM      COMBINE HYDROGRAPHS SUB45, SUB45A, & SUB46
  93      HC     3
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  94      KK  SUB47
  95      KM      RUNOFF FROM SUB-BASIN 47 & ROUTE CP 47
  96      BA  .3757
  97      LS          77    8.6
  98      UK   375  .1000    .20    100
  99      RK  9600  .0217   .045          TRAP     50      3    YES

 100      KK   CP48
 101      KM      COMBINE HYDROGRAPHS SUB41, SUB42, & SUB47
 102      HC     3

 103      KK  SUB48
 104      KM      RUNOFF FROM SUB-BASIN 48 & ROUTE CP 48
 105      BA  .0438
 106      LS          73    6.9
 107      UK   150  .0733    .20    100
 108      RK  1300  .0338   .045          TRAP     75      3    YES

 109      KK  SUB50
 110      KM      RUNOFF FROM SUB-BASIN 50
 111      BA  .3580
 112      LS          84    2.8
 113      UK   300  .3555    .20    100
 114      RK   730  .1506   .045   .036   TRAP     10      3
 115      RK  6400  .0453   .045          TRAP     25      3

 116      KK   CP51
 117      KM      COMBINE HYDROGRAPHS SUB48 & SUB50
 118      HC     2

 119      KK   2004    DIV
 120      KM      DIVERT FLOW TO SUB 2005
 121      KM      THIS DIVERT OCCURS AT A BRAIDED CHANNEL BIFURCATION LOCATED 1000 FEET
 122      KM      SOUTH OF THE EAST END OF PINNACLE PEAK ROAD.
 123      KM      THIS IS AN ACTIVE ALLUVIAL FAN APEX.
 124      DT   2003
 125      DI     0  15000  25000
 126      DQ     0  15000  25000

 127      KK   2000    SUB
 128      KM      RUNOFF FROM SUB 2000
 129      KM      RAINFALL AMOUNT IS CHANGED TO REFLECT TRANSITION INTO A DIFFERENT
 130      KM      GEOGRAPHICAL AREA
 131      BA  .7999
 132      PB  4.15
 133      PC     0   .005   .009   .010   .013   .019   .021   .028   .032   .044
 134      PC  .057   .100   .660   .745   .776   .800   .816   .830   .840   .850
 135      PC  .861   .868   .878   .884   .891   .900   .905   .912   .919   .923
 136      PC  .930   .934   .939   .944   .950   .958   .961   .963   .969   .971
 137      PC  .974   .979   .981   .985   .989   .991   .993   .996  1.000
 138      LS          84    2.6
 139      UK   400  .2750    .25    100
 140      RK  2625  .0785   .045   .072   TRAP     10      3
 141      RK  2300  .0217   .045          TRAP     25      3
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  142     KK   2010     SUB
  143     KM        RUNOFF FROM SUB 2010 & ROUTE SUB 2000
  144     BA   .0933
  145     LS            83     3.7
  146     UK    800  .6425    .30    100
  147     RK   3000  .0213   .045          TRAP     50      3     YES

  148     KK   2003     RET
  149     KM        RETRIEVE DIVERTED FLOW FROM DIV 2004
  150     DR   2003

  151     KK  2003A      CP
  152     KM        ROUTE DIVERTED FLOW TO UPSTREAM END OF SUB 2005
  153     RS      1    FLOW     -1
  154     RC   .055   .045   .055    700  .0200
  155     RX      0     35    135    150    225    240    340    375
  156     RY     10      3      3      0      0      3      3     10

  157     KK   2005     SUB
  158     KM        RUNOFF FROM 2005 & ROUTE CP 2003A
  159     BA   .1363
  160     LS            72    6.70
  161     UK    175  .1400    .15    100
  162     RK   2600  .0200   .045          TRAP    150      5     YES

  163     KK   2011      CP
  164     KM        ROUTE SUB 2005 TO CP 2011
  165     RS      1    FLOW     -1
  166     RC   .055   .045   .055   2200  .0200
  167     RX      0     35    135    150    225    240    340    375
  168     RY     10      3      3      0      0      3      3     10

  169     KK   2012      CP
  170     KM        COMBINE SUB 2010 & CP 2011
  171     HC      2

  172     KK  2015A     SUB
  173     KM        RUNOFF FROM SUB 2015A & ROUTE CP 2012
  174     BA   .3587
  175     LS            82     7.7
  176     UK    500  .2800    .25    100
  177     RK   2400  .1358   .045   .061   TRAP     10      3
  178     RK   4700  .0200   .045          TRAP    150      5     YES

  179     KK  2015B     SUB
  180     KM        RUNOFF FROM SUB 2015B
  181     BA   .0416
  182     LS            60    15.4
  183     UK    500  .2800    .25    100
  184     RK   2000  .0500   .045          TRAP     25      5
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

185       KK   2020     SUB
186       KM        RUNOFF FROM SUB 2020
187       BA   .1090
188       LS            85    4.05
189       UK    205   .6969    .30    100
190       RK    900   .3889   .045   .011   TRAP    10     3
191       RK   2800   .1428   .045          TRAP    20     3

192       KK   2016     CP
193       KM        ROUTE SUB 2020 TO CP 2016
194       RK   1400   .0343   .045          TRAP    20     3

195       KK   2017     CP
196       KM        COMBINE SUB 2015A, SUB 2015B, & CP 2016
197       HC      3

198       KK   2018    DIV
199       KM        DIVERT LOW-FLOWS TO SUB 2030A
200       DT   2019
201       DI      0    500   1000  20000
202       DQ      0      0      0      0

203       KK  2030B1     CP
204       KM        ROUTE NON-DIVERTED FLOW FROM CP 2017 TO CP 2030B1
205       RS      1   FLOW     -1
206       RC   .055   .045   .055    850  .0200
207       RX      0     35    135    150    225    240    340    375
208       RY     10      3      3      0      0      3      3     10

209       KK   2030B    SUB
210       KM        RUNOFF FROM SUB 2030B
211       BA   .0098
212       LS            74    32.1
213       UK    155   .0614    .15    100
214       RK    800   .0308   .045  .0049   TRAP    10     2
215       RK    400   .0200   .045          TRAP   150     5

216       KK  2030B2     CP
217       KM        COMBINE SUB 2030B & CP 2030B1
218       HC      2

219       KK  2080B1     CP
220       KM        ROUTE CP 2030B2 TO 2080B1
221       RS      1   FLOW     -1
222       RC   .055   .045   .055    200  .0200
223       RX      0     35    135    150    225    240    340    375
224       RY     10      3      3      0      0      3      3     10

225       KK   2040    SUB
226       KM        RUNOFF FROM SUB 2040
227       BA   .9290
228       LS            82     8.3
229       UK    463   .4072    .25    100
230       RK   2700   .1878   .045   .056   TRAP    10     3
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  231     RK   6800  .0485   .045          TRAP    25     3

  232     KK   2050    SUB
  233     KM       RUNOFF FROM SUB 2050
  234     BA  .8580
  235     LS          81    9.8
  236     UK    530  .5726    .25    100
  237     RK   3400  .2067   .045   .086   TRAP    10     3
  238     RK   6200  .0693   .045          TRAP    25     5

  239     KK   2051     CP
  240     KM       COMBINE SUB 2040 & SUB 2050
  241     HC      2

  242     KK   2060    SUB
  243     KM       RUNOFF FROM SUB 2060 & ROUTE CP 2051
  244     BA  .1542
  245     LS          77   17.80
  246     UK    217  .1667    .20    100
  247     RK   2275  .0929   .045   .031   TRAP    10     5
  248     RK   2400  .0321   .055          TRAP    30    15    YES

  249     KK   2070    SUB
  250     KM       RUNOFF FROM SUB 2070
  251     BA 1.4649
  252     LS          84    4.05
  253     UK    400  .5174    .30    100
  254     RK   1750  .2962   .045   .048   TRAP     5     3
  255     RK   3500  .1236   .045   .483   TRAP    10     3
  256     RK   3400  .0882   .045          TRAP    30    10

  257     KK   2071    DIV
  258     KM       DIVERT FLOW FROM SUB 2070 TO SUB 2130
  259     DT   2072
  260     DI      0   6000
  261     DQ      0   4000

  262     KK   2065    SUB
  263     KM       RUNOFF FROM SUB 2065 & ROUTE NON-DIVERTED FLOW FROM DIV 2071
  264     BA  .1664
  265     LS          73    31.5
  266     UK    200  .0500    .20    100
  267     RK   6800  .0471   .055          TRAP    30    15    YES

  268     KK   2072    RET
  269     KM       RETRIEVE DIVERTED FLOW FROM DIV 2071
  270     DR   2072

  271     KK   2131     CP
  272     KM       ROUTE RET 2072 TO CP 2131
  273     RK   3600  .0555   .045          TRAP   200     1
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  274     KK   2130     SUB
  275     KM        RUNOFF FROM SUB 2130
  276     BA   .2992
  277     LS            83     7.1
  278     UK    267   .3126    .20     100
  279     RK   9240   .0941   .045          TRAP     30     20

  280     KK   2132      CP
  281     KM        COMBINE SUB 2130 & CP 2131
  282     HC      2

  283     KK   2133     DIV
  284     KM        DIVERT FLOW TO SUB 2135
  285     DT   2134
  286     DI     0    500   1000   6000
  287     DQ     0    500    850   4350

  288     KK   2066      CP
  289     KM        ROUTE NON-DIVERTED FLOW FROM DIV 2133 TO CP 2066
  290     RK   2850   .0421   .045          TRAP     30     15

  291     KK   2067      CP
  292     KM        COMBINE SUB 2060, SUB 2065, & CP 2066
  293     HC      3

  294     KK  2080B     SUB
  295     KM        RUNOFF FROM SUB 2080B & ROUTE CP 2067
  296     BA   .0466
  297     LS            70    32.1
  298     UK    175   .0571    .15     100
  299     RK    900   .0325   .045          TRAP     30     15    YES

  300     KK  2080B2      CP
  301     KM        COMBINE SUB 2080B & CP 2080B1
  302     HC      2

  303     KK  2080B3     DIV
  304     KM        DIVERT LOW-FLOWS TO SUB 2080A
  305     DT  2080B4
  306     DI     0    500   1000  10000  25000
  307     DQ     0      0      0      0      0

  308     KK  2140B1      CP
  309     KM        ROUTE NON-DIVERTED FLOW FROM SUB 2080B TO CP 2140B1
  310     RS     1   FLOW     -1
  311     RC   .055   .045   .055   2720  .0200
  312     RX     0     35    135    150    225    240    340    375
  313     RY    10      3      3      0      0      3      3     10
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  314     KK   2134    RET
  315     KM        RETIEVE DIVERTED FLOW FROM DIV 2133
  316     DR   2134

  317     KK   2135    SUB
  318     KM        RUNOFF FROM SUB 2135 & ROUTE RET 2134
  319     BA  .1083
  320     LS            86   19.3            74   19.3
  321     UK    800  .4000    .30     40
  322     UK    200  .0500    .15     60
  323     RK   2700  .0444   .045          TRAP     20      2    YES

  324     KK  2140B    SUB
  325     KM        RUNOFF FROM SUB 2140B & ROUTE SUB 2135
  326     BA  .0768
  327     LS            74   32.1
  328     UK    200  .0500    .15    100
  329     RK   1820  .0461   .045          TRAP     20     10    YES

  330     KK 2140B2     CP
  331     KM        COMBINE SUB 2140B & CP 2140B1
  332     HC      2

  333     KK 2140B3    DIV
  334     KM        DIVERT LOW-FLOWS TO SUB 2160A
  335     DT 2140B4
  336     DI      0    100    500  25000
  337     DQ      0      0      0      0

  338     KK 2140A1     CP
  339     KM        ROUTE NON-DIVERTED FLOW TO CP 2140A1
  340     RS      1   FLOW     -1
  341     RC   .055   .045   .055   3600  .0200
  342     RX      0     35    135    150    225    240    340    375
  343     RY     10      3      3      0      0      3      3     10

  344     KK  2140A    SUB
  345     KM        RUNOFF FROM SUB 2140A
  346     BA  .1220
  347     LS            74   32.1
  348     UK    200  .0500    .15    100
  349     RK    800  .0500   .045  .0244   TRAP     15      3
  350     RK   3600  .0200   .045          TRAP    150      5

  351     KK 2140A2     CP
  352     KM        COMBINE SUB 2140 & CP 2140A1
  353     HC      2

  354     KK   2150    SUB
  355     KM        RUNOFF FROM SUB 2150
  356     BA  .6873
  357     LS            86   15.0            74   15.0
  358     UK    350  .3428    .30     50
  359     UK    180  .0555    .15     50
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

360       RK   1785  .1313   .045   .027   TRAP    10     3
361       RK   6400  .0312   .045          TRAP    20    10

362       KK 2140A3     CP
363       KM       COMBINE SUB 2150 & CP 2140A2
364       HC     2

365       KK 2160C1     CP
366       KM       ROUTE CP 2140A3 TO CP 2160C1
367       RS     1   FLOW    -1
368       RC   .055   .045   .055   900  .0200
369       RX     0    35    135   150   225   240   340   375
370       RY    10     3     3     0     0     3     3    10

371       KK  2160C    SUB
372       KM       RUNOFF FROM SUB 2160C
373       BA  .0352
374       LS           74   32.1
375       UK    337  .0324   .15   100
376       RK   2200  .0364   .045          TRAP    15     5

377       KK  2160B    SUB
378       KM       RUNOFF FROM SUB 2160B
379       BA  .1442
380       LS           75   19.3
381       UK    337  .0324   .15   100
382       RK   2275  .0527   .045  .0361  TRAP    15     3
383       RK    900  .0200   .045          TRAP   150     5

384       KK 2160C2     CP
385       KM       COMBINE SUB 2160B, SUB 2160C, & CP 2160C1
386       HC     3

387       KK 2160C3    DIV
388       KM       DIVERT LOW-FLOWS TO SUB 2160A
389       DT 2160C4
390       DI     0   100   500  25000
391       DQ     0     0     0     0

392       KK 2170B1     CP
393       KM       ROUTE NON-DIVERTED FLOW TO CP 2170B1
394       RS     1   FLOW    -1
395       RC   .055   .045   .055  2760  .0200
396       RX     0    35    135   150   225   240   340   375
397       RY    10     3     3     0     0     3     3    10

398       KK  2170B    SUB
399       KM       RUNOFF FROM SUB 2170B
400       BA  .1284
401       LS           76   34.5
402       UK    250  .0266   .15   100
403       RK   4800  .0417   .045          TRAP    20     5
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  404     KK  2170B2      CP
  405     KM        COMBINE SUB 2170B & CP 2170B1
  406     HC       2

  407     KK  2170B3      DIV
  408     KM        DIVERT LOW-FLOWS TO SUB 2170A
  409     DT  2170B4
  410     DI       0     100     500   25000
  411     DQ       0       0       0       0

  412     KK  2190A       CP
  413     KM        ROUTE NON-DIVERTED FLOW TO CP 2190A
  414     RS       1    FLOW      -1
  415     RC    .055    .045    .055     580   .0200
  416     RX       0      35     135     150     225     240     340     375
  417     RY      10       3       3       0       0       3       3      10

  418     KK    2180      SUB
  419     KM        RUNOFF FROM SUB 2180
  420     BA  1.0044
  421     LS            86     2.1
  422     UK     468   .4496     .30     100
  423     RK    3100   .2558    .045    .121    TRAP      10       3
  424     RK    8200   .0731    .045            TRAP      20       5

  425     KK    2190      SUB
  426     KM        RUNOFF FROM SUB 2190 & ROUTE SUB 2180
  427     BA   .1227
  428     LS            79    16.7
  429     UK     190   .0915     .15     100
  430     RK    4100   .0390    .045            TRAP      30      10     YES

  431     KK   2190B       CP
  432     KM        COMBINE SUB 2190 & CP 2190A
  433     HC       2

  434     KK    2200      SUB
  435     KM        RUNOFF FROM SUB 2200
  436     BA   .2532
  437     LS            81     7.7
  438     UK     353   .1529     .20     100
  439     RK    6150   .0838    .045            TRAP       5      11

  440     KK    2210      SUB
  441     KM        RUNOFF FROM SUB 2210
  442     BA  1.7763
  443     LS            82     2.9
  444     UK     248   .3717     .30     100
  445     RK    4500   .1875    .045    .107    TRAP      10       3
  446     RK   10000   .0490    .045            TRAP      20      10
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

447       KK  2210A     CP
448       KM       COMBINE CP 2190B, SUB 2200, & SUB 2210
449       HC      3

450       KK  2210B     DIV
451       KM       DIVERT LOW-FLOWS TO SUB 2220A
452       DT  2210C
453       DI      0    100    500  25000
454       DQ      0      0      0      0

455       KK  2220C1     CP
456       KM       ROUTE NON-DIVERTED FLOW TO CP 2220C1
457       RS      1   FLOW     -1
458       RC   .055   .045   .055   1400  .0200
459       RX      0     35    135    150    225    240    340    375
460       RY     10      3      3      0      0      3      3     10

461       KK  2220C     SUB
462       KM       RUNOFF FROM SUB 2220C
463       BA  .0717
464       LS            74   21.9
465       UK    200  .0500    .15    100
466       RK   1800  .0444   .045          TRAP     20      5

467       KK  2220C2     CP
468       KM       COMBINE SUB 2220C & CP 2220C1
469       HC      2

470       KK  2220B1     CP
471       KM       ROUTE CP 2220C2 TO CP 2220B1
472       RS      1   FLOW     -1
473       RC   .055   .045   .055   1350  .0200
474       RX      0     35    135    150    225    240    340    375
475       RY     10      3      3      0      0      3      3     10

476       KK  2220B     SUB
477       KM       RUNOFF FROM SUB 2220B
478       BA  .1650
479       LS            74   21.9
480       UK    200  .0500    .15    100
481       RK   5400  .0435   .045          TRAP     20      5

482       KK  2220B2     CP
483       KM       COMBINE SUB 2220B & CP 2220B1
484       HC      2

485       KK  2220B3     DIV
486       KM       DIVERT LOW-FLOWS TO SUB 2220A
487       DT  2220B4
488       DI      0    100   1000  25000
489       DQ      0      0      0      0
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  490     KK  2230B1     CP
  491     KM       ROUTE NON-DIVERTED FLOW TO CP 2230B1
  492     RS      1   FLOW     -1
  493     RC   .055   .045   .055   1700  .0200
  494     RX      0     35    135    150    225    240    340    375
  495     RY     10      3      3      0      0      3      3     10

  496     KK  2230B    SUB
  497     KM       RUNOFF FROM SUB 2230B
  498     BA  .2317
  499     LS           74   29.3
  500     UK    200  .0500    .15    100
  501     RK   7500  .0413   .050          TRAP     10     10

  502     KK  2230B2     CP
  503     KM       COMBINE SUB 2230B & CP 2230B1
  504     HC      2

  505     KK  2230B3    DIV
  506     KM       DIVERT LOW-FLOWS TO SUB 2230A
  507     DT  2230B4
  508     DI      0    100   1000  25000
  509     DQ      0      0      0      0

  510     KK  2220A2     CP
  511     KM       ROUTE NON-DIVERTED FLOW TO DOWNSTREAM END OF REATA PASS CHANNEL
  512     RS      1   FLOW     -1
  513     RC   .055   .045   .055   3800  .0200
  514     RX      0     35    135    150    225    240    340    375
  515     RY     10      3      3      0      0      3      3     10

  516     KK   2019    RET
  517     KM       RETRIEVE LOW-FLOW DIVERTS FROM CP 2017
  518     DR   2019

  519     KK   2030A    SUB
  520     KM       RUNOFF FROM SUB 2030A & ROUTE RET 2019
  521     BA  .2317
  522     LS           66   27.3
  523     UK    155  .0614    .15    100
  524     RK   3555  .0355   .045   .047   TRAP     10     10
  525     RK   3300  .0262   .045          TRAP     60     20    YES

  526     KK  2080B4    RET
  527     KM       RETRIEVE LOW-FLOW DIVERT FROM CP 2080B2
  528     DR  2080B4

  529     KK   2080A    SUB
  530     KM       RUNOFF FROM SUB 2080A & ROUTE RET 2080B4
  531     BA  .0897
  532     LS           70   32.1
  533     UK    175  .0571    .15    100
  534     RK   3100  .0325   .045          TRAP     30     15    YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

535       KK   2081     CP
536       KM       COMBINE SUB 2030A & SUB 2080A
537       HC      2

538       KK  2090A     SUB
539       KM       RUNOFF FROM SUB 2090A & ROUTE CP 2081
540       BA  .3582
541       LS           71    21.5
542       UK    140  .0285    .15    100
543       RK   9400  .0212   .045          TRAP     50     10     YES

544       KK   2100     SUB
545       KM       RUNOFF FROM SUB 2100
546       BA  .3795
547       LS           73    24.0
548       UK    140  .0285    .15    100
549       RK  14600  .0260   .045          TRAP    100     25

550       KK   2101     CP
551       KM       COMBINE SUB 2090A & SUB 2100
552       HC      2

553       KK   2110     SUB
554       KM       RUNOFF FROM SUB 2110 & ROUTE CP 2101
555       BA  .5180
556       LS           74    26.2
557       UK    200  .0286    .15    100
558       RK   5400  .0129   .045          TRAP     60     15     YES

559       KK  2140B4    RET
560       KM       RETRIEVE LOW-FLOW DIVERTS FROM SUB 2140B
561       DR  2140B4

562       KK  2160A1     CP
563       KM       ROUTE RET 2140B4 THROUGH UPPER PART OF SUB 2160A TO CP 2160A1
564       RK   4800  .0313   .045          TRAP     25      5

565       KK  2160C4    RET
566       KM       RETRIEVE LOW-FLOW DIVERTS FROM CP 2160C2
567       DR  2160C4

568       KK  2160A2     CP
569       KM       COMBINE CP 2160A1 & RET 2160C4
570       HC      2

571       KK  2160A     SUB
572       KM       RUNOFF FROM SUB 2160A & ROUTE CP 2160A2
573       BA  .8186
574       LS           74    32.1
575       UK    337  .0324    .15    100
576       RK   4067  .0231   .045  .0819   TRAP      5      3
577       RK   9700  .0170   .045          TRAP     20     10     YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

578       KK  2170B4     RET
579       KM        RETRIEVE LOW-FLOW DIVERTS FROM SUB 2170B
580       DR  2170B4

581       KK   2170A     SUB
582       KM        RUNOFF FROM SUB 2170A & ROUTE RET 2170B4
583       BA   .3350
584       LS            74    24.2
585       UK    250  .0266    .15     100
586       RK   8400  .0202    .045          TRAP     15     10     YES

587       KK   2210C     RET
588       KM        RETRIEVE LOW-FLOW DIVERTS FROM CP 2210A
589       DR   2210C

590       KK  2220B4     RET
591       KM        RETRIEVE LOW-FLOW DIVERTS FROM SUB 2220B
592       DR  2220B4

593       KK  2220A1      CP
594       KM        COMBINE RET 2210C & RET 2220B4
595       HC      2

596       KK   2220A     SUB
597       KM        RUNOFF FROM SUB 2220A & ROUTE CP 2220A1
598       BA   .3279
599       LS            74    13.8
600       UK    200  .0500    .15     100
601       RK   7600  .0179    .045          TRAP     30     10     YES

602       KK  2230B4     RET
603       KM        RETRIEVE LOW-FLOW DIVERTS FROM SUB 2230B
604       DR  2230B4

605       KK   2230A     SUB
606       KM        RUNOFF FROM SUB 2230A & ROUTE RET 2230B4
607       BA   .0976
608       LS            74    14.0
609       UK    200  .0500    .15     100
610       RK   2200  .0273    .050          TRAP     10     10     YES

611       KK  2230A1      CP
612       KM        ROUTE SUB 2230A TO CAP DIKE No.4
613       RK   1600  .0187    .045          TRAP     10     10

614       KK   2120     SUB
615       KM        RUNOFF FROM SUB 2120
616       BA  1.4255
617       LS            74    28.5
618       UK    115  .0383    .15     100
619       RK  20800  .0234    .045          TRAP    150     50
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

620       KK   2125     SUB
621       KM        RUNOFF FROM SUB-BASIN 2125
622       BA  .0739
623       LS            74     72
624       UK    115  .0383    .15    100
625       RK   3400  .0150   .045          TRAP     15      5

626       KK   2126     CP
627       KM        ROUTE SUB 2125 TO CAP DIKE 4
628       RK   3300  .0130   .030          TRAP     10      3

629       KK  COMB8     CP
630       KM        COMBINE SUB 2120, CP 2126, CP 2230A1, SUB 2220A, SUB 2170A, SUB 2160A,
631       KM        CP 2110, AND CP 2220A2.  THIS COMBINE OPREATION IS PERFORMED IN ORDER
632       KM        TO PROVIDE ADDITIONAL ROUTING SCHEMATIC PLOTTING CAPABILITY FOR THE
633       KM        HEC-1 "DIAGRAM" PLOT.
634       HC      8

635       KK  2240A     SUB
636       KM        RUNOFF FROM SUB 2240A
637       BA  .5919
638       PB   4.15
639       PC      0   .005   .009   .010   .013   .019   .021   .028   .032   .044
640       PC   .057   .100   .660   .745   .776   .800   .816   .830   .840   .850
641       PC   .861   .868   .878   .884   .891   .900   .905   .912   .919   .923
642       PC   .930   .934   .939   .944   .950   .958   .961   .963   .969   .971
643       PC   .974   .979   .981   .985   .989   .991   .993   .996  1.000
644       LS            74   25.80
645       UK    200  .0500    .15    100
646       RK   9600  .0354   .045          TRAP      8     10

647       KK   2260     SUB
648       KM        RUNOFF FROM SUB 2260
649       BA  .2647
650       LS            76   20.90
651       UK    200  .0500    .15    100
652       RK  11130  .0500   .045          TRAP      8     10

653       KK   2255     SUB
654       KM        RUNOFF FROM SUB 2255
655       BA  .2955
656       LS            86   14.60          74   14.60
657       UK    465  .6014    .25     40
658       UK    350  .0628    .15     60
659       RK   1360  .1536   .045   .030   TRAP      5      3
660       RK   4400  .0386   .045          TRAP     10      3

661       KK   2270     SUB
662       KM        RUNOFF FROM SUB 2270
663       BA  .9714
664       LS            86    12.5          74    12.5
665       UK    270  .5185    .30     40
666       UK    300  .2000    .15     60
667       RK   3120  .1137   .045   .097   TRAP     10      3
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

668       RK   4500  .0333   .045          TRAP     15      3

669       KK   2271     CP
670       KM      COMBINE SUB 2255 & SUB 2270
671       HC     2

672       KK   2250    SUB
673       KM      RUNOFF FROM SUB 2250 & ROUTE CP 2271
674       BA  .2239
675       LS           82   18.40
676       UK    130  .1696    .15    100
677       RK   1625  .0867   .045   .027   TRAP      5      3
678       RK   4000  .0200   .045          TRAP     30      5    YES

679       KK   2251     CP
680       KM      COMBINE SUB 2250 & SUB 2260
681       HC     2

682       KK   2280    SUB
683       KM      RUNOFF FROM SUB 2280 & ROUTE CP 2251
684       BA  .1808
685       LS           75    18.1
686       UK    300  .0300    .15    100
687       RK   3200  .0187   .045          TRAP     35      5    YES

688       KK   2290    SUB
689       KM      RUNOFF FROM SUB 2290
690       BA  .6005
691       LS           82   13.90
692       UK    300  .0499    .15    100
693       RK   9000  .0367   .045          TRAP     10      4

694       KK   2300    SUB
695       KM      RUNOFF FROM SUB 2300
696       BA 1.8007
697       LS           84     1.9
698       UK    303  .4881    .30    100
699       RK   1310  .2150   .045   .047   TRAP      5      1
700       RK   2928  .1451   .045   .306   TRAP     10      3
701       RK   9600  .0577   .045          TRAP     75     10

702       KK   2301    DIV
703       KM      DIVERT FLOW AT FAN APEX TO SUB 2330
704       DT   2302
705       DI      0   6000
706       DQ      0   3000

707       KK   2310    SUB
708       KM      RUNOFF FROM SUB 2310 & ROUTE NON-DIVERTED FLOW FROM DIV 2301
709       BA  .3035
710       LS           81    11.2
711       UK    200  .0550    .15    100
712       RK  10300  .0446   .045          TRAP     30      3    YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  713     KK   2320    SUB
  714     KM       RUNOFF FROM SUB 2320
  715     BA  .3723
  716     LS           79   14.0
  717     UK    200  .0500    .15    100
  718     RK   7200  .0416   .045          TRAP     15      3

  719     KK   2321     CP
  720     KM       COMBINE SUB 2240, SUB 2280, SUB 2290, SUB 2310, & SUB 2320
  721     HC      5

  722     KK   2302    RET
  723     KM       RETRIEVE DIVERTED FLOW FROM DIV 2301 (SUB 2300)
  724     DR   2302

  725     KK   2331     CP
  726     KM       ROUTE DIVERTED FLOW FROM SUB 2300 TO CP 2331
  727     RK   3600  .0472   .045          TRAP     30      3

  728     KK   2330    SUB
  729     KM       RUNOFF FROM SUB 2330
  730     BA  .4807
  731     LS           82    6.0
  732     UK    352  .3911    .25    100
  733     RK   1920  .2283   .045   .048   TRAP     10      3
  734     RK   5760  .0738   .045          TRAP     30      3

  735     KK   2332     CP
  736     KM       COMBINE SUB 2330 & CP 2331
  737     HC      2

  738     KK   2335    SUB
  739     KM       RUNOFF FROM SUB 2335 & ROUTE CP 2332
  740     BA  .3515
  741     LS           74   34.8
  742     UK    150  .0600    .15    100
  743     RK   7400  .0382   .045          TRAP     30     25    YES

  744     KK   2340    SUB
  745     KM       RUNOFF FROM SUB 2340
  746     BA  .2776
  747     LS           86   44.4          74   44.4
  748     UK    500  .4000    .30     30
  749     UK    160  .0625    .15     70
  750     RK   7050  .0526   .045          TRAP     10      3

  751     KK   2322     CP
  752     KM       COMBINE SUB 2335, SUB 2340, & CP 2321
  753     KM       THIS IS THE TOTAL INFLOW FROM MODEL GN50.24I TO CAP DIKE NO.4
  754     HC      3
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  LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  755         KK    4IN      CP
  756         KM       COMBINE CP D1 & CP 2322
  757         KM       THIS IS THE TOTAL INFLOW TO CAP DIKE NO. 4
  758         HC     2

  759         KK   DIKE4     DAM
  760         KM       ROUTE CP 4IN THROUGH CAP DIKE NO. 4
  761         RS     1    STOR
  762         SV     0     2    13    45    98   171   265   404   595   824
  763         SV  1098  1420  1800  2253  2782  3381  4069  4854  5728  6686
  764         SE  1496  1498  1500  1502  1504  1506  1508  1510  1512  1514
  765         SE  1516  1518  1520  1522  1524  1526  1528  1530  1532  1534
  766         SS  1533   100   2.9   1.5
  767         ST  1534   100   2.9   1.5
  768         ZZ
1
          SCHEMATIC DIAGRAM OF STREAM NETWORK
INPUT
 LINE    (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

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

 24      SUB39
          .
          .
 36        .     SUB40
           .       .
           .       .
 42      CP41............
          V
          V
 45      SUB41 ***
          .
          .
 51        .     SUB42
           .       .
           .       .
 57        .       .     SUB43
           .       .       .
           .       .       .
 63        .       .       .     SUB44
           .       .       .       .
           .       .       .       .
 69        .       .     CP45............
           .       .       V
           .       .       V
 72        .       .     SUB45 ***
           .       .       .
           .       .       .
 78        .       .       .     SUB45A
           .       .       .       .
           .       .       .       .
 84        .       .       .       .     SUB46
           .       .       .       .       .
           .       .       .       .       .
 91        .       .     CP47........................
           .       .       V
           .       .       V
 94        .       .     SUB47 ***
           .       .       .
```

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        .        .        .
100     CP48.......................
         V
         V
103     SUB48 ***
         .
         .
109       .      SUB50
         .        .
         .        .
116     CP51............
         .
         .
124       .-------->   2003
119     2004
         .
         .
127       .      2000
         .        V
         .        V
142       .      2010 ***
         .        .
         .        .
150       .        .        .<-------   2003
148       .        .      2003
         .        .        V
         .        .        V
151       .        .      2003A
         .        .        V
         .        .        V
157       .        .      2005 ***
         .        .        V
         .        .        V
163       .        .      2011
         .        .        .
         .        .        .
169       .      2012............
         .        V
         .        V
172       .      2015A ***
         .        .
         .        .
179       .        .      2015B
         .        .        .
         .        .        .
185       .        .        .      2020
         .        .        .       V
         .        .        .       V
192       .        .        .      2016
         .        .        .        .
         .        .        .        .
195       .      2017........................
         .        .
         .        .
200       .        .-------->   2019
198       .      2018
         .        V
         .        V
203       .      2030B1
         .        .
         .        .
209       .        .      2030B
         .        .        .
         .        .        .
216       .      2030B2............
```

```
          .      V
          .      V
219       .   2080B1
          .      .
          .      .
225       .      .     2040
          .      .      .
          .      .      .
232       .      .      .     2050
          .      .      .      .
          .      .      .      .
239       .      .   2051............
          .      .      V
          .      .      V
242       .      .   2060 ***
          .      .      .
          .      .      .
249       .      .      .     2070
          .      .      .      .
          .      .      .      .
259       .      .      .      .-------> 2072
257       .      .      .     2071
          .      .      .      V
          .      .      .      V
262       .      .      .     2065 ***
          .      .      .      .
          .      .      .      .
270       .      .      .      .      .<------- 2072
268       .      .      .      .     2072
          .      .      .      .      V
          .      .      .      .      V
271       .      .      .      .     2131
          .      .      .      .      .
          .      .      .      .      .
274       .      .      .      .      .     2130
          .      .      .      .      .      .
          .      .      .      .      .      .
280       .      .      .      .     2132............
          .      .      .      .      .
          .      .      .      .      .
285       .      .      .      .      .-------> 2134
283       .      .      .      .     2133
          .      .      .      .      V
          .      .      .      .      V
288       .      .      .      .     2066
          .      .      .      .      .
          .      .      .      .      .
291       .      .   2067........................
          .      .      V
          .      .      V
294       .      .   2080B ***
          .      .      .
          .      .      .
300       .   2080B2............
          .      .
          .      .
305       .      .-------> 2080B4
303       .   2080B3
          .      V
          .      V
308       .   2140B1
          .      .
          .      .
316       .      .      .<------- 2134
314       .      .   2134
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        .       .       V
        .       .       V
317     .       .     2135 ***
        .       .       V
        .       .       V
324     .       .     2140B ***
        .       .       .
        .       .       .
330     .     2140B2............
        .       .
        .       .
335     .       .-------> 2140B4
333     .     2140B3
        .       V
        .       V
338     .     2140A1
        .       .
        .       .
344     .       .     2140A
        .       .       .
        .       .       .
351     .     2140A2............
        .       .
        .       .
354     .       .     2150
        .       .       .
        .       .       .
362     .     2140A3............
        .       V
        .       V
365     .     2160C1
        .       .
        .       .
371     .       .     2160C
        .       .       .
        .       .       .
377     .       .       .     2160B
        .       .       .       .
        .       .       .       .
384     .     2160C2........................
        .       .
        .       .
389     .       .-------> 2160C4
387     .     2160C3
        .       V
        .       V
392     .     2170B1
        .       .
        .       .
398     .       .     2170B
        .       .       .
        .       .       .
404     .     2170B2............
        .       .
        .       .
409     .       .-------> 2170B4
407     .     2170B3
        .       V
        .       V
412     .     2190A
        .       .
        .       .
418     .       .     2180
        .       .       V
        .       .       V
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425      .        .      2190 ***
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431      .      2190B............
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434      .        .      2200
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440      .        .        .      2210
         .        .        .        .
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447      .      2210A........................
         .        .
         .        .
452      .        .-------> 2210C
450      .      2210B
         .        V
         .        V
455      .      2220C1
         .        .
         .        .
461      .        .      2220C
         .        .        .
         .        .        .
467      .      2220C2............
         .        V
         .        V
470      .      2220B1
         .        .
         .        .
476      .        .      2220B
         .        .        .
         .        .        .
482      .      2220B2............
         .        .
         .        .
487      .        .-------> 2220B4
485      .      2220B3
         .        V
         .        V
490      .      2230B1
         .        .
         .        .
496      .        .      2230B
         .        .        .
         .        .        .
502      .      2230B2............
         .        .
         .        .
507      .        .-------> 2230B4
505      .      2230B3
         .        V
         .        V
510      .      2220A2
         .        .
         .        .
518      .        .        .<-------  2019
516      .        .      2019
         .        .        V
         .        .        V
519      .        .      2030A ***
         .        .        .
         .        .        .
528      .        .        .        .<-------  2080B4
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526     .     .     .     2080B4
        .     .     .       V
        .     .     .       V
529     .     .     .     2080A ***
        .     .     .       .
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535     .     .   2081............
        .     .     V
        .     .     V
538     .     .   2090A ***
        .     .     .
        .     .     .
544     .     .     .       2100
        .     .     .       .
        .     .     .       .
550     .     .   2101............
        .     .     V
        .     .     V
553     .     .   2110 ***
        .     .     .
        .     .     .
561     .     .     .         .<-------  2140B4
559     .     .     .     2140B4
        .     .     .       V
        .     .     .       V
562     .     .     .     2160A1
        .     .     .       .
        .     .     .       .
567     .     .     .     .         .<-------  2160C4
565     .     .     .     .     2160C4
        .     .     .     .       .
        .     .     .     .       .
568     .     .     .     2160A2............
        .     .     .       V
        .     .     .       V
571     .     .     .     2160A ***
        .     .     .       .
        .     .     .       .
580     .     .     .     .         .<-------  2170B4
578     .     .     .     .     2170B4
        .     .     .     .       V
        .     .     .     .       V
581     .     .     .     .     2170A ***
        .     .     .     .       .
        .     .     .     .       .
589     .     .     .     .     .         .<-------  2210C
587     .     .     .     .     .     2210C
        .     .     .     .     .       .
        .     .     .     .     .       .
592     .     .     .     .     .     .         .<-------  2220B4
590     .     .     .     .     .     .     2220B4
        .     .     .     .     .     .       .
        .     .     .     .     .     .       .
593     .     .     .     .     .     2220A1............
        .     .     .     .     .       V
        .     .     .     .     .       V
596     .     .     .     .     .     2220A ***
        .     .     .     .     .       .
        .     .     .     .     .       .
604     .     .     .     .     .     .         .<-------  2230B4
602     .     .     .     .     .     .     2230B4
        .     .     .     .     .     .       V
        .     .     .     .     .     .       V
605     .     .     .     .     .     .     2230A ***
        .     .     .     .     .     .       V
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                                                  V
611                                               2230A1
                                                  .
                                                  .
614                                               .       2120
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620                                               .       .       2125
                                                          .       V
                                                          .       V
626                                               .       .       2126
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629                 COMB8.......................................................
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635                 .       2240A
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647                         .       2260
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653                         .       .       2255
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661                         .       .       .       2270
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669                         .       .       2271............
                                            V
                                            V
672                         .       .       2250 ***
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                                            .
679                         .       2251............
                                    V
                                    V
682                         .       2280 ***
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688                         .       .       2290
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694                         .       .       .       2300
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                                            .       .
704                         .       .       .       .-------->      2302
702                         .       .       .       2301
                                            .       V
                                            .       V
707                         .       .       .       2310 ***
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713                         .       .       .       .       .       2320
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                                            .       .       .       .
719                         .       2321.......................................
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724                         .       .       .<-------       2302
722                         .       .       2302
                                            V
                                            V
725                         .       .       2331
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728       .       .       .       .       2330
          .       .       .       .       .
          .       .       .       .       .
735       .       .       .       2332.............
          .       .       .       V
          .       .       .       V
738       .       .       .       2335 ***
          .       .       .       .
          .       .       .       .
744       .       .       .       .       2340
          .       .       .       .       .
          .       .       .       .       .
751       .       .       2322........................
          .       .       .
          .       .       .
755       .       4IN.............
          .       V
          .       V
759       .       DIKE4
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(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

1 ****

FLOOD HYDROGRAPH PACKAGE HEC-1 (IBM XT 512K VERSION) -FEB 1,1985
U.S. ARMY CORPS OF ENGINEERS, THE HYDROLOGIC ENGINEERING CENTER, 609 SECOND STREET, DAVIS, CA. 95616
****

UPPER INDIAN BEND WASH REGIONAL DRAINAGE & FLOOD CONTROL PLAN

MODEL RP5.24I -- SUB-BASIN SERIES 2000 TO 2230 & 39 TO 50

REATA PASS CHANNEL ALIGNMENT ALONG THOMPSON PEAK PARKWAY
100% OF FLOW FROM THE REATA PASS APEX IS DIVERTED SOUTH TO CAP DIKE 4

A RESERVOIR ROUTING OPERATION IS IN-PLACE FOR CAP DIKE 4.
SUB 2125 IS INCLUDED

ALL LOW-FLOW CULVERT DIVERTS ARE SET TO ZERO.

FUTURE LAND USE CONDITIONS WITH EXISTING DRAINAGE PATTERN

100-YEAR, 24-HOUR STORM, USING SCS TYPE IIA RAINFALL DISTRIBUTION
RAINFALL FROM NOAA ATLAS, USING 25 SQ MI AREAL REDUCTION FACTOR (.968)

LAND USE DENSITIES FROM GENERAL PLAN & TONTO FOOTHILLS PLAN.
PERCENT OF IMPERVIOUS COVER HAS BEEN ADJUSTED TO REFLECT
CITY OF SCOTTSDALE NAOS REQUIREMENTS.

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

  IT       HYDROGRAPH TIME DATA
             NMIN         5  MINUTES IN COMPUTATION INTERVAL
            IDATE    25APR90  STARTING DATE
            ITIME      0000  STARTING TIME
               NQ       300  NUMBER OF HYDROGRAPH ORDINATES
           NDDATE    26APR90  ENDING DATE
           NDTIME      0055  ENDING TIME

          COMPUTATION INTERVAL     .08 HOURS
             TOTAL TIME BASE   24.92 HOURS

      ENGLISH UNITS

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN      122. TO    42087.
        THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
        THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN     9817. TO    42087.
        THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
        THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN      122. TO    42087.
        THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
        THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN        0. TO    42087.
        THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
        THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN    18313. TO    42087.
        THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
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THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 122. TO 42087.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 18313. TO 42087.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 122. TO 42087.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 780. TO 42087.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 780. TO 42087.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 1278. TO 42087.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)
1 NO UPSTREAM INFLOW TO ROUTE - ERROR EXIT FROM *** FDKSRM ****

1

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

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	AREA	BASIN STAGE	MAXIMUM MAX STAGE	TIME OF
+	HYDROGRAPH AT	SUB39	4477.	6.08	489.	149.	143.	1.93			
+	HYDROGRAPH AT	SUB40	1343.	6.08	132.	40.	39.	.58			
+	2 COMBINED AT	CP41	5821.	6.08	622.	189.	182.	2.51			
+	HYDROGRAPH AT	SUB41	6325.	6.17	775.	236.	227.	3.31			
+	HYDROGRAPH AT	SUB42	1252.	6.08	126.	39.	37.	.58			
+	HYDROGRAPH AT	SUB43	2512.	6.08	255.	77.	75.	1.07			
+	HYDROGRAPH AT	SUB44	1951.	6.08	198.	60.	58.	.84			
+	2 COMBINED AT	CP45	4463.	6.08	453.	138.	132.	1.91			
+	HYDROGRAPH AT	SUB45	4602.	6.08	498.	151.	146.	2.11			
+	HYDROGRAPH AT	SUB45A	425.	6.08	43.	13.	12.	.17			
+	HYDROGRAPH AT	SUB46	2271.	6.08	230.	69.	66.	.93			
+	3 COMBINED AT	CP47	7298.	6.08	771.	233.	224.	3.21			
+	HYDROGRAPH AT	SUB47	7150.	6.17	870.	263.	253.	3.58			
+	3 COMBINED AT	CP48	14513.	6.17	1769.	537.	517.	7.47			
+	HYDROGRAPH AT	SUB48	14273.	6.17	1774.	539.	519.	7.52			
+	HYDROGRAPH AT	SUB50	824.	6.08	81.	25.	24.	.36			
+	2 COMBINED AT	CP51	14935.	6.17	1855.	563.	543.	7.88			
+	DIVERSION TO	2003	14935.	.08	1855.	563.	543.	7.88			
+	HYDROGRAPH AT	2004	0.	.08	0.	0.	0.	7.88			

	HYDROGRAPH AT							
+	2000	1745.	6.08	173.	52.	50.	.80	
	HYDROGRAPH AT							
+	2010	1729.	6.08	196.	59.	57.	.89	
	HYDROGRAPH AT							
+	2003	14935.	6.17	1855.	563.	543.	.00	
	ROUTED TO							
+	2003A	14330.	6.17	1854.	563.	542.	.00	
+							6.15	6.17
	HYDROGRAPH AT							
+	2005	14272.	6.25	1876.	570.	549.	.14	
	ROUTED TO							
+	2011	14144.	6.25	1871.	569.	548.	.14	
+							6.12	6.25
	2 COMBINED AT							
+	2012	15403.	6.25	2065.	628.	605.	1.03	
	HYDROGRAPH AT							
+	2015A	14903.	6.33	2139.	651.	627.	1.39	
	HYDROGRAPH AT							
+	2015B	33.	6.08	4.	1.	1.	.04	
	HYDROGRAPH AT							
+	2020	256.	6.08	25.	8.	7.	.11	
	ROUTED TO							
+	2016	247.	6.08	26.	8.	7.	.11	
	3 COMBINED AT							
+	2017	14986.	6.33	2166.	660.	636.	1.54	
	DIVERSION TO							
+	2019	0.	6.33	0.	0.	0.	1.54	
	HYDROGRAPH AT							
+	2018	14986.	6.33	2166.	660.	636.	1.54	
	ROUTED TO							
+	2030B1	15020.	6.33	2165.	660.	635.	1.54	
+							6.28	6.33
	HYDROGRAPH AT							
+	2030B	20.	6.08	2.	1.	1.	.01	
	2 COMBINED AT							
+	2030B2	15025.	6.33	2167.	660.	636.	1.55	
	ROUTED TO							
+	2080B1	15042.	6.33	2166.	660.	636.	1.55	
+							6.28	6.33
	HYDROGRAPH AT							
+	2040	1945.	6.08	193.	59.	57.	.93	
	HYDROGRAPH AT							
+	2050	1757.	6.08	174.	53.	51.	.86	

	2 COMBINED AT							
+	2051	3702.	6.08	367.	112.	108.	1.79	
	HYDROGRAPH AT							
+	2060	3569.	6.08	398.	121.	117.	1.94	
	HYDROGRAPH AT							
+	2070	3255.	6.08	320.	97.	94.	1.46	
	DIVERSION TO							
+	2072	2170.	6.08	214.	65.	62.	1.46	
	HYDROGRAPH AT							
+	2071	1085.	6.08	107.	32.	31.	1.46	
	HYDROGRAPH AT							
+	2065	1309.	6.17	139.	43.	41.	1.63	
	HYDROGRAPH AT							
+	2072	2170.	6.08	214.	65.	62.	.00	
	ROUTED TO							
+	2131	1922.	6.17	220.	66.	64.	.00	
	HYDROGRAPH AT							
+	2130	567.	6.08	64.	19.	19.	.30	
	2 COMBINED AT							
+	2132	2471.	6.08	283.	86.	83.	.30	
	DIVERSION TO							
+	2134	1880.	6.08	247.	77.	74.	.30	
	HYDROGRAPH AT							
+	2133	591.	6.08	36.	9.	9.	.30	
	ROUTED TO							
+	2066	585.	6.17	36.	9.	9.	.30	
	3 COMBINED AT							
+	2067	5424.	6.17	573.	173.	167.	3.87	
	HYDROGRAPH AT							
+	2080B	5419.	6.17	581.	176.	169.	3.92	
	2 COMBINED AT							
+	2080B2	18176.	6.25	2743.	836.	805.	5.47	
	DIVERSION TO							
+	2080B4	0.	6.25	0.	0.	0.	5.47	
	HYDROGRAPH AT							
+	2080B3	18176.	6.25	2743.	836.	805.	5.47	
	ROUTED TO							
+	2140B1	18070.	6.33	2737.	835.	804.	5.47	
+							6.80	6.33
	HYDROGRAPH AT							
+	2134	1880.	6.08	247.	77.	74.	.00	
	HYDROGRAPH AT							
+	2135	1947.	6.17	268.	84.	81.	.11	
	HYDROGRAPH AT							

+	2140B	2018.	6.17	283.	89.	85.	.19	
	2 COMBINED AT							
+	2140B2	19524.	6.33	3018.	923.	889.	5.65	
	DIVERSION TO							
+	2140B4	0.	6.33	0.	0.	0.	5.65	
	HYDROGRAPH AT							
+	2140B3	19524.	6.33	3018.	923.	889.	5.65	
	ROUTED TO							
+	2140A1	18641.	6.42	3009.	921.	887.	5.65	
+							6.89	6.42
	HYDROGRAPH AT							
+	2140A	192.	6.17	25.	8.	7.	.12	
	2 COMBINED AT							
+	2140A2	18719.	6.42	3033.	929.	895.	5.77	
	HYDROGRAPH AT							
+	2150	1357.	6.08	142.	43.	42.	.69	
	2 COMBINED AT							
+	2140A3	19024.	6.42	3165.	972.	937.	6.46	
	ROUTED TO							
+	2160C1	19073.	6.42	3164.	972.	936.	6.46	
+							6.96	6.42
	HYDROGRAPH AT							
+	2160C	64.	6.08	7.	2.	2.	.04	
	HYDROGRAPH AT							
+	2160B	225.	6.08	26.	8.	8.	.14	
	3 COMBINED AT							
+	2160C2	19172.	6.42	3197.	982.	946.	6.64	
	DIVERSION TO							
+	2160C4	0.	6.42	0.	0.	0.	6.64	
	HYDROGRAPH AT							
+	2160C3	19172.	6.42	3197.	982.	946.	6.64	
	ROUTED TO							
+	2170B1	18542.	6.50	3192.	981.	944.	6.64	
+							6.88	6.50
	HYDROGRAPH AT							
+	2170B	259.	6.08	28.	9.	8.	.13	
	2 COMBINED AT							
+	2170B2	18601.	6.50	3218.	989.	953.	6.77	
	DIVERSION TO							
+	2170B4	0.	6.50	0.	0.	0.	6.77	
	HYDROGRAPH AT							
+	2170B3	18601.	6.50	3218.	989.	953.	6.77	
	ROUTED TO							
+	2190A	18712.	6.50	3217.	989.	952.	6.77	
+							6.90	6.50

```
      HYDROGRAPH AT
+          2180    2279.   6.08     231.     70.     67.    1.00

      HYDROGRAPH AT
+          2190    2262.   6.17     260.     79.     76.    1.13

      2 COMBINED AT
+          2190B   19351.  6.50    3473.   1068.   1028.    7.90

      HYDROGRAPH AT
+          2200     508.   6.08      50.     15.     15.     .25

      HYDROGRAPH AT
+          2210    3417.   6.08     349.    107.    103.    1.78

      3 COMBINED AT
+          2210A   20126.  6.50    3868.   1190.   1146.    9.93

      DIVERSION TO
+          2210C       0.  6.50       0.      0.      0.    9.93

      HYDROGRAPH AT
+          2210B   20126.  6.50    3868.   1190.   1146.    9.93

      ROUTED TO
+          2220C1  20257.  6.50    3866.   1189.   1145.    9.93
+                                                           7.15    6.50

      HYDROGRAPH AT
+          2220C     134.  6.08      13.      4.      4.     .07

      2 COMBINED AT
+          2220C2  20279.  6.50    3878.   1193.   1149.   10.00

      ROUTED TO
+          2220B1  20195.  6.50    3874.   1192.   1148.   10.00
+                                                           7.14    6.50

      HYDROGRAPH AT
+          2220B     299.  6.08      30.      9.      9.     .17

      2 COMBINED AT
+          2220B2  20251.  6.50    3903.   1202.   1157.   10.16

      DIVERSION TO
+          2220B4      0.  6.50       0.      0.      0.   10.16

      HYDROGRAPH AT
+          2220B3  20251.  6.50    3903.   1202.   1157.   10.16

      ROUTED TO
+          2230B1  19893.  6.58    3901.   1201.   1156.   10.16
+                                                           7.09    6.58

      HYDROGRAPH AT
+          2230B     370.  6.08      46.     14.     14.     .23

      2 COMBINED AT
+          2230B2  19989.  6.58    3943.   1215.   1170.   10.39

      DIVERSION TO
+          2230B4      0.  6.58       0.      0.      0.   10.39

      HYDROGRAPH AT
```

+	2230B3	19989.	6.58	3943.	1215.	1170.	10.39	
	ROUTED TO							
+	2220A2	19449.	6.58	3933.	1212.	1168.	10.39	
+							7.02	6.58
	HYDROGRAPH AT							
+	2019	0.	.08	0.	0.	0.	.00	
	HYDROGRAPH AT							
+	2030A	318.	6.17	36.	11.	11.	.23	
	HYDROGRAPH AT							
+	2080B4	0.	.08	0.	0.	0.	.00	
	HYDROGRAPH AT							
+	2080A	162.	6.08	17.	5.	5.	.09	
	2 COMBINED AT							
+	2081	458.	6.17	53.	17.	16.	.32	
	HYDROGRAPH AT							
+	2090A	636.	6.25	113.	36.	34.	.68	
	HYDROGRAPH AT							
+	2100	245.	6.42	68.	22.	21.	.38	
	2 COMBINED AT							
+	2101	869.	6.25	181.	57.	55.	1.06	
	HYDROGRAPH AT							
+	2110	1244.	6.17	279.	88.	85.	1.58	
	HYDROGRAPH AT							
+	2140B4	0.	.08	0.	0.	0.	.00	
	ROUTED TO							
+	2160A1	0.	.08	0.	0.	0.	.00	
	HYDROGRAPH AT							
+	2160C4	0.	.08	0.	0.	0.	.00	
	2 COMBINED AT							
+	2160A2	0.	.08	0.	0.	0.	.00	
	HYDROGRAPH AT							
+	2160A	943.	6.25	160.	50.	48.	.82	
	HYDROGRAPH AT							
+	2170B4	0.	.08	0.	0.	0.	.00	
	HYDROGRAPH AT							
+	2170A	378.	6.17	61.	19.	19.	.34	
	HYDROGRAPH AT							
+	2210C	0.	.08	0.	0.	0.	.00	
	HYDROGRAPH AT							
+	2220B4	0.	.08	0.	0.	0.	.00	
	2 COMBINED AT							
+	2220A1	0.	.08	0.	0.	0.	.00	
	HYDROGRAPH AT							
+	2220A	404.	6.17	54.	17.	16.	.33	

	HYDROGRAPH AT						
+	2230B4	0.	.08	0.	0.	0.	.00
	HYDROGRAPH AT						
+	2230A	169.	6.08	16.	5.	5.	.10
	ROUTED TO						
+	2230A1	167.	6.17	17.	5.	5.	.10
	HYDROGRAPH AT						
+	2120	912.	6.50	278.	88.	84.	1.43
	HYDROGRAPH AT						
+	2125	191.	6.08	22.	7.	6.	.07
	ROUTED TO						
+	2126	182.	6.17	23.	7.	7.	.07
	8 COMBINED AT						
+	COMB8	22174.	6.58	4790.	1486.	1431.	15.05
	HYDROGRAPH AT						
+	2240A	917.	6.08	113.	35.	34.	.59
	HYDROGRAPH AT						
+	2260	366.	6.17	50.	16.	15.	.26
	HYDROGRAPH AT						
+	2255	550.	6.00	59.	18.	18.	.30
	HYDROGRAPH AT						
+	2270	1868.	6.00	193.	59.	57.	.97
	2 COMBINED AT						
+	2271	2418.	6.00	252.	77.	74.	1.27
	HYDROGRAPH AT						
+	2250	2806.	6.08	309.	94.	90.	1.49
	2 COMBINED AT						
+	2251	3149.	6.08	359.	110.	106.	1.76
	HYDROGRAPH AT						
+	2280	3172.	6.17	393.	120.	116.	1.94
	HYDROGRAPH AT						
+	2290	1192.	6.08	128.	39.	38.	.60
	HYDROGRAPH AT						
+	2300	3893.	6.08	380.	116.	112.	1.80
	DIVERSION TO						
+	2302	1947.	6.08	190.	58.	56.	1.80
	HYDROGRAPH AT						
+	2301	1947.	6.08	190.	58.	56.	1.80
	HYDROGRAPH AT						
+	2310	2215.	6.08	264.	81.	78.	2.10
	HYDROGRAPH AT						
+	2320	746.	6.08	73.	23.	22.	.37
	5 COMBINED AT						

+	2321	8170.	6.08	970.	298.	287.	5.61	
	HYDROGRAPH AT							
+	2302	1947.	6.08	190.	58.	56.	.00	
	ROUTED TO							
+	2331	1874.	6.17	192.	59.	57.	.00	
	HYDROGRAPH AT							
+	2330	1015.	6.08	100.	30.	29.	.48	
	2 COMBINED AT							
+	2332	2721.	6.17	292.	89.	86.	.48	
	HYDROGRAPH AT							
+	2335	3275.	6.17	375.	115.	111.	.83	
	HYDROGRAPH AT							
+	2340	628.	6.00	70.	21.	20.	.28	
	3 COMBINED AT							
+	2322	11552.	6.17	1413.	434.	418.	6.71	
	2 COMBINED AT							
+	4IN	25067.	6.58	6193.	1920.	1850.	21.76	
	ROUTED TO							
+	DIKE4	0.	.08	0.	0.	0.	21.76	
+							1527.24	24.92

1 SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION DIKE4

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1496.00	1533.00	1534.00
STORAGE	0.	6207.	6686.
OUTFLOW	0.	0.	290.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1527.24	.00	3807.	0.	.00	.00	.00

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

FILE: RP6.24I

(100-Year, 24-Hour, SCS Type IIA Storm)

This model includes the Thompson Peak Parkway channel and a reservoir routing operation for CAP Dike 4. Low-flow culvert diverts are de-activated and 100 percent of the Reata Pass flows are diverted to CAP Dike 3.

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

  1       ID      UPPER INDIAN BEND WASH REGIONAL DRAINAGE & FLOOD CONTROL PLAN
  2       ID
  3       ID      MODEL RP6.24I -- SUB-BASIN SERIES 2000 TO 2230 & 39 TO 50
  4       ID
  5       ID      REATA PASS CHANNEL ALIGNMENT ALONG THOMPSON PEAK PARKWAY
  6       ID      100% OF FLOW FROM THE REATA PASS APEX IS DIVERTED WEST TO CAP DIKE 3
  7       ID
  8       ID      A RESERVOIR ROUTING OPERATION IS IN-PLACE FOR CAP DIKE 4.
  9       ID      SUB 2125 IS INCLUDED
 10       ID
 11       ID      ALL LOW-FLOW CULVERT DIVERTS ARE SET TO ZERO.
 12       ID
 13       ID      FUTURE LAND USE CONDITIONS WITH EXISTING DRAINAGE PATTERN
 14       ID
 15       ID      100-YEAR, 24-HOUR STORM, USING SCS TYPE IIA RAINFALL DISTRIBUTION
 16       ID      RAINFALL FROM NOAA ATLAS, USING 25 SQ MI AREAL REDUCTION FACTOR (.968)
 17       ID
 18       ID      LAND USE DENSITIES FROM GENERAL PLAN & TONTO FOOTHILLS PLAN.
 19       ID      PERCENT OF IMPERVIOUS COVER HAS BEEN ADJUSTED TO REFLECT
 20       ID      CITY OF SCOTTSDALE NAOS REQUIREMENTS.
         *DIAGRAM
 21       IT      5 25APR90      0    300
 22       IO      5      0
 23       IN     30 25APR90      0

 24       KK  SUB39
 25       KM      RUNOFF FROM SUB-BASIN 39
 26       BA  1.9302
 27       PB   4.25
 28       PC     0   .005   .009   .010   .013   .019   .021   .028   .032   .044
 29       PC  .057   .100   .660   .745   .776   .800   .816   .830   .840   .850
 30       PC  .861   .868   .878   .884   .891   .900   .905   .912   .919   .923
 31       PC  .930   .934   .939   .944   .950   .958   .961   .963   .969   .971
 32       PC  .974   .979   .981   .985   .989   .991   .993   .996  1.000
 33       LS          85   23.4
 34       UK   330  .0433    .20    100
 35       RK  11240  .0253   .045          TRAP     30      3

 36       KK  SUB40
 37       KM      RUNOFF FROM SUB-BASIN 40
 38       BA  .5844
 39       LS          83     9.9
 40       UK   160  .0627    .20    100
 41       RK  7000  .0350   .045          TRAP     20      3

 42       KK   CP41
 43       KM      COMBINE HYDROGRAPHS SUB39 & SUB40
 44       HC      2

 45       KK  SUB41
 46       KM      RUNOFF FROM SUB-BASIN 41 & ROUTE CP 41
 47       BA  .7911
 48       LS          74    10.1
 49       UK   280  .2386    .20    100
 50       RK  9400  .0282   .045          TRAP     50      3    YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  51      KK  SUB42
  52      KM      RUNOFF FROM SUB-BASIN 42
  53      BA  .5844
  54      LS          78   23.3
  55      UK   280  .2386   .20   100
  56      RK  8750  .0573  .045        TRAP    20     3

  57      KK  SUB43
  58      KM      RUNOFF FROM SUB-BASIN 43
  59      BA 1.0665
  60      LS          85   10.5
  61      UK   260  .0515   .20   100
  62      RK  7400  .0255  .045        TRAP    25     3

  63      KK  SUB44
  64      KM      RUNOFF FROM SUB-BASIN 44
  65      BA  .8389
  66      LS          85    8.1
  67      UK   260  .0515   .20   100
  68      RK  9840  .0622  .045        TRAP    25     3

  69      KK   CP45
  70      KM      COMBINE HYDROGRAPHS SUB43 & SUB44
  71      HC     2

  72      KK  SUB45
  73      KM      RUNOFF FROM SUB-BASIN 45 & ROUTE CP 45
  74      BA  .2037
  75      LS          81   14.5
  76      UK   125  .1166   .20   100
  77      RK  3600  .0366  .045        TRAP    30     3    YES

  78      KK SUB45A
  79      KM      RUNOFF FROM SUB 45A
  80      BA  .1720
  81      LS          86    6.9
  82      UK   275  .2200   .20   100
  83      RK  5400  .0411  .045        TRAP    15     3

  84      KK  SUB46
  85      KM      RUNOFF FROM SUB-BASIN 46
  86      BA  .9268
  87      LS          86    3.7
  88      UK   265  .4958   .20   100
  89      RK  3300  .2271  .045  .111   TRAP    10     3
  90      RK  7100  .0535  .045        TRAP    25     3

  91      KK   CP47
  92      KM      COMBINE HYDROGRAPHS SUB45, SUB45A, & SUB46
  93      HC     3
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  94      KK  SUB47
  95      KM      RUNOFF FROM SUB-BASIN 47 & ROUTE CP 47
  96      BA  .3757
  97      LS          77    8.6
  98      UK   375  .1000    .20    100
  99      RK  9600  .0217   .045          TRAP     50      3    YES

 100      KK   CP48
 101      KM      COMBINE HYDROGRAPHS SUB41, SUB42, & SUB47
 102      HC     3

 103      KK  SUB48
 104      KM      RUNOFF FROM SUB-BASIN 48 & ROUTE CP 48
 105      BA  .0438
 106      LS          73    6.9
 107      UK   150  .0733    .20    100
 108      RK  1300  .0338   .045          TRAP     75      3    YES

 109      KK  SUB50
 110      KM      RUNOFF FROM SUB-BASIN 50
 111      BA  .3580
 112      LS          84    2.8
 113      UK   300  .3555    .20    100
 114      RK   730  .1506   .045   .036   TRAP     10      3
 115      RK  6400  .0453   .045          TRAP     25      3

 116      KK   CP51
 117      KM      COMBINE HYDROGRAPHS SUB48 & SUB50
 118      HC     2

 119      KK   2004    DIV
 120      KM      DIVERT FLOW TO SUB 2005
 121      KM      THIS DIVERT OCCURS AT A BRAIDED CHANNEL BIFURCATION LOCATED 1000 FEET
 122      KM      SOUTH OF THE EAST END OF PINNACLE PEAK ROAD.
 123      KM      THIS IS AN ACTIVE ALLUVIAL FAN APEX.
 124      DT   2003
 125      DI     0  15000  25000
 126      DQ     0      0      0

 127      KK   2000    SUB
 128      KM      RUNOFF FROM SUB 2000
 129      KM      RAINFALL AMOUNT IS CHANGED TO REFLECT TRANSITION INTO A DIFFERENT
 130      KM      GEOGRAPHICAL AREA
 131      BA  .7999
 132      PB  4.15
 133      PC     0  .005  .009  .010  .013  .019  .021  .028  .032  .044
 134      PC  .057  .100  .660  .745  .776  .800  .816  .830  .840  .850
 135      PC  .861  .868  .878  .884  .891  .900  .905  .912  .919  .923
 136      PC  .930  .934  .939  .944  .950  .958  .961  .963  .969  .971
 137      PC  .974  .979  .981  .985  .989  .991  .993  .996 1.000
 138      LS          84    2.6
 139      UK   400  .2750   .25    100
 140      RK  2625  .0785  .045  .072   TRAP     10      3
 141      RK  2300  .0217  .045          TRAP     25      3
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As Div 2004
DI 0 15000 25000
DQ 0 0 0
Correct for Low flow channel
deactivated or activated

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

  142     KK   2010     SUB
  143     KM        RUNOFF FROM SUB 2010 & ROUTE SUB 2000
  144     BA   .0933
  145     LS            83     3.7
  146     UK    800   .6425    .30     100
  147     RK   3000   .0213   .045           TRAP     50      3     YES

  148     KK   2003     RET
  149     KM        RETRIEVE DIVERTED FLOW FROM DIV 2004
  150     DR   2003

  151     KK  2003A      CP
  152     KM        ROUTE DIVERTED FLOW TO UPSTREAM END OF SUB 2005
  153     RS      1    FLOW      -1
  154     RC   .055    .045    .055     700   .0200
  155     RX      0      35     135     150     225     240     340     375
  156     RY     10       3       3       0       0       3       3      10

  157     KK   2005     SUB
  158     KM        RUNOFF FROM 2005 & ROUTE CP 2003A
  159     BA   .1363
  160     LS            72    6.70
  161     UK    175   .1400    .15     100
  162     RK   2600   .0200   .045           TRAP    150      5     YES

  163     KK   2011      CP
  164     KM        ROUTE SUB 2005 TO CP 2011
  165     RS      1    FLOW      -1
  166     RC   .055    .045    .055    2200   .0200
  167     RX      0      35     135     150     225     240     340     375
  168     RY     10       3       3       0       0       3       3      10

  169     KK   2012      CP
  170     KM        COMBINE SUB 2010 & CP 2011
  171     HC      2

  172     KK  2015A     SUB
  173     KM        RUNOFF FROM SUB 2015A & ROUTE CP 2012
  174     BA   .3587
  175     LS            82     7.7
  176     UK    500   .2800    .25     100
  177     RK   2400   .1358   .045    .061    TRAP     10      3
  178     RK   4700   .0200   .045           TRAP    150      5     YES

  179     KK  2015B     SUB
  180     KM        RUNOFF FROM SUB 2015B
  181     BA   .0416
  182     LS            60    15.4
  183     UK    500   .2800    .25     100
  184     RK   2000   .0500   .045           TRAP     25      5
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  185     KK   2020     SUB
  186     KM        RUNOFF FROM SUB 2020
  187     BA  .1090
  188     LS            85    4.05
  189     UK    205  .6969    .30     100
  190     RK    900  .3889   .045    .011   TRAP     10      3
  191     RK   2800  .1428   .045           TRAP     20      3

  192     KK   2016      CP
  193     KM        ROUTE SUB 2020 TO CP 2016
  194     RK   1400  .0343   .045           TRAP     20      3

  195     KK   2017      CP
  196     KM        COMBINE SUB 2015A, SUB 2015B, & CP 2016
  197     HC      3

  198     KK   2018     DIV
  199     KM        DIVERT LOW-FLOWS TO SUB 2030A
  200     DT   2019
  201     DI      0    500   1000  20000
  202     DQ      0      0      0      0

  203     KK  2030B1      CP
  204     KM        ROUTE NON-DIVERTED FLOW FROM CP 2017 TO CP 2030B1
  205     RS      1   FLOW     -1
  206     RC   .055   .045   .055    850  .0200
  207     RX      0     35    135    150    225    240    340    375
  208     RY     10      3      3      0      0      3      3     10

  209     KK   2030B     SUB
  210     KM        RUNOFF FROM SUB 2030B
  211     BA  .0098
  212     LS            74    32.1
  213     UK    155  .0614    .15     100
  214     RK    800  .0308   .045   .0049   TRAP     10      2
  215     RK    400  .0200   .045          TRAP    150      5

  216     KK  2030B2      CP
  217     KM        COMBINE SUB 2030B & CP 2030B1
  218     HC      2

  219     KK  2080B1      CP
  220     KM        ROUTE CP 2030B2 TO 2080B1
  221     RS      1   FLOW     -1
  222     RC   .055   .045   .055    200  .0200
  223     RX      0     35    135    150    225    240    340    375
  224     RY     10      3      3      0      0      3      3     10

  225     KK   2040     SUB
  226     KM        RUNOFF FROM SUB 2040
  227     BA  .9290
  228     LS            82     8.3
  229     UK    463  .4072    .25     100
  230     RK   2700  .1878   .045    .056   TRAP     10      3
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  231     RK   6800  .0485   .045          TRAP    25     3

  232     KK   2050    SUB
  233     KM       RUNOFF FROM SUB 2050
  234     BA  .8580
  235     LS           81    9.8
  236     UK    530  .5726    .25    100
  237     RK   3400  .2067   .045   .086   TRAP    10     3
  238     RK   6200  .0693   .045          TRAP    25     5

  239     KK   2051     CP
  240     KM       COMBINE SUB 2040 & SUB 2050
  241     HC      2

  242     KK   2060    SUB
  243     KM       RUNOFF FROM SUB 2060 & ROUTE CP 2051
  244     BA  .1542
  245     LS           77   17.80
  246     UK    217  .1667    .20    100
  247     RK   2275  .0929   .045   .031   TRAP    10     5
  248     RK   2400  .0321   .055          TRAP    30    15    YES

  249     KK   2070    SUB
  250     KM       RUNOFF FROM SUB 2070
  251     BA 1.4649
  252     LS           84    4.05
  253     UK    400  .5174    .30    100
  254     RK   1750  .2962   .045   .048   TRAP     5     3
  255     RK   3500  .1236   .045   .483   TRAP    10     3
  256     RK   3400  .0882   .045          TRAP    30    10

  257     KK   2071    DIV
  258     KM       DIVERT FLOW FROM SUB 2070 TO SUB 2130
  259     DT   2072
  260     DI      0   6000
  261     DQ      0   4000

  262     KK   2065    SUB
  263     KM       RUNOFF FROM SUB 2065 & ROUTE NON-DIVERTED FLOW FROM DIV 2071
  264     BA  .1664
  265     LS           73    31.5
  266     UK    200  .0500    .20    100
  267     RK   6800  .0471   .055          TRAP    30    15    YES

  268     KK   2072    RET
  269     KM       RETRIEVE DIVERTED FLOW FROM DIV 2071
  270     DR   2072

  271     KK   2131     CP
  272     KM       ROUTE RET 2072 TO CP 2131
  273     RK   3600  .0555   .045          TRAP   200     1
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  274     KK   2130     SUB
  275     KM        RUNOFF FROM SUB 2130
  276     BA   .2992
  277     LS            83     7.1
  278     UK    267   .3126    .20     100
  279     RK   9240   .0941   .045          TRAP     30     20

  280     KK   2132     CP
  281     KM        COMBINE SUB 2130 & CP 2131
  282     HC      2

  283     KK   2133     DIV
  284     KM        DIVERT FLOW TO SUB 2135
  285     DT   2134
  286     DI      0    500    1000    6000
  287     DQ      0    500     850    4350

  288     KK   2066     CP
  289     KM        ROUTE NON-DIVERTED FLOW FROM DIV 2133 TO CP 2066
  290     RK   2850   .0421   .045          TRAP     30     15

  291     KK   2067     CP
  292     KM        COMBINE SUB 2060, SUB 2065, & CP 2066
  293     HC      3

  294     KK  2080B     SUB
  295     KM        RUNOFF FROM SUB 2080B & ROUTE CP 2067
  296     BA   .0466
  297     LS            70    32.1
  298     UK    175   .0571    .15     100
  299     RK    900   .0325   .045          TRAP     30     15     YES

  300     KK  2080B2     CP
  301     KM        COMBINE SUB 2080B & CP 2080B1
  302     HC      2

  303     KK  2080B3     DIV
  304     KM        DIVERT LOW-FLOWS TO SUB 2080A
  305     DT  2080B4
  306     DI      0     500    1000   10000   25000
  307     DQ      0       0       0       0       0

  308     KK  2140B1     CP
  309     KM        ROUTE NON-DIVERTED FLOW FROM SUB 2080B TO CP 2140B1
  310     RS      1    FLOW     -1
  311     RC   .055    .045    .055    2720   .0200
  312     RX      0      35     135     150     225     240     340     375
  313     RY     10       3       3       0       0       3       3      10
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  314     KK   2134     RET
  315     KM        RETIEVE DIVERTED FLOW FROM DIV 2133
  316     DR   2134

  317     KK   2135     SUB
  318     KM        RUNOFF FROM SUB 2135 & ROUTE RET 2134
  319     BA  .1083
  320     LS            86    19.3            74    19.3
  321     UK    800  .4000    .30     40
  322     UK    200  .0500    .15     60
  323     RK   2700  .0444    .045          TRAP     20      2     YES

  324     KK  2140B     SUB
  325     KM        RUNOFF FROM SUB 2140B & ROUTE SUB 2135
  326     BA  .0768
  327     LS            74    32.1
  328     UK    200  .0500    .15    100
  329     RK   1820  .0461    .045          TRAP     20     10     YES

  330     KK 2140B2     CP
  331     KM        COMBINE SUB 2140B & CP 2140B1
  332     HC      2

  333     KK 2140B3     DIV
  334     KM        DIVERT LOW-FLOWS TO SUB 2160A
  335     DT 2140B4
  336     DI      0    100    500   25000
  337     DQ      0      0      0       0

  338     KK 2140A1     CP
  339     KM        ROUTE NON-DIVERTED FLOW TO CP 2140A1
  340     RS      1   FLOW     -1
  341     RC   .055   .045   .055   3600  .0200
  342     RX      0     35    135    150    225    240    340    375
  343     RY     10      3      3      0      0      3      3     10

  344     KK  2140A     SUB
  345     KM        RUNOFF FROM SUB 2140A
  346     BA  .1220
  347     LS            74    32.1
  348     UK    200  .0500    .15    100
  349     RK    800  .0500   .045  .0244   TRAP     15      3
  350     RK   3600  .0200   .045          TRAP    150      5

  351     KK 2140A2     CP
  352     KM        COMBINE SUB 2140 & CP 2140A1
  353     HC      2

  354     KK   2150     SUB
  355     KM        RUNOFF FROM SUB 2150
  356     BA  .6873
  357     LS            86    15.0            74    15.0
  358     UK    350  .3428    .30     50
  359     UK    180  .0555    .15     50
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  360     RK   1785  .1313   .045   .027   TRAP    10     3
  361     RK   6400  .0312   .045          TRAP    20    10

  362     KK  2140A3     CP
  363     KM       COMBINE SUB 2150 & CP 2140A2
  364     HC     2

  365     KK  2160C1     CP
  366     KM       ROUTE CP 2140A3 TO CP 2160C1
  367     RS     1   FLOW    -1
  368     RC   .055   .045   .055   900  .0200
  369     RX     0    35    135   150   225   240   340   375
  370     RY    10     3     3     0     0     3     3    10

  371     KK   2160C     SUB
  372     KM       RUNOFF FROM SUB 2160C
  373     BA   .0352
  374     LS           74   32.1
  375     UK    337  .0324   .15   100
  376     RK   2200  .0364   .045          TRAP    15     5

  377     KK   2160B     SUB
  378     KM       RUNOFF FROM SUB 2160B
  379     BA   .1442
  380     LS           75   19.3
  381     UK    337  .0324   .15   100
  382     RK   2275  .0527   .045  .0361   TRAP    15     3
  383     RK    900  .0200   .045          TRAP   150     5

  384     KK  2160C2     CP
  385     KM       COMBINE SUB 2160B, SUB 2160C, & CP 2160C1
  386     HC     3

  387     KK  2160C3     DIV
  388     KM       DIVERT LOW-FLOWS TO SUB 2160A
  389     DT  2160C4
  390     DI     0   100   500  25000
  391     DQ     0     0     0     0

  392     KK  2170B1     CP
  393     KM       ROUTE NON-DIVERTED FLOW TO CP 2170B1
  394     RS     1   FLOW    -1
  395     RC   .055   .045   .055  2760  .0200
  396     RX     0    35    135   150   225   240   340   375
  397     RY    10     3     3     0     0     3     3    10

  398     KK   2170B     SUB
  399     KM       RUNOFF FROM SUB 2170B
  400     BA   .1284
  401     LS           76   34.5
  402     UK    250  .0266   .15   100
  403     RK   4800  .0417   .045          TRAP    20     5
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

404       KK  2170B2     CP
405       KM       COMBINE SUB 2170B & CP 2170B1
406       HC      2

407       KK  2170B3     DIV
408       KM       DIVERT LOW-FLOWS TO SUB 2170A
409       DT  2170B4
410       DI      0    100    500   25000
411       DQ      0      0      0       0

412       KK  2190A      CP
413       KM       ROUTE NON-DIVERTED FLOW TO CP 2190A
414       RS      1   FLOW     -1
415       RC   .055   .045   .055    580   .0200
416       RX      0     35    135    150     225    240    340    375
417       RY     10      3      3      0       0      3      3     10

418       KK   2180     SUB
419       KM       RUNOFF FROM SUB 2180
420       BA  1.0044
421       LS            86     2.1
422       UK    468  .4496    .30    100
423       RK   3100  .2558   .045   .121   TRAP     10      3
424       RK   8200  .0731   .045          TRAP     20      5

425       KK   2190     SUB
426       KM       RUNOFF FROM SUB 2190 & ROUTE SUB 2180
427       BA   .1227
428       LS            79    16.7
429       UK    190  .0915    .15    100
430       RK   4100  .0390   .045          TRAP     30     10    YES

431       KK  2190B      CP
432       KM       COMBINE SUB 2190 & CP 2190A
433       HC      2

434       KK   2200     SUB
435       KM       RUNOFF FROM SUB 2200
436       BA   .2532
437       LS            81     7.7
438       UK    353  .1529    .20    100
439       RK   6150  .0838   .045          TRAP      5     11

440       KK   2210     SUB
441       KM       RUNOFF FROM SUB 2210
442       BA  1.7763
443       LS            82     2.9
444       UK    248  .3717    .30    100
445       RK   4500  .1875   .045   .107   TRAP     10      3
446       RK  10000  .0490   .045          TRAP     20     10
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

447       KK  2210A     CP
448       KM       COMBINE CP 2190B, SUB 2200, & SUB 2210
449       HC      3

450       KK  2210B     DIV
451       KM       DIVERT LOW-FLOWS TO SUB 2220A
452       DT  2210C
453       DI      0    100    500  25000
454       DQ      0      0      0      0

455       KK  2220C1     CP
456       KM       ROUTE NON-DIVERTED FLOW TO CP 2220C1
457       RS      1   FLOW     -1
458       RC   .055   .045   .055   1400  .0200
459       RX      0     35    135    150    225    240    340    375
460       RY     10      3      3      0      0      3      3     10

461       KK  2220C     SUB
462       KM       RUNOFF FROM SUB 2220C
463       BA  .0717
464       LS            74   21.9
465       UK    200  .0500    .15    100
466       RK   1800  .0444   .045          TRAP     20      5

467       KK  2220C2     CP
468       KM       COMBINE SUB 2220C & CP 2220C1
469       HC      2

470       KK  2220B1     CP
471       KM       ROUTE CP 2220C2 TO CP 2220B1
472       RS      1   FLOW     -1
473       RC   .055   .045   .055   1350  .0200
474       RX      0     35    135    150    225    240    340    375
475       RY     10      3      3      0      0      3      3     10

476       KK  2220B     SUB
477       KM       RUNOFF FROM SUB 2220B
478       BA  .1650
479       LS            74   21.9
480       UK    200  .0500    .15    100
481       RK   5400  .0435   .045          TRAP     20      5

482       KK  2220B2     CP
483       KM       COMBINE SUB 2220B & CP 2220B1
484       HC      2

485       KK  2220B3     DIV
486       KM       DIVERT LOW-FLOWS TO SUB 2220A
487       DT  2220B4
488       DI      0    100   1000  25000
489       DQ      0      0      0      0
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  490     KK  2230B1      CP
  491     KM        ROUTE NON-DIVERTED FLOW TO CP 2230B1
  492     RS      1    FLOW      -1
  493     RC   .055    .045    .055    1700   .0200
  494     RX      0      35     135     150     225     240     340     375
  495     RY     10       3       3       0       0       3       3      10

  496     KK   2230B     SUB
  497     KM        RUNOFF FROM SUB 2230B
  498     BA   .2317
  499     LS            74    29.3
  500     UK    200   .0500    .15     100
  501     RK   7500   .0413   .050          TRAP      10      10

  502     KK  2230B2      CP
  503     KM        COMBINE SUB 2230B & CP 2230B1
  504     HC       2

  505     KK  2230B3     DIV
  506     KM        DIVERT LOW-FLOWS TO SUB 2230A
  507     DT  2230B4
  508     DI       0     100    1000   25000
  509     DQ       0       0       0       0

  510     KK  2220A2      CP
  511     KM        ROUTE NON-DIVERTED FLOW TO DOWNSTREAM END OF REATA PASS CHANNEL
  512     RS      1    FLOW      -1
  513     RC   .055    .045    .055    3800   .0200
  514     RX      0      35     135     150     225     240     340     375
  515     RY     10       3       3       0       0       3       3      10

  516     KK    2019     RET
  517     KM        RETRIEVE LOW-FLOW DIVERTS FROM CP 2017
  518     DR    2019

  519     KK   2030A     SUB
  520     KM        RUNOFF FROM SUB 2030A & ROUTE RET 2019
  521     BA   .2317
  522     LS            66    27.3
  523     UK    155   .0614    .15     100
  524     RK   3555   .0355   .045    .047    TRAP      10      10
  525     RK   3300   .0262   .045          TRAP      60      20     YES

  526     KK  2080B4     RET
  527     KM        RETRIEVE LOW-FLOW DIVERT FROM CP 2080B2
  528     DR  2080B4

  529     KK   2080A     SUB
  530     KM        RUNOFF FROM SUB 2080A & ROUTE RET 2080B4
  531     BA   .0897
  532     LS            70    32.1
  533     UK    175   .0571    .15     100
  534     RK   3100   .0325   .045          TRAP      30      15     YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

535       KK   2081     CP
536       KM       COMBINE SUB 2030A & SUB 2080A
537       HC     2

538       KK   2090A     SUB
539       KM       RUNOFF FROM SUB 2090A & ROUTE CP 2081
540       BA   .3582
541       LS           71    21.5
542       UK    140   .0285    .15    100
543       RK   9400   .0212   .045          TRAP     50     10     YES

544       KK   2100     SUB
545       KM       RUNOFF FROM SUB 2100
546       BA   .3795
547       LS           73    24.0
548       UK    140   .0285    .15    100
549       RK  14600   .0260   .045          TRAP    100     25

550       KK   2101     CP
551       KM       COMBINE SUB 2090A & SUB 2100
552       HC     2

553       KK   2110     SUB
554       KM       RUNOFF FROM SUB 2110 & ROUTE CP 2101
555       BA   .5180
556       LS           74    26.2
557       UK    200   .0286    .15    100
558       RK   5400   .0129   .045          TRAP     60     15     YES

559       KK  2140B4     RET
560       KM       RETRIEVE LOW-FLOW DIVERTS FROM SUB 2140B
561       DR  2140B4

562       KK  2160A1     CP
563       KM       ROUTE RET 2140B4 THROUGH UPPER PART OF SUB 2160A TO CP 2160A1
564       RK   4800   .0313   .045          TRAP     25      5

565       KK  2160C4     RET
566       KM       RETRIEVE LOW-FLOW DIVERTS FROM CP 2160C2
567       DR  2160C4

568       KK  2160A2     CP
569       KM       COMBINE CP 2160A1 & RET 2160C4
570       HC     2

571       KK   2160A     SUB
572       KM       RUNOFF FROM SUB 2160A & ROUTE CP 2160A2
573       BA   .8186
574       LS           74    32.1
575       UK    337   .0324    .15    100
576       RK   4067   .0231   .045  .0819   TRAP      5      3
577       RK   9700   .0170   .045          TRAP     20     10     YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

578       KK  2170B4     RET
579       KM        RETRIEVE LOW-FLOW DIVERTS FROM SUB 2170B
580       DR  2170B4

581       KK   2170A     SUB
582       KM        RUNOFF FROM SUB 2170A & ROUTE RET 2170B4
583       BA   .3350
584       LS            74    24.2
585       UK    250   .0266    .15     100
586       RK   8400   .0202    .045          TRAP     15     10     YES

587       KK   2210C     RET
588       KM        RETRIEVE LOW-FLOW DIVERTS FROM CP 2210A
589       DR   2210C

590       KK  2220B4     RET
591       KM        RETRIEVE LOW-FLOW DIVERTS FROM SUB 2220B
592       DR  2220B4

593       KK  2220A1      CP
594       KM        COMBINE RET 2210C & RET 2220B4
595       HC      2

596       KK   2220A     SUB
597       KM        RUNOFF FROM SUB 2220A & ROUTE CP 2220A1
598       BA   .3279
599       LS            74    13.8
600       UK    200   .0500    .15     100
601       RK   7600   .0179    .045          TRAP     30     10     YES

602       KK  2230B4     RET
603       KM        RETRIEVE LOW-FLOW DIVERTS FROM SUB 2230B
604       DR  2230B4

605       KK   2230A     SUB
606       KM        RUNOFF FROM SUB 2230A & ROUTE RET 2230B4
607       BA   .0976
608       LS            74    14.0
609       UK    200   .0500    .15     100
610       RK   2200   .0273    .050          TRAP     10     10     YES

611       KK  2230A1      CP
612       KM        ROUTE SUB 2230A TO CAP DIKE No.4
613       RK   1600   .0187    .045          TRAP     10     10

614       KK   2120     SUB
615       KM        RUNOFF FROM SUB 2120
616       BA  1.4255
617       LS            74    28.5
618       UK    115   .0383    .15     100
619       RK  20800   .0234    .045          TRAP    150     50
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

620       KK   2125     SUB
621       KM        RUNOFF FROM SUB-BASIN 2125
622       BA  .0739
623       LS            74     72
624       UK    115  .0383    .15    100
625       RK   3400  .0150   .045          TRAP     15      5

626       KK   2126     CP
627       KM        ROUTE SUB 2125 TO CAP DIKE 4
628       RK   3300  .0130   .030          TRAP     10      3

629       KK  COMB8     CP
630       KM        COMBINE SUB 2120, CP 2126, CP 2230A1, SUB 2220A, SUB 2170A, SUB 2160A,
631       KM        CP 2110, AND CP 2220A2.  THIS COMBINE OPREATION IS PERFORMED IN ORDER
632       KM        TO PROVIDE ADDITIONAL ROUTING SCHEMATIC PLOTTING CAPABILITY FOR THE
633       KM        HEC-1 "DIAGRAM" PLOT.
634       HC      8

635       KK  2240A     SUB
636       KM        RUNOFF FROM SUB 2240A
637       BA  .5919
638       PB   4.15
639       PC      0   .005   .009   .010   .013   .019   .021   .028   .032   .044
640       PC   .057   .100   .660   .745   .776   .800   .816   .830   .840   .850
641       PC   .861   .868   .878   .884   .891   .900   .905   .912   .919   .923
642       PC   .930   .934   .939   .944   .950   .958   .961   .963   .969   .971
643       PC   .974   .979   .981   .985   .989   .991   .993   .996  1.000
644       LS            74   25.80
645       UK    200  .0500    .15    100
646       RK   9600  .0354   .045          TRAP      8     10

647       KK   2260     SUB
648       KM        RUNOFF FROM SUB 2260
649       BA  .2647
650       LS            76   20.90
651       UK    200  .0500    .15    100
652       RK  11130  .0500   .045          TRAP      8     10

653       KK   2255     SUB
654       KM        RUNOFF FROM SUB 2255
655       BA  .2955
656       LS            86   14.60          74   14.60
657       UK    465  .6014    .25     40
658       UK    350  .0628    .15     60
659       RK   1360  .1536   .045   .030   TRAP      5      3
660       RK   4400  .0386   .045          TRAP     10      3

661       KK   2270     SUB
662       KM        RUNOFF FROM SUB 2270
663       BA  .9714
664       LS            86    12.5          74    12.5
665       UK    270  .5185    .30     40
666       UK    300  .2000    .15     60
667       RK   3120  .1137   .045   .097   TRAP     10      3
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

668       RK   4500  .0333   .045          TRAP    15     3

669       KK   2271     CP
670       KM      COMBINE SUB 2255 & SUB 2270
671       HC     2

672       KK   2250    SUB
673       KM      RUNOFF FROM SUB 2250 & ROUTE CP 2271
674       BA  .2239
675       LS          82  18.40
676       UK    130  .1696    .15    100
677       RK   1625  .0867   .045   .027   TRAP     5     3
678       RK   4000  .0200   .045          TRAP    30     5   YES

679       KK   2251     CP
680       KM      COMBINE SUB 2250 & SUB 2260
681       HC     2

682       KK   2280    SUB
683       KM      RUNOFF FROM SUB 2280 & ROUTE CP 2251
684       BA  .1808
685       LS          75   18.1
686       UK    300  .0300    .15    100
687       RK   3200  .0187   .045          TRAP    35     5   YES

688       KK   2290    SUB
689       KM      RUNOFF FROM SUB 2290
690       BA  .6005
691       LS          82  13.90
692       UK    300  .0499    .15    100
693       RK   9000  .0367   .045          TRAP    10     4

694       KK   2300    SUB
695       KM      RUNOFF FROM SUB 2300
696       BA 1.8007
697       LS          84    1.9
698       UK    303  .4881    .30    100
699       RK   1310  .2150   .045   .047   TRAP     5     1
700       RK   2928  .1451   .045   .306   TRAP    10     3
701       RK   9600  .0577   .045          TRAP    75    10

702       KK   2301    DIV
703       KM      DIVERT FLOW AT FAN APEX TO SUB 2330
704       DT   2302
705       DI      0   6000
706       DQ      0   3000

707       KK   2310    SUB
708       KM      RUNOFF FROM SUB 2310 & ROUTE NON-DIVERTED FLOW FROM DIV 2301
709       BA  .3035
710       LS          81   11.2
711       UK    200  .0550    .15    100
712       RK  10300  .0446   .045          TRAP    30     3   YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  713     KK   2320    SUB
  714     KM       RUNOFF FROM SUB 2320
  715     BA  .3723
  716     LS           79    14.0
  717     UK    200  .0500    .15    100
  718     RK   7200  .0416    .045          TRAP     15      3

  719     KK   2321     CP
  720     KM       COMBINE SUB 2240, SUB 2280, SUB 2290, SUB 2310, & SUB 2320
  721     HC      5

  722     KK   2302    RET
  723     KM       RETRIEVE DIVERTED FLOW FROM DIV 2301 (SUB 2300)
  724     DR   2302

  725     KK   2331     CP
  726     KM       ROUTE DIVERTED FLOW FROM SUB 2300 TO CP 2331
  727     RK   3600  .0472    .045          TRAP     30      3

  728     KK   2330    SUB
  729     KM       RUNOFF FROM SUB 2330
  730     BA  .4807
  731     LS           82     6.0
  732     UK    352  .3911     .25    100
  733     RK   1920  .2283    .045   .048   TRAP     10      3
  734     RK   5760  .0738    .045          TRAP     30      3

  735     KK   2332     CP
  736     KM       COMBINE SUB 2330 & CP 2331
  737     HC      2

  738     KK   2335    SUB
  739     KM       RUNOFF FROM SUB 2335 & ROUTE CP 2332
  740     BA  .3515
  741     LS           74    34.8
  742     UK    150  .0600     .15    100
  743     RK   7400  .0382    .045          TRAP     30     25     YES

  744     KK   2340    SUB
  745     KM       RUNOFF FROM SUB 2340
  746     BA  .2776
  747     LS           86    44.4            74    44.4
  748     UK    500  .4000     .30     30
  749     UK    160  .0625     .15     70
  750     RK   7050  .0526    .045          TRAP     10      3

  751     KK   2322     CP
  752     KM       COMBINE SUB 2335, SUB 2340, & CP 2321
  753     KM       THIS IS THE TOTAL INFLOW FROM MODEL GN50.24I TO CAP DIKE NO.4
  754     HC      3
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

755       KK    4IN      CP
756       KM       COMBINE CP D1 & CP 2322
757       KM       THIS IS THE TOTAL INFLOW TO CAP DIKE NO. 4
758       HC     2

759       KK   DIKE4     DAM
760       KM       ROUTE CP 4IN THROUGH CAP DIKE NO. 4
761       RS     1    STOR
762       SV     0     2    13    45    98   171   265   404   595   824
763       SV  1098  1420  1800  2253  2782  3381  4069  4854  5728  6686
764       SE  1496  1498  1500  1502  1504  1506  1508  1510  1512  1514
765       SE  1516  1518  1520  1522  1524  1526  1528  1530  1532  1534
766       SS  1533   100   2.9   1.5
767       ST  1534   100   2.9   1.5
768       ZZ
```

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SCHEMATIC DIAGRAM OF STREAM NETWORK

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

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

  24     SUB39
           .
           .
  36        .      SUB40
            .        .
            .        .
  42      CP41............
           V
           V
  45     SUB41 ***
           .
           .
  51        .      SUB42
            .        .
            .        .
  57        .        .     SUB43
            .        .       .
            .        .       .
  63        .        .       .      SUB44
            .        .       .        .
            .        .       .        .
  69        .        .     CP45............
            .        .       V
            .        .       V
  72        .        .     SUB45 ***
            .        .       .
            .        .       .
  78        .        .       .     SUB45A
            .        .       .        .
            .        .       .        .
  84        .        .       .        .      SUB46
            .        .       .        .        .
            .        .       .        .        .
  91        .        .     CP47........................
            .        .       V
            .        .       V
  94        .        .     SUB47 ***
            .        .       .
            .        .       .
 100      CP48........................
           V
           V
 103      SUB48 ***
           .
           .
 109        .      SUB50
            .        .
            .        .
 116      CP51............
           .
           .
 124        .-------->    2003
 119      2004
           .
           .
 127        .      2000
            .        V
            .        V
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142     .     2010 ***
        .     .
        .     .
150     .     .     .<-------   2003
148     .     .   2003
        .     .     V
        .     .     V
151     .     .   2003A
        .     .     V
        .     .     V
157     .     .   2005 ***
        .     .     V
        .     .     V
163     .     .   2011
        .     .     .
        .     .     .
169     .   2012............
        .     V
        .     V
172     .   2015A ***
        .     .
        .     .
179     .     .   2015B
        .     .     .
        .     .     .
185     .     .     .     2020
        .     .     .       V
        .     .     .       V
192     .     .     .     2016
        .     .     .       .
        .     .     .       .
195     .   2017........................
        .     .
        .     .
200     .     .-------->   2019
198     .   2018
        .     V
        .     V
203     .   2030B1
        .     .
        .     .
209     .     .   2030B
        .     .     .
        .     .     .
216     .   2030B2............
        .     V
        .     V
219     .   2080B1
        .     .
        .     .
225     .     .   2040
        .     .     .
        .     .     .
232     .     .     .     2050
        .     .     .       .
        .     .     .       .
239     .     .   2051............
        .     .     V
        .     .     V
242     .     .   2060 ***
        .     .     .
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249     .     .     .     2070
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259   .   .   .   .-------> 2072
257   .   .   .  2071
      .   .   .   V
      .   .   .   V
262   .   .   .  2065 ***
      .   .   .   .
      .   .   .   .
270   .   .   .   .   .<------- 2072
268   .   .   .   .  2072
      .   .   .   .   V
      .   .   .   .   V
271   .   .   .   .  2131
      .   .   .   .   .
      .   .   .   .   .
274   .   .   .   .   .   2130
      .   .   .   .   .    .
      .   .   .   .   .    .
280   .   .   .   .  2132............
      .   .   .   .   .
      .   .   .   .   .
285   .   .   .   .   .-------> 2134
283   .   .   .   .  2133
      .   .   .   .   V
      .   .   .   .   V
288   .   .   .   .  2066
      .   .   .   .   .
      .   .   .   .   .
291   .   .  2067........................
      .   .   V
      .   .   V
294   .   .  2080B ***
      .   .   .
      .   .   .
300   .  2080B2............
      .   .
      .   .
305   .   .-------> 2080B4
303   .  2080B3
      .   V
      .   V
308   .  2140B1
      .   .
      .   .
316   .   .   .<------- 2134
314   .   .  2134
      .   .   V
      .   .   V
317   .   .  2135 ***
      .   .   V
      .   .   V
324   .   .  2140B ***
      .   .   .
      .   .   .
330   .  2140B2............
      .   .
      .   .
335   .   .-------> 2140B4
333   .  2140B3
      .   V
      .   V
338   .  2140A1
      .   .
      .   .
344   .   .  2140A
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          .        .        .
351       .     2140A2............
          .        .
          .        .
354       .        .        2150
          .        .        .
          .        .        .
362       .     2140A3............
          .        V
          .        V
365       .     2160C1
          .        .
          .        .
371       .        .        2160C
          .        .        .
          .        .        .
377       .        .        .        2160B
          .        .        .        .
          .        .        .        .
384       .     2160C2........................
          .        .
          .        .
389       .        .-------> 2160C4
387       .     2160C3
          .        V
          .        V
392       .     2170B1
          .        .
          .        .
398       .        .        2170B
          .        .        .
          .        .        .
404       .     2170B2............
          .        .
          .        .
409       .        .-------> 2170B4
407       .     2170B3
          .        V
          .        V
412       .     2190A
          .        .
          .        .
418       .        .        2180
          .        .        V
          .        .        V
425       .        .        2190 ***
          .        .        .
          .        .        .
431       .     2190B............
          .        .
          .        .
434       .        .        2200
          .        .        .
          .        .        .
440       .        .        .        2210
          .        .        .        .
          .        .        .        .
447       .     2210A........................
          .        .
          .        .
452       .        .-------> 2210C
450       .     2210B
          .        V
          .        V
455       .     2220C1
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          .        .
          .        .
461       .        .      2220C
          .        .        .
          .        .        .
467       .     2220C2............
          .       V
          .       V
470       .     2220B1
          .       .
          .       .
476       .        .      2220B
          .        .        .
          .        .        .
482       .     2220B2............
          .       .
          .       .
487       .        .-------> 2220B4
485       .     2220B3
          .       V
          .       V
490       .     2230B1
          .       .
          .       .
496       .        .      2230B
          .        .        .
          .        .        .
502       .     2230B2............
          .       .
          .       .
507       .        .-------> 2230B4
505       .     2230B3
          .       V
          .       V
510       .     2220A2
          .       .
          .       .
518       .        .        .<-------   2019
516       .        .      2019
          .        .       V
          .        .       V
519       .        .      2030A ***
          .        .        .
          .        .        .
528       .        .        .        .<-------  2080B4
526       .        .        .     2080B4
          .        .        .       V
          .        .        .       V
529       .        .        .     2080A ***
          .        .        .       .
          .        .        .       .
535       .        .      2081............
          .        .       V
          .        .       V
538       .        .      2090A ***
          .        .        .
          .        .        .
544       .        .        .      2100
          .        .        .        .
          .        .        .        .
550       .        .      2101............
          .        .       V
          .        .       V
553       .        .      2110 ***
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                .   .   .
561             .   .   .     .<------- 2140B4
559             .   .   .  2140B4
                .   .   .    V
                .   .   .    V
562             .   .   .  2160A1
                .   .   .    .
                .   .   .    .
567             .   .   .    .     .<------- 2160C4
565             .   .   .    .  2160C4
                .   .   .    .     .
                .   .   .    .     .
568             .   .   .  2160A2.............
                .   .   .    V
                .   .   .    V
571             .   .   .  2160A ***
                .   .   .    .
                .   .   .    .
580             .   .   .    .     .<------- 2170B4
578             .   .   .    .  2170B4
                .   .   .    .     V
                .   .   .    .     V
581             .   .   .    .  2170A ***
                .   .   .    .     .
                .   .   .    .     .
589             .   .   .    .     .     .<------- 2210C
587             .   .   .    .     .  2210C
                .   .   .    .     .     .
                .   .   .    .     .     .
592             .   .   .    .     .     .     .<------- 2220B4
590             .   .   .    .     .     .  2220B4
                .   .   .    .     .     .     .
                .   .   .    .     .     .     .
593             .   .   .    .     .  2220A1.............
                .   .   .    .     .     V
                .   .   .    .     .     V
596             .   .   .    .     .  2220A ***
                .   .   .    .     .     .
                .   .   .    .     .     .
604             .   .   .    .     .     .     .<------- 2230B4
602             .   .   .    .     .     .  2230B4
                .   .   .    .     .     .     V
                .   .   .    .     .     .     V
605             .   .   .    .     .     .  2230A ***
                .   .   .    .     .     .     V
                .   .   .    .     .     .     V
611             .   .   .    .     .     .  2230A1
                .   .   .    .     .     .     .
                .   .   .    .     .     .     .
614             .   .   .    .     .     .     .     2120
                .   .   .    .     .     .     .       .
                .   .   .    .     .     .     .       .
620             .   .   .    .     .     .     .       .     2125
                .   .   .    .     .     .     .       .       V
                .   .   .    .     .     .     .       .       V
626             .   .   .    .     .     .     .       .     2126
                .   .   .    .     .     .     .       .       .
                .   .   .    .     .     .     .       .       .
629             .   COMB8.....................................................
                .   .
                .   .
635             .   .   2240A
                .   .   .
                .   .   .
647             .   .   .   2260
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                .         .         .         .
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653             .         .         .         .         2255
                .         .         .         .         .
                .         .         .         .         .
661             .         .         .         .         .         2270
                .         .         .         .         .         .
                .         .         .         .         .         .
669             .         .         .         .         2271............
                .         .         .         .         V
                .         .         .         .         V
672             .         .         .         .         2250 ***
                .         .         .         .         .
                .         .         .         .         .
679             .         .         .         2251............
                .         .         .         V
                .         .         .         V
682             .         .         .         2280 ***
                .         .         .         .
                .         .         .         .
688             .         .         .         .         2290
                .         .         .         .         .
                .         .         .         .         .
694             .         .         .         .         .         2300
                .         .         .         .         .         .
                .         .         .         .         .         .
704             .         .         .         .         .         .-------->   2302
702             .         .         .         .         .         2301
                .         .         .         .         .         V
                .         .         .         .         .         V
707             .         .         .         .         .         2310 ***
                .         .         .         .         .         .
                .         .         .         .         .         .
713             .         .         .         .         .         .         2320
                .         .         .         .         .         .         .
                .         .         .         .         .         .         .
719             .         .         2321.............................................
                .         .         .
                .         .         .
724             .         .         .         .<-------   2302
722             .         .         .         2302
                .         .         .         V
                .         .         .         V
725             .         .         .         2331
                .         .         .         .
                .         .         .         .
728             .         .         .         .         2330
                .         .         .         .         .
                .         .         .         .         .
735             .         .         .         2332............
                .         .         .         V
                .         .         .         V
738             .         .         .         2335 ***
                .         .         .         .
                .         .         .         .
744             .         .         .         .         2340
                .         .         .         .         .
                .         .         .         .         .
751             .         .         2322........................
                .         .         .
                .         .         .
755             .         4IN............
                .         V
                .         V
759             .         DIKE4
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(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

1 ****

FLOOD HYDROGRAPH PACKAGE HEC-1 (IBM XT 512K VERSION) -FEB 1,1985
U.S. ARMY CORPS OF ENGINEERS, THE HYDROLOGIC ENGINEERING CENTER, 609 SECOND STREET, DAVIS, CA. 95616
****

UPPER INDIAN BEND WASH REGIONAL DRAINAGE & FLOOD CONTROL PLAN

MODEL RP6.24I -- SUB-BASIN SERIES 2000 TO 2230 & 39 TO 50

REATA PASS CHANNEL ALIGNMENT ALONG THOMPSON PEAK PARKWAY
100% OF FLOW FROM THE REATA PASS APEX IS DIVERTED WEST TO CAP DIKE 3

A RESERVOIR ROUTING OPERATION IS IN-PLACE FOR CAP DIKE 4.
SUB 2125 IS INCLUDED

ALL LOW-FLOW CULVERT DIVERTS ARE SET TO ZERO.

FUTURE LAND USE CONDITIONS WITH EXISTING DRAINAGE PATTERN

100-YEAR, 24-HOUR STORM, USING SCS TYPE IIA RAINFALL DISTRIBUTION
RAINFALL FROM NOAA ATLAS, USING 25 SQ MI AREAL REDUCTION FACTOR (.968)

LAND USE DENSITIES FROM GENERAL PLAN & TONTO FOOTHILLS PLAN.
PERCENT OF IMPERVIOUS COVER HAS BEEN ADJUSTED TO REFLECT
CITY OF SCOTTSDALE NAOS REQUIREMENTS.

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

 IT        HYDROGRAPH TIME DATA
             NMIN         5  MINUTES IN COMPUTATION INTERVAL
            IDATE    25APR90  STARTING DATE
            ITIME      0000  STARTING TIME
               NQ       300  NUMBER OF HYDROGRAPH ORDINATES
           NDDATE    26APR90  ENDING DATE
           NDTIME      0055  ENDING TIME

          COMPUTATION INTERVAL     .08 HOURS
             TOTAL TIME BASE   24.92 HOURS

      ENGLISH UNITS
```

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 122. TO 42087.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 9817. TO 42087.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 122. TO 42087.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 0. TO 42087.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 18313. TO 42087.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.

THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 122. TO 42087.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 18313. TO 42087.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 122. TO 42087.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 780. TO 42087.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 780. TO 42087.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 1278. TO 42087.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

1 NO UPSTREAM INFLOW TO ROUTE - ERROR EXIT FROM *** FDKSRM ****

1

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

OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
HYDROGRAPH AT	SUB39	4477.	6.08	489.	149.	143.	1.93		
HYDROGRAPH AT	SUB40	1343.	6.08	132.	40.	39.	.58		
2 COMBINED AT	CP41	5821.	6.08	622.	189.	182.	2.51		
HYDROGRAPH AT	SUB41	6325.	6.17	775.	236.	227.	3.31		
HYDROGRAPH AT	SUB42	1252.	6.08	126.	39.	37.	.58		
HYDROGRAPH AT	SUB43	2512.	6.08	255.	77.	75.	1.07		
HYDROGRAPH AT	SUB44	1951.	6.08	198.	60.	58.	.84		
2 COMBINED AT	CP45	4463.	6.08	453.	138.	132.	1.91		
HYDROGRAPH AT	SUB45	4602.	6.08	498.	151.	146.	2.11		
HYDROGRAPH AT	SUB45A	425.	6.08	43.	13.	12.	.17		
HYDROGRAPH AT	SUB46	2271.	6.08	230.	69.	66.	.93		
3 COMBINED AT	CP47	7298.	6.08	771.	233.	224.	3.21		
HYDROGRAPH AT	SUB47	7150.	6.17	870.	263.	253.	3.58		
3 COMBINED AT	CP48	14513.	6.17	1769.	537.	517.	7.47		
HYDROGRAPH AT	SUB48	14273.	6.17	1774.	539.	519.	7.52		
HYDROGRAPH AT	SUB50	824.	6.08	81.	25.	24.	.36		
2 COMBINED AT	CP51	14935.	6.17	1855.	563.	543.	7.88		
DIVERSION TO	2003	0.	6.17	0.	0.	0.	7.88		
HYDROGRAPH AT	2004	14935.	6.17	1855.	563.	543.	7.88		

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      HYDROGRAPH AT
+                2000    1745.   6.08      173.      52.      50.      .80

      HYDROGRAPH AT
+                2010    1729.   6.08      196.      59.      57.      .89

      HYDROGRAPH AT
+                2003       0.    .08        0.       0.       0.     .00

      ROUTED TO
+                2003A      0.    .08        0.       0.       0.     .00

      HYDROGRAPH AT
+                2005     179.   6.08       19.       6.       6.     .14

      ROUTED TO
+                2011     114.   6.25       19.       6.       6.     .14
+                                                                     .49     6.25

      2 COMBINED AT
+                2012    1805.   6.08      215.      65.      63.    1.03

      HYDROGRAPH AT
+                2015A   2154.   6.25      296.      90.      87.    1.39

      HYDROGRAPH AT
+                2015B     33.   6.08        4.       1.       1.     .04

      HYDROGRAPH AT
+                2020     256.   6.08       25.       8.       7.     .11

      ROUTED TO
+                2016     247.   6.08       26.       8.       7.     .11

      3 COMBINED AT
+                2017    2414.   6.08      326.      99.      96.    1.54

      DIVERSION TO
+                2019       0.   6.08        0.       0.       0.    1.54

      HYDROGRAPH AT
+                2018    2414.   6.08      326.      99.      96.    1.54

      ROUTED TO
+                2030B1  2448.   6.17      325.      99.      96.    1.54
+                                                                    3.02     6.17

      HYDROGRAPH AT
+                2030B     20.   6.08        2.       1.       1.     .01

      2 COMBINED AT
+                2030B2  2463.   6.17      327.     100.      96.    1.55

      ROUTED TO
+                2080B1  2477.   6.17      327.     100.      96.    1.55
+                                                                    3.04     6.17

      HYDROGRAPH AT
+                2040    1945.   6.08      193.      59.      57.     .93

      HYDROGRAPH AT
+                2050    1757.   6.08      174.      53.      51.     .86

      2 COMBINED AT
```

+	2051	3702.	6.08	367.	112.	108.	1.79	
	HYDROGRAPH AT							
+	2060	3569.	6.08	398.	121.	117.	1.94	
	HYDROGRAPH AT							
+	2070	3255.	6.08	320.	97.	94.	1.46	
	DIVERSION TO							
+	2072	2170.	6.08	214.	65.	62.	1.46	
	HYDROGRAPH AT							
+	2071	1085.	6.08	107.	32.	31.	1.46	
	HYDROGRAPH AT							
+	2065	1309.	6.17	139.	43.	41.	1.63	
	HYDROGRAPH AT							
+	2072	2170.	6.08	214.	65.	62.	.00	
	ROUTED TO							
+	2131	1922.	6.17	220.	66.	64.	.00	
	HYDROGRAPH AT							
+	2130	567.	6.08	64.	19.	19.	.30	
	2 COMBINED AT							
+	2132	2471.	6.08	283.	86.	83.	.30	
	DIVERSION TO							
+	2134	1880.	6.08	247.	77.	74.	.30	
	HYDROGRAPH AT							
+	2133	591.	6.08	36.	9.	9.	.30	
	ROUTED TO							
+	2066	585.	6.17	36.	9.	9.	.30	
	3 COMBINED AT							
+	2067	5424.	6.17	573.	173.	167.	3.87	
	HYDROGRAPH AT							
+	2080B	5419.	6.17	581.	176.	169.	3.92	
	2 COMBINED AT							
+	2080B2	7896.	6.17	908.	276.	266.	5.47	
	DIVERSION TO							
+	2080B4	0.	6.17	0.	0.	0.	5.47	
	HYDROGRAPH AT							
+	2080B3	7896.	6.17	908.	276.	266.	5.47	
	ROUTED TO							
+	2140B1	7139.	6.25	905.	275.	265.	5.47	
+							4.63	6.25
	HYDROGRAPH AT							
+	2134	1880.	6.08	247.	77.	74.	.00	
	HYDROGRAPH AT							
+	2135	1947.	6.17	268.	84.	81.	.11	
	HYDROGRAPH AT							
+	2140B	2018.	6.17	283.	89.	85.	.19	

```
      2 COMBINED AT
+                2140B2   8936.  6.25    1187.    364.    351.    5.65

      DIVERSION TO
+                2140B4      0.  6.25       0.      0.      0.    5.65

      HYDROGRAPH AT
+                2140B3   8936.  6.25    1187.    364.    351.    5.65

      ROUTED TO
+                2140A1   8093.  6.33    1182.    363.    350.    5.65
+                                                              4.87    6.33

      HYDROGRAPH AT
+                 2140A    192.  6.17      25.      8.      7.     .12

      2 COMBINED AT
+                2140A2   8195.  6.33    1206.    371.    357.    5.77

      HYDROGRAPH AT
+                  2150   1357.  6.08     142.     43.     42.     .69

      2 COMBINED AT
+                2140A3   8572.  6.33    1345.    414.    399.    6.46

      ROUTED TO
+                2160C1   8621.  6.33    1344.    414.    399.    6.46
+                                                              4.99    6.33

      HYDROGRAPH AT
+                 2160C     64.  6.08       7.      2.      2.     .04

      HYDROGRAPH AT
+                 2160B    225.  6.08      26.      8.      8.     .14

      3 COMBINED AT
+                2160C2   8749.  6.33    1377.    424.    409.    6.64

      DIVERSION TO
+                2160C4      0.  6.33       0.      0.      0.    6.64

      HYDROGRAPH AT
+                2160C3   8749.  6.33    1377.    424.    409.    6.64

      ROUTED TO
+                2170B1   8311.  6.42    1373.    423.    408.    6.64
+                                                              4.92    6.42

      HYDROGRAPH AT
+                 2170B    259.  6.08      28.      9.      8.     .13

      2 COMBINED AT
+                2170B2   8380.  6.42    1400.    432.    416.    6.77

      DIVERSION TO
+                2170B4      0.  6.42       0.      0.      0.    6.77

      HYDROGRAPH AT
+                2170B3   8380.  6.42    1400.    432.    416.    6.77

      ROUTED TO
+                 2190A   8418.  6.42    1400.    432.    416.    6.77
+                                                              4.94    6.42
```

```
      HYDROGRAPH AT
+          2180    2279.   6.08     231.     70.     67.    1.00

      HYDROGRAPH AT
+          2190    2262.   6.17     260.     79.     76.    1.13

      2 COMBINED AT
+          2190B   9294.   6.42    1659.    510.    492.    7.90

      HYDROGRAPH AT
+          2200     508.   6.08      50.     15.     15.     .25

      HYDROGRAPH AT
+          2210    3417.   6.08     349.    107.    103.    1.78

      3 COMBINED AT
+          2210A  10438.   6.33    2057.    633.    610.    9.93

      DIVERSION TO
+          2210C      0.   6.33       0.      0.      0.    9.93

      HYDROGRAPH AT
+          2210B  10438.   6.33    2057.    633.    610.    9.93

      ROUTED TO
+          2220C1 10342.   6.33    2055.    632.    609.    9.93
+                                                          5.37    6.33

      HYDROGRAPH AT
+          2220C    134.   6.08      13.      4.      4.     .07

      2 COMBINED AT
+          2220C2 10364.   6.33    2067.    636.    613.   10.00

      ROUTED TO
+          2220B1 10356.   6.33    2065.    636.    612.   10.00
+                                                          5.37    6.33

      HYDROGRAPH AT
+          2220B    299.   6.08      30.      9.      9.     .17

      2 COMBINED AT
+          2220B2 10435.   6.33    2095.    645.    621.   10.16

      DIVERSION TO
+          2220B4     0.   6.33       0.      0.      0.   10.16

      HYDROGRAPH AT
+          2220B3 10435.   6.33    2095.    645.    621.   10.16

      ROUTED TO
+          2230B1 10463.   6.33    2091.    644.    621.   10.16
+                                                          5.40    6.33

      HYDROGRAPH AT
+          2230B    370.   6.08      46.     14.     14.     .23

      2 COMBINED AT
+          2230B2 10641.   6.33    2135.    659.    634.   10.39

      DIVERSION TO
+          2230B4     0.   6.33       0.      0.      0.   10.39

      HYDROGRAPH AT
+          2230B3 10641.   6.33    2135.    659.    634.   10.39
```

	ROUTED TO							
+	2220A2	10373.	6.50	2127.	657.	633.	10.39	
+							5.38	6.50
	HYDROGRAPH AT							
+	2019	0.	.08	0.	0.	0.	.00	
	HYDROGRAPH AT							
+	2030A	318.	6.17	36.	11.	11.	.23	
	HYDROGRAPH AT							
+	2080B4	0.	.08	0.	0.	0.	.00	
	HYDROGRAPH AT							
+	2080A	162.	6.08	17.	5.	5.	.09	
	2 COMBINED AT							
+	2081	458.	6.17	53.	17.	16.	.32	
	HYDROGRAPH AT							
+	2090A	636.	6.25	113.	36.	34.	.68	
	HYDROGRAPH AT							
+	2100	245.	6.42	68.	22.	21.	.38	
	2 COMBINED AT							
+	2101	869.	6.25	181.	57.	55.	1.06	
	HYDROGRAPH AT							
+	2110	1244.	6.17	279.	88.	85.	1.58	
	HYDROGRAPH AT							
+	2140B4	0.	.08	0.	0.	0.	.00	
	ROUTED TO							
+	2160A1	0.	.08	0.	0.	0.	.00	
	HYDROGRAPH AT							
+	2160C4	0.	.08	0.	0.	0.	.00	
	2 COMBINED AT							
+	2160A2	0.	.08	0.	0.	0.	.00	
	HYDROGRAPH AT							
+	2160A	943.	6.25	160.	50.	48.	.82	
	HYDROGRAPH AT							
+	2170B4	0.	.08	0.	0.	0.	.00	
	HYDROGRAPH AT							
+	2170A	378.	6.17	61.	19.	19.	.34	
	HYDROGRAPH AT							
+	2210C	0.	.08	0.	0.	0.	.00	
	HYDROGRAPH AT							
+	2220B4	0.	.08	0.	0.	0.	.00	
	2 COMBINED AT							
+	2220A1	0.	.08	0.	0.	0.	.00	
	HYDROGRAPH AT							
+	2220A	404.	6.17	54.	17.	16.	.33	

	HYDROGRAPH AT						
+	2230B4	0.	.08	0.	0.	0.	.00
	HYDROGRAPH AT						
+	2230A	169.	6.08	16.	5.	5.	.10
	ROUTED TO						
+	2230A1	167.	6.17	17.	5.	5.	.10
	HYDROGRAPH AT						
+	2120	912.	6.50	278.	88.	84.	1.43
	HYDROGRAPH AT						
+	2125	191.	6.08	22.	7.	6.	.07
	ROUTED TO						
+	2126	182.	6.17	23.	7.	7.	.07
	8 COMBINED AT						
+	COMB8	13583.	6.42	2992.	931.	896.	15.05
	HYDROGRAPH AT						
+	2240A	917.	6.08	113.	35.	34.	.59
	HYDROGRAPH AT						
+	2260	366.	6.17	50.	16.	15.	.26
	HYDROGRAPH AT						
+	2255	550.	6.00	59.	18.	18.	.30
	HYDROGRAPH AT						
+	2270	1868.	6.00	193.	59.	57.	.97
	2 COMBINED AT						
+	2271	2418.	6.00	252.	77.	74.	1.27
	HYDROGRAPH AT						
+	2250	2806.	6.08	309.	94.	90.	1.49
	2 COMBINED AT						
+	2251	3149.	6.08	359.	110.	106.	1.76
	HYDROGRAPH AT						
+	2280	3172.	6.17	393.	120.	116.	1.94
	HYDROGRAPH AT						
+	2290	1192.	6.08	128.	39.	38.	.60
	HYDROGRAPH AT						
+	2300	3893.	6.08	380.	116.	112.	1.80
	DIVERSION TO						
+	2302	1947.	6.08	190.	58.	56.	1.80
	HYDROGRAPH AT						
+	2301	1947.	6.08	190.	58.	56.	1.80
	HYDROGRAPH AT						
+	2310	2215.	6.08	264.	81.	78.	2.10
	HYDROGRAPH AT						
+	2320	746.	6.08	73.	23.	22.	.37
	5 COMBINED AT						
+	2321	8170.	6.08	970.	298.	287.	5.61

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     HYDROGRAPH AT
+                2302   1947.  6.08    190.    58.    56.    .00

     ROUTED TO
+                2331   1874.  6.17    192.    59.    57.    .00

     HYDROGRAPH AT
+                2330   1015.  6.08    100.    30.    29.    .48

     2 COMBINED AT
+                2332   2721.  6.17    292.    89.    86.    .48

     HYDROGRAPH AT
+                2335   3275.  6.17    375.   115.   111.    .83

     HYDROGRAPH AT
+                2340    628.  6.00     70.    21.    20.    .28

     3 COMBINED AT
+                2322  11552.  6.17   1413.   434.   418.   6.71

     2 COMBINED AT
+                 4IN  21120.  6.25   4399.  1365.  1315.  21.76

     ROUTED TO
+               DIKE4      0.   .08      0.     0.     0.  21.76
+                                                        1523.72    24.92
```

SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION DIKE4

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1496.00	1533.00	1534.00
STORAGE	0.	6207.	6686.
OUTFLOW	0.	0.	290.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1523.72	.00	2707.	0.	.00	.00	.00

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

FILE: RP7.24I

(100-Year, 24-Hour, SCS Type IIA Storm)

This model includes the Thompson Peak Parkway channel and a reservoir routing operation for CAP Dike 4. Low-flow culvert diverts are activated and 100 percent of the Reata Pass flows are diverted to CAP Dike 3.

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

  1       ID      UPPER INDIAN BEND WASH REGIONAL FLOOD CONTROL & DRAINAGE PLAN
  2       ID
  3       ID      MODEL RP7.24I -- SUB-BASIN SERIES 2000 TO 2340 & 39 TO 50
  4       ID
  5       ID      REATA PASS CHANNEL ALIGNMENT ALONG THOMPSON PEAK PARKWAY
  6       ID      100% OF FLOW FROM THE REATA PASS APEX IS DIVERTED WEST TO CAP DIKE 3
  7       ID
  8       ID      A RESERVOIR ROUTING OPERATION IS IN-PLACE FOR CAP DIKE 4.
  9       ID
 10       ID      FUTURE LAND USE CONDITIONS WITH EXISTING DRAINAGE PATTERN
 11       ID
 12       ID      LOW-FLOW CULVERT DIVERTS ARE ACTIVATED
 13       ID
 14       ID      100-YEAR, 24-HOUR STORM, USING SCS TYPE IIA RAINFALL DISTRIBUTION
 15       ID      RAINFALL FROM NOAA ATLAS, USING 25 SQ MI AREAL REDUCTION FACTOR (.968)
 16       ID
 17       ID      LAND USE DENSITIES FROM GENERAL PLAN & TONTO FOOTHILLS PLAN.
 18       ID      PERCENT OF IMPERVIOUS COVER HAS BEEN ADJUSTED TO REFLECT
 19       ID      CITY OF SCOTTSDALE NAOS REQUIREMENTS.
         *DIAGRAM
 20       IT      5 25APR90      0    289
 21       IO      5      0
 22       IN     30 25APR90      0

 23       KK  SUB39
 24       KM      RUNOFF FROM SUB-BASIN 39
 25       BA  1.9302
 26       PB   4.25
 27       PC     0   .005   .009   .010   .013   .019   .021   .028   .032   .044
 28       PC   .057   .100   .660   .745   .776   .800   .816   .830   .840   .850
 29       PC   .861   .868   .878   .884   .891   .900   .905   .912   .919   .923
 30       PC   .930   .934   .939   .944   .950   .958   .961   .963   .969   .971
 31       PC   .974   .979   .981   .985   .989   .991   .993   .996  1.000
 32       LS           85   23.4
 33       UK    330  .0433    .20    100
 34       RK  11240  .0253    .045          TRAP     30      3

 35       KK  SUB40
 36       KM      RUNOFF FROM SUB-BASIN 40
 37       BA   .5844
 38       LS           83    9.9
 39       UK    160  .0627    .20    100
 40       RK   7000  .0350    .045          TRAP     20      3

 41       KK   CP41
 42       KM      COMBINE HYDROGRAPHS SUB39 & SUB40
 43       HC      2

 44       KK  SUB41
 45       KM      RUNOFF FROM SUB-BASIN 41 & ROUTE CP 41
 46       BA   .7911
 47       LS           74   10.1
 48       UK    280  .2386    .20    100
 49       RK   9400  .0282    .045          TRAP     50      3    YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  50      KK  SUB42
  51      KM      RUNOFF FROM SUB-BASIN 42
  52      BA  .5844
  53      LS          78   23.3
  54      UK   280  .2386   .20   100
  55      RK  8750  .0573  .045         TRAP    20     3

  56      KK  SUB43
  57      KM      RUNOFF FROM SUB-BASIN 43
  58      BA 1.0665
  59      LS          85   10.5
  60      UK   260  .0515   .20   100
  61      RK  7400  .0255  .045         TRAP    25     3

  62      KK  SUB44
  63      KM      RUNOFF FROM SUB-BASIN 44
  64      BA  .8389
  65      LS          85    8.1
  66      UK   260  .0515   .20   100
  67      RK  9840  .0622  .045         TRAP    25     3

  68      KK   CP45
  69      KM      COMBINE HYDROGRAPHS SUB43 & SUB44
  70      HC     2

  71      KK  SUB45
  72      KM      RUNOFF FROM SUB-BASIN 45 & ROUTE CP 45
  73      BA  .2037
  74      LS          81   14.5
  75      UK   125  .1166   .20   100
  76      RK  3600  .0366  .045         TRAP    30     3    YES

  77      KK SUB45A
  78      KM      RUNOFF FROM SUB 45A
  79      BA  .1720
  80      LS          86    6.9
  81      UK   275  .2200   .20   100
  82      RK  5400  .0411  .045         TRAP    15     3

  83      KK  SUB46
  84      KM      RUNOFF FROM SUB-BASIN 46
  85      BA  .9268
  86      LS          86    3.7
  87      UK   265  .4958   .20   100
  88      RK  3300  .2271  .045  .111   TRAP    10     3
  89      RK  7100  .0535  .045         TRAP    25     3

  90      KK   CP47
  91      KM      COMBINE HYDROGRAPHS SUB45, SUB45A, & SUB46
  92      HC     3
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  93      KK  SUB47
  94      KM      RUNOFF FROM SUB-BASIN 47 & ROUTE CP 47
  95      BA  .3757
  96      LS          77    8.6
  97      UK   375  .1000    .20    100
  98      RK  9600  .0217    .045          TRAP     50      3     YES

  99      KK  CP48
 100      KM      COMBINE HYDROGRAPHS SUB41, SUB42, & SUB47
 101      HC     3

 102      KK  SUB48
 103      KM      RUNOFF FROM SUB-BASIN 48 & ROUTE CP 48
 104      BA  .0438
 105      LS          73    6.9
 106      UK   150  .0733    .20    100
 107      RK  1300  .0338    .045          TRAP     75      3     YES

 108      KK  SUB50
 109      KM      RUNOFF FROM SUB-BASIN 50
 110      BA  .3580
 111      LS          84    2.8
 112      UK   300  .3555    .20    100
 113      RK   730  .1506    .045   .036   TRAP     10      3
 114      RK  6400  .0453    .045          TRAP     25      3

 115      KK  CP51
 116      KM      COMBINE HYDROGRAPHS SUB48 & SUB50
 117      HC     2

 118      KK  2004    DIV
 119      KM      DIVERT FLOW TO SUB 2005
 120      KM      THIS DIVERT OCCURS AT A BRAIDED CHANNEL BIFURCATION LOCATED 1000 FEET
 121      KM      SOUTH OF THE EAST END OF PINNACLE PEAK ROAD.
 122      KM      THIS IS AN ACTIVE ALLUVIAL FAN APEX.
 123      DT  2003
 124      DI     0  15000  25000
 125      DQ     0      0      0

 126      KK  2000    SUB
 127      KM      RUNOFF FROM SUB 2000
 128      KM      RAINFALL AMOUNT IS CHANGED TO REFLECT TRANSITION INTO A DIFFERENT
 129      KM      GEOGRAPHICAL AREA
 130      BA  .7999
 131      PB  4.15
 132      PC     0  .005  .009  .010  .013  .019  .021  .028  .032  .044
 133      PC  .057  .100  .660  .745  .776  .800  .816  .830  .840  .850
 134      PC  .861  .868  .878  .884  .891  .900  .905  .912  .919  .923
 135      PC  .930  .934  .939  .944  .950  .958  .961  .963  .969  .971
 136      PC  .974  .979  .981  .985  .989  .991  .993  .996 1.000
 137      LS          84    2.6
 138      UK   400  .2750    .25    100
 139      RK  2625  .0785    .045   .072   TRAP     10      3
 140      RK  2300  .0217    .045          TRAP     25      3
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There is no difference between the programs where the Peata Pass Flows are diverted to CAP Dike 3 or CAP dike 4.

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

141       KK   2010     SUB
142       KM        RUNOFF FROM SUB 2010 & ROUTE SUB 2000
143       BA  .0933
144       LS            83     3.7
145       UK    800  .6425    .30     100
146       RK   3000  .0213   .045          TRAP     50      3    YES

147       KK   2003     RET
148       KM        RETRIEVE DIVERTED FLOW FROM DIV 2004
149       DR   2003

150       KK  2003A      CP
151       KM        ROUTE DIVERTED FLOW TO UPSTREAM END OF SUB 2005
152       RS      1   FLOW     -1
153       RC   .055   .045   .055    700  .0200
154       RX      0     35    135    150    225    240    340    375
155       RY     10      3      3      0      0      3      3     10

156       KK   2005     SUB
157       KM        RUNOFF FROM 2005 & ROUTE CP 2003A
158       BA  .1363
159       LS            72    6.70
160       UK    175  .1400    .15     100
161       RK   2600  .0200   .045          TRAP    150      5    YES

162       KK   2011      CP
163       KM        ROUTE SUB 2005 TO CP 2011
164       RS      1   FLOW     -1
165       RC   .055   .045   .055   2200  .0200
166       RX      0     35    135    150    225    240    340    375
167       RY     10      3      3      0      0      3      3     10

168       KK   2012      CP
169       KM        COMBINE SUB 2010 & CP 2011
170       HC      2

171       KK  2015A     SUB
172       KM        RUNOFF FROM SUB 2015A & ROUTE CP 2012
173       BA  .3587
174       LS            82     7.7
175       UK    500  .2800    .25     100
176       RK   2400  .1358   .045    .061   TRAP     10      3
177       RK   4700  .0200   .045          TRAP    150      5    YES

178       KK  2015B     SUB
179       KM        RUNOFF FROM SUB 2015B
180       BA  .0416
181       LS            60    15.4
182       UK    500  .2800    .25     100
183       RK   2000  .0500   .045          TRAP     25      5
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 184      KK   2020     SUB
 185      KM        RUNOFF FROM SUB 2020
 186      BA  .1090
 187      LS            85    4.05
 188      UK    205  .6969    .30    100
 189      RK    900  .3889   .045   .011   TRAP     10      3
 190      RK   2800  .1428   .045          TRAP     20      3

 191      KK   2016     CP
 192      KM        ROUTE SUB 2020 TO CP 2016
 193      RK   1400  .0343   .045          TRAP     20      3

 194      KK   2017     CP
 195      KM        COMBINE SUB 2015A, SUB 2015B, & CP 2016
 196      HC      3

 197      KK   2018    DIV
 198      KM        DIVERT LOW-FLOWS TO SUB 2030A
 199      DT   2019
 200      DI      0    200    800  20000
 201      DQ      0    200    600    700

 202      KK  2030B1     CP
 203      KM        ROUTE NON-DIVERTED FLOW FROM CP 2017 TO CP 2030B1
 204      RS      1   FLOW     -1
 205      RC   .055   .045   .055    850  .0200
 206      RX      0     35    135    150    225    240    340    375
 207      RY     10      3      3      0      0      3      3     10

 208      KK  2030B    SUB
 209      KM        RUNOFF FROM SUB 2030B
 210      BA  .0098
 211      LS            74    32.1
 212      UK    155  .0614    .15    100
 213      RK    800  .0308   .045  .0049   TRAP     10      2
 214      RK    400  .0200   .045          TRAP    150      5

 215      KK  2030B2     CP
 216      KM        COMBINE SUB 2030B & CP 2030B1
 217      HC      2

 218      KK  2080B1     CP
 219      KM        ROUTE CP 2030B2 TO 2080B1
 220      RS      1   FLOW     -1
 221      RC   .055   .045   .055    200  .0200
 222      RX      0     35    135    150    225    240    340    375
 223      RY     10      3      3      0      0      3      3     10

 224      KK   2040    SUB
 225      KM        RUNOFF FROM SUB 2040
 226      BA  .9290
 227      LS            82     8.3
 228      UK    463  .4072    .25    100
 229      RK   2700  .1878   .045   .056   TRAP     10      3
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 230      RK   6800  .0485   .045          TRAP    25     3

 231      KK   2050    SUB
 232      KM       RUNOFF FROM SUB 2050
 233      BA  .8580
 234      LS           81    9.8
 235      UK    530  .5726    .25    100
 236      RK   3400  .2067   .045   .086   TRAP    10     3
 237      RK   6200  .0693   .045          TRAP    25     5

 238      KK   2051     CP
 239      KM       COMBINE SUB 2040 & SUB 2050
 240      HC      2

 241      KK   2060    SUB
 242      KM       RUNOFF FROM SUB 2060 & ROUTE CP 2051
 243      BA  .1542
 244      LS           77   17.80
 245      UK    217  .1667    .20    100
 246      RK   2275  .0929   .045   .031   TRAP    10     5
 247      RK   2400  .0321   .055          TRAP    30    15    YES

 248      KK   2070    SUB
 249      KM       RUNOFF FROM SUB 2070
 250      BA 1.4649
 251      LS           84    4.05
 252      UK    400  .5174    .30    100
 253      RK   1750  .2962   .045   .048   TRAP     5     3
 254      RK   3500  .1236   .045   .483   TRAP    10     3
 255      RK   3400  .0882   .045          TRAP    30    10

 256      KK   2071    DIV
 257      KM       DIVERT FLOW FROM SUB 2070 TO SUB 2130
 258      DT   2072
 259      DI      0   6000
 260      DQ      0   4000

 261      KK   2065    SUB
 262      KM       RUNOFF FROM SUB 2065 & ROUTE NON-DIVERTED FLOW FROM DIV 2071
 263      BA  .1664
 264      LS           73    31.5
 265      UK    200  .0500    .20    100
 266      RK   6800  .0471   .055          TRAP    30    15    YES

 267      KK   2072    RET
 268      KM       RETRIEVE DIVERTED FLOW FROM DIV 2071
 269      DR   2072

 270      KK   2131     CP
 271      KM       ROUTE RET 2072 TO CP 2131
 272      RK   3600  .0555   .045          TRAP   200     1
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  273     KK   2130     SUB
  274     KM        RUNOFF FROM SUB 2130
  275     BA   .2992
  276     LS            83     7.1
  277     UK    267   .3126    .20     100
  278     RK   9240   .0941    .045          TRAP     30     20

  279     KK   2132      CP
  280     KM        COMBINE SUB 2130 & CP 2131
  281     HC      2

  282     KK   2133     DIV
  283     KM        DIVERT FLOW TO SUB 2135
  284     DT   2134
  285     DI      0    500    1000    6000
  286     DQ      0    500     850    4350

  287     KK   2066      CP
  288     KM        ROUTE NON-DIVERTED FLOW FROM DIV 2133 TO CP 2066
  289     RK   2850   .0421    .045          TRAP     30     15

  290     KK   2067      CP
  291     KM        COMBINE SUB 2060, SUB 2065, & CP 2066
  292     HC      3

  293     KK  2080B     SUB
  294     KM        RUNOFF FROM SUB 2080B & ROUTE CP 2067
  295     BA   .0466
  296     LS            70    32.1
  297     UK    175   .0571    .15     100
  298     RK    900   .0325    .045          TRAP     30     15     YES

  299     KK  2080B2      CP
  300     KM        COMBINE SUB 2080B & CP 2080B1
  301     HC      2

  302     KK  2080B3     DIV
  303     KM        DIVERT LOW-FLOWS TO SUB 2080A
  304     DT  2080B4
  305     DI      0    200     600   20000
  306     DQ      0    200     400     500

  307     KK  2140B1      CP
  308     KM        ROUTE NON-DIVERTED FLOW FROM SUB 2080B TO CP 2140B1
  309     RS      1   FLOW      -1
  310     RC   .055    .045    .055    2720   .0200
  311     RX      0     35     135     150     225     240     340     375
  312     RY     10      3       3       0       0       3       3      10
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  313     KK   2134     RET
  314     KM        RETIEVE DIVERTED FLOW FROM DIV 2133
  315     DR   2134

  316     KK   2135     SUB
  317     KM        RUNOFF FROM SUB 2135 & ROUTE RET 2134
  318     BA  .1083
  319     LS            86    19.3            74    19.3
  320     UK    800  .4000    .30     40
  321     UK    200  .0500    .15     60
  322     RK   2700  .0444    .045          TRAP     20      2     YES

  323     KK  2140B     SUB
  324     KM        RUNOFF FROM SUB 2140B & ROUTE SUB 2135
  325     BA  .0768
  326     LS            74    32.1
  327     UK    200  .0500    .15    100
  328     RK   1820  .0461    .045          TRAP     20     10     YES

  329     KK  2140B2     CP
  330     KM        COMBINE SUB 2140B & CP 2140B1
  331     HC      2

  332     KK  2140B3     DIV
  333     KM        DIVERT LOW-FLOWS TO SUB 2160A
  334     DT  2140B4
  335     DI      0     88    1000   20000
  336     DQ      0     88     100     150

  337     KK  2140A1     CP
  338     KM        ROUTE NON-DIVERTED FLOW TO CP 2140A1
  339     RS      1   FLOW     -1
  340     RC   .055   .045    .055    3600   .0200
  341     RX      0     35     135     150     225     240     340     375
  342     RY     10      3       3       0       0       3       3      10

  343     KK  2140A     SUB
  344     KM        RUNOFF FROM SUB 2140A
  345     BA  .1220
  346     LS            74    32.1
  347     UK    200  .0500    .15    100
  348     RK    800  .0500    .045  .0244   TRAP     15      3
  349     RK   3600  .0200    .045          TRAP    150      5

  350     KK  2140A2     CP
  351     KM        COMBINE SUB 2140 & CP 2140A1
  352     HC      2

  353     KK   2150     SUB
  354     KM        RUNOFF FROM SUB 2150
  355     BA  .6873
  356     LS            86    15.0            74    15.0
  357     UK    350  .3428    .30     50
  358     UK    180  .0555    .15     50
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  359     RK   1785  .1313   .045   .027   TRAP    10     3
  360     RK   6400  .0312   .045          TRAP    20    10

  361     KK  2140A3     CP
  362     KM        COMBINE SUB 2150 & CP 2140A2
  363     HC      2

  364     KK  2160C1     CP
  365     KM        ROUTE CP 2140A3 TO CP 2160C1
  366     RS      1   FLOW     -1
  367     RC   .055   .045   .055    900  .0200
  368     RX      0     35    135    150    225    240    340    375
  369     RY     10      3      3      0      0      3      3     10

  370     KK   2160C    SUB
  371     KM        RUNOFF FROM SUB 2160C
  372     BA   .0352
  373     LS            74   32.1
  374     UK    337  .0324    .15    100
  375     RK   2200  .0364   .045          TRAP    15     5

  376     KK   2160B    SUB
  377     KM        RUNOFF FROM SUB 2160B
  378     BA   .1442
  379     LS            75   19.3
  380     UK    337  .0324    .15    100
  381     RK   2275  .0527   .045  .0361   TRAP    15     3
  382     RK    900  .0200   .045          TRAP   150     5

  383     KK  2160C2     CP
  384     KM        COMBINE SUB 2160B, SUB 2160C, & CP 2160C1
  385     HC      3

  386     KK  2160C3    DIV
  387     KM        DIVERT LOW-FLOWS TO SUB 2160A
  388     DT  2160C4
  389     DI      0    200    600  20000
  390     DQ      0    200    400    500

  391     KK  2170B1     CP
  392     KM        ROUTE NON-DIVERTED FLOW TO CP 2170B1
  393     RS      1   FLOW     -1
  394     RC   .055   .045   .055   2760  .0200
  395     RX      0     35    135    150    225    240    340    375
  396     RY     10      3      3      0      0      3      3     10

  397     KK   2170B    SUB
  398     KM        RUNOFF FROM SUB 2170B
  399     BA   .1284
  400     LS            76   34.5
  401     UK    250  .0266    .15    100
  402     RK   4800  .0417   .045          TRAP    20     5
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

403       KK  2170B2      CP
404       KM        COMBINE SUB 2170B & CP 2170B1
405       HC       2

406       KK  2170B3     DIV
407       KM        DIVERT LOW-FLOWS TO SUB 2170A
408       DT  2170B4
409       DI       0    500   20000
410       DQ       0    265     350

411       KK  2190A      CP
412       KM        ROUTE NON-DIVERTED FLOW TO CP 2190A
413       RS       1   FLOW      -1
414       RC    .055   .045    .055     580   .0200
415       RX       0     35     135     150     225     240     340     375
416       RY      10      3       3       0       0       3       3      10

417       KK    2180     SUB
418       KM        RUNOFF FROM SUB 2180
419       BA  1.0044
420       LS            86     2.1
421       UK     468  .4496     .30     100
422       RK    3100  .2558    .045    .121    TRAP      10       3
423       RK    8200  .0731    .045            TRAP      20       5

424       KK    2190     SUB
425       KM        RUNOFF FROM SUB 2190 & ROUTE SUB 2180
426       BA   .1227
427       LS            79    16.7
428       UK     190  .0915     .15     100
429       RK    4100  .0390    .045            TRAP      30      10     YES

430       KK   2190B      CP
431       KM        COMBINE SUB 2190 & CP 2190A
432       HC       2

433       KK    2200     SUB
434       KM        RUNOFF FROM SUB 2200
435       BA   .2532
436       LS            81     7.7
437       UK     353  .1529     .20     100
438       RK    6150  .0838    .045            TRAP       5      11

439       KK    2210     SUB
440       KM        RUNOFF FROM SUB 2210
441       BA  1.7763
442       LS            82     2.9
443       UK     248  .3717     .30     100
444       RK    4500  .1875    .045    .107    TRAP      10       3
445       RK   10000  .0490    .045            TRAP      20      10
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

446       KK  2210A     CP
447       KM       COMBINE CP 2190B, SUB 2200, & SUB 2210
448       HC      3

449       KK  2210B     DIV
450       KM       DIVERT LOW-FLOWS TO SUB 2220A
451       DT  2210C
452       DI      0    200    600  20000
453       DQ      0    200    400    500

454       KK  2220C1     CP
455       KM       ROUTE NON-DIVERTED FLOW TO CP 2220C1
456       RS      1   FLOW     -1
457       RC   .055   .045   .055   1400  .0200
458       RX      0     35    135    150    225    240    340    375
459       RY     10      3      3      0      0      3      3     10

460       KK  2220C     SUB
461       KM       RUNOFF FROM SUB 2220C
462       BA  .0717
463       LS            74   21.9
464       UK    200  .0500    .15    100
465       RK   1800  .0444   .045          TRAP     20      5

466       KK  2220C2     CP
467       KM       COMBINE SUB 2220C & CP 2220C1
468       HC      2

469       KK  2220B1     CP
470       KM       ROUTE CP 2220C2 TO CP 2220B1
471       RS      1   FLOW     -1
472       RC   .055   .045   .055   1350  .0200
473       RX      0     35    135    150    225    240    340    375
474       RY     10      3      3      0      0      3      3     10

475       KK  2220B     SUB
476       KM       RUNOFF FROM SUB 2220B
477       BA  .1650
478       LS            74   21.9
479       UK    200  .0500    .15    100
480       RK   5400  .0435   .045          TRAP     20      5

481       KK  2220B2     CP
482       KM       COMBINE SUB 2220B & CP 2220B1
483       HC      2

484       KK  2220B3     DIV
485       KM       DIVERT LOW-FLOWS TO SUB 2220A
486       DT  2220B4
487       DI      0    500  20000
488       DQ      0    323    400
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

489       KK  2230B1      CP
490       KM        ROUTE NON-DIVERTED FLOW TO CP 2230B1
491       RS      1   FLOW     -1
492       RC   .055   .045   .055   1700   .0200
493       RX      0     35    135    150    225    240    340    375
494       RY     10      3      3      0      0      3      3     10

495       KK   2230B     SUB
496       KM        RUNOFF FROM SUB 2230B
497       BA   .2317
498       LS            74   29.3
499       UK    200  .0500    .15    100
500       RK   7500  .0413   .050          TRAP     10     10

501       KK  2230B2      CP
502       KM        COMBINE SUB 2230B & CP 2230B1
503       HC      2

504       KK  2230B3     DIV
505       KM        DIVERT LOW-FLOWS TO SUB 2230A
506       DT  2230B4
507       DI      0    500  20000
508       DQ      0    235    350

509       KK  2220A2      CP
510       KM        ROUTE NON-DIVERTED FLOW TO DOWNSTREAM END OF REATA PASS CHANNEL
511       RS      1   FLOW     -1
512       RC   .055   .045   .055   3800   .0200
513       RX      0     35    135    150    225    240    340    375
514       RY     10      3      3      0      0      3      3     10

515       KK    2019     RET
516       KM        RETRIEVE LOW-FLOW DIVERTS FROM CP 2017
517       DR    2019

518       KK   2030A     SUB
519       KM        RUNOFF FROM SUB 2030A & ROUTE RET 2019
520       BA   .2317
521       LS            66   27.3
522       UK    155  .0614    .15    100
523       RK   3555  .0355   .045   .047   TRAP     10     10
524       RK   3300  .0262   .045          TRAP     60     20    YES

525       KK  2080B4     RET
526       KM        RETRIEVE LOW-FLOW DIVERT FROM CP 2080B2
527       DR  2080B4

528       KK   2080A     SUB
529       KM        RUNOFF FROM SUB 2080A & ROUTE RET 2080B4
530       BA   .0897
531       LS            70   32.1
532       UK    175  .0571    .15    100
533       RK   3100  .0325   .045          TRAP     30     15    YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

534       KK   2081      CP
535       KM        COMBINE SUB 2030A & SUB 2080A
536       HC      2

537       KK  2090A     SUB
538       KM        RUNOFF FROM SUB 2090A & ROUTE CP 2081
539       BA  .3582
540       LS            71    21.5
541       UK    140  .0285    .15     100
542       RK   9400  .0212    .045          TRAP     50      10     YES

543       KK   2100     SUB
544       KM        RUNOFF FROM SUB 2100
545       BA  .3795
546       LS            73    24.0
547       UK    140  .0285    .15     100
548       RK  14600  .0260    .045          TRAP    100      25

549       KK   2101      CP
550       KM        COMBINE SUB 2090A & SUB 2100
551       HC      2

552       KK   2110     SUB
553       KM        RUNOFF FROM SUB 2110 & ROUTE CP 2101
554       BA  .5180
555       LS            74    26.2
556       UK    200  .0286    .15     100
557       RK   5400  .0129    .045          TRAP     60      15     YES

558       KK  2140B4    RET
559       KM        RETRIEVE LOW-FLOW DIVERTS FROM SUB 2140B
560       DR  2140B4

561       KK  2160A1     CP
562       KM        ROUTE RET 2140B4 THROUGH UPPER PART OF SUB 2160A TO CP 2160A1
563       RK   4800  .0313    .045          TRAP     25       5

564       KK  2160C4    RET
565       KM        RETRIEVE LOW-FLOW DIVERTS FROM CP 2160C2
566       DR  2160C4

567       KK  2160A2     CP
568       KM        COMBINE CP 2160A1 & RET 2160C4
569       HC      2

570       KK   2160A    SUB
571       KM        RUNOFF FROM SUB 2160A & ROUTE CP 2160A2
572       BA  .8186
573       LS            74    32.1
574       UK    337  .0324    .15     100
575       RK   4067  .0231    .045  .0819   TRAP      5       3
576       RK   9700  .0170    .045          TRAP     20      10     YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

577       KK  2170B4     RET
578       KM        RETRIEVE LOW-FLOW DIVERTS FROM SUB 2170B
579       DR  2170B4

580       KK   2170A     SUB
581       KM        RUNOFF FROM SUB 2170A & ROUTE RET 2170B4
582       BA   .3350
583       LS            74    24.2
584       UK    250  .0266    .15    100
585       RK   8400  .0202   .045          TRAP     15     10    YES

586       KK   2210C     RET
587       KM        RETRIEVE LOW-FLOW DIVERTS FROM CP 2210A
588       DR   2210C

589       KK  2220B4     RET
590       KM        RETRIEVE LOW-FLOW DIVERTS FROM SUB 2220B
591       DR  2220B4

592       KK  2220A1      CP
593       KM        COMBINE RET 2210C & RET 2220B4
594       HC       2

595       KK   2220A     SUB
596       KM        RUNOFF FROM SUB 2220A & ROUTE CP 2220A1
597       BA   .3279
598       LS            74    13.8
599       UK    200  .0500    .15    100
600       RK   7600  .0179   .045          TRAP     30     10    YES

601       KK  2230B4     RET
602       KM        RETRIEVE LOW-FLOW DIVERTS FROM SUB 2230B
603       DR  2230B4

604       KK   2230A     SUB
605       KM        RUNOFF FROM SUB 2230A & ROUTE RET 2230B4
606       BA   .0976
607       LS            74    14.0
608       UK    200  .0500    .15    100
609       RK   2200  .0273   .050          TRAP     10     10    YES

610       KK  2230A1      CP
611       KM        ROUTE SUB 2230A TO CAP DIKE No.4
612       RK   1600  .0187   .045          TRAP     10     10

613       KK   2120     SUB
614       KM        RUNOFF FROM SUB 2120
615       BA  1.4255
616       LS            74    28.5
617       UK    115  .0383    .15    100
618       RK  20800  .0234   .045          TRAP    150     50
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

619       KK   2125     SUB
620       KM        RUNOFF FROM SUB-BASIN 2125
621       BA  .0739
622       LS            74     72
623       UK    115  .0383    .15     100
624       RK   3400  .0150   .045          TRAP     15      5

625       KK   2126      CP
626       KM        ROUTE SUB 2125 TO CAP DIKE 4
627       RK   3300  .0130   .030          TRAP     10      3

628       KK  COMB8      CP
629       KM        COMBINE SUB 2120, CP 2126, CP 2230A1, SUB 2220A, SUB 2170A, SUB 2160A,
630       KM        CP 2110, AND CP 2220A2.  THIS COMBINE OPREATION IS PERFORMED IN ORDER
631       KM        TO PROVIDE ADDITIONAL ROUTING SCHEMATIC PLOTTING CAPABILITY FOR THE
632       KM        HEC-1 "DIAGRAM" PLOT.
633       HC      8

634       KK  2240A     SUB
635       KM        RUNOFF FROM SUB 2240A
636       BA  .5919
637       PB   4.15
638       PC      0   .005   .009   .010   .013   .019   .021   .028   .032   .044
639       PC   .057   .100   .660   .745   .776   .800   .816   .830   .840   .850
640       PC   .861   .868   .878   .884   .891   .900   .905   .912   .919   .923
641       PC   .930   .934   .939   .944   .950   .958   .961   .963   .969   .971
642       PC   .974   .979   .981   .985   .989   .991   .993   .996  1.000
643       LS            74   25.80
644       UK    200  .0500    .15     100
645       RK   9600  .0354   .045          TRAP      8     10

646       KK   2260     SUB
647       KM        RUNOFF FROM SUB 2260
648       BA  .2647
649       LS            76   20.90
650       UK    200  .0500    .15     100
651       RK  11130  .0500   .045          TRAP      8     10

652       KK   2255     SUB
653       KM        RUNOFF FROM SUB 2255
654       BA  .2955
655       LS            86   14.60            74   14.60
656       UK    465  .6014    .25      40
657       UK    350  .0628    .15      60
658       RK   1360  .1536   .045    .030   TRAP      5      3
659       RK   4400  .0386   .045          TRAP     10      3

660       KK   2270     SUB
661       KM        RUNOFF FROM SUB 2270
662       BA  .9714
663       LS            86    12.5            74    12.5
664       UK    270  .5185    .30      40
665       UK    300  .2000    .15      60
666       RK   3120  .1137   .045    .097   TRAP     10      3
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

667       RK   4500  .0333   .045          TRAP    15     3

668       KK   2271     CP
669       KM       COMBINE SUB 2255 & SUB 2270
670       HC     2

671       KK   2250    SUB
672       KM       RUNOFF FROM SUB 2250 & ROUTE CP 2271
673       BA  .2239
674       LS           82  18.40
675       UK    130  .1696    .15    100
676       RK   1625  .0867   .045   .027   TRAP     5     3
677       RK   4000  .0200   .045          TRAP    30     5   YES

678       KK   2251     CP
679       KM       COMBINE SUB 2250 & SUB 2260
680       HC     2

681       KK   2280    SUB
682       KM       RUNOFF FROM SUB 2280 & ROUTE CP 2251
683       BA  .1808
684       LS           75   18.1
685       UK    300  .0300    .15    100
686       RK   3200  .0187   .045          TRAP    35     5   YES

687       KK   2290    SUB
688       KM       RUNOFF FROM SUB 2290
689       BA  .6005
690       LS           82  13.90
691       UK    300  .0499    .15    100
692       RK   9000  .0367   .045          TRAP    10     4

693       KK   2300    SUB
694       KM       RUNOFF FROM SUB 2300
695       BA 1.8007
696       LS           84    1.9
697       UK    303  .4881    .30    100
698       RK   1310  .2150   .045   .047   TRAP     5     1
699       RK   2928  .1451   .045   .306   TRAP    10     3
700       RK   9600  .0577   .045          TRAP    75    10

701       KK   2301    DIV
702       KM       DIVERT FLOW AT FAN APEX TO SUB 2330
703       DT   2302
704       DI     0   6000
705       DQ     0   3000

706       KK   2310    SUB
707       KM       RUNOFF FROM SUB 2310 & ROUTE NON-DIVERTED FLOW FROM DIV 2301
708       BA  .3035
709       LS           81   11.2
710       UK    200  .0550    .15    100
711       RK  10300  .0446   .045          TRAP    30     3   YES
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  712     KK   2320    SUB
  713     KM       RUNOFF FROM SUB 2320
  714     BA  .3723
  715     LS           79   14.0
  716     UK    200  .0500    .15    100
  717     RK   7200  .0416   .045          TRAP     15      3

  718     KK   2321    CP
  719     KM       COMBINE SUB 2240, SUB 2280, SUB 2290, SUB 2310, & SUB 2320
  720     HC      5

  721     KK   2302    RET
  722     KM       RETRIEVE DIVERTED FLOW FROM DIV 2301 (SUB 2300)
  723     DR   2302

  724     KK   2331    CP
  725     KM       ROUTE DIVERTED FLOW FROM SUB 2300 TO CP 2331
  726     RK   3600  .0472   .045          TRAP     30      3

  727     KK   2330    SUB
  728     KM       RUNOFF FROM SUB 2330
  729     BA  .4807
  730     LS           82    6.0
  731     UK    352  .3911    .25    100
  732     RK   1920  .2283   .045   .048   TRAP     10      3
  733     RK   5760  .0738   .045          TRAP     30      3

  734     KK   2332    CP
  735     KM       COMBINE SUB 2330 & CP 2331
  736     HC      2

  737     KK   2335    SUB
  738     KM       RUNOFF FROM SUB 2335 & ROUTE CP 2332
  739     BA  .3515
  740     LS           74   34.8
  741     UK    150  .0600    .15    100
  742     RK   7400  .0382   .045          TRAP     30     25    YES

  743     KK   2340    SUB
  744     KM       RUNOFF FROM SUB 2340
  745     KM       D.A. HAS BEEN REDUCED FROM THAT USED IN THE NORTH SCOTTSDALE GENERAL
  746     KM       PLAN TO REFLECT TIE-IN TO CAP DIKE4
  747     BA  .2776
  748     LS           86   44.4          74   44.4
  749     UK    500  .4000    .30     30
  750     UK    160  .0625    .15     70
  751     RK   7050  .0526   .045          TRAP     10      3

  752     KK   2322    CP
  753     KM       COMBINE SUB 2335, SUB 2340, & CP 2321
  754     KM       THIS IS THE TOTAL INFLOW FROM MODEL GN50.24I TO CAP DIKE NO.4
  755     HC      3
1
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 756        KK    4IN      CP
 757        KM       COMBINE CP D1 & CP 2322
 758        KM       THIS IS THE TOTAL INFLOW TO CAP DIKE NO. 4
 759        HC     2

 760        KK   DIKE4     DAM
 761        KM       ROUTE CP 4IN THROUGH CAP DIKE NO. 4
 762        RS     1    STOR
 763        SV     0     2    13    45    98   171   265   404   595   824
 764        SV  1098  1420  1800  2253  2782  3381  4069  4854  5728  6686
 765        SE  1496  1498  1500  1502  1504  1506  1508  1510  1512  1514
 766        SE  1516  1518  1520  1522  1524  1526  1528  1530  1532  1534
 767        SS  1533   100   2.9   1.5
 768        ST  1534   100   2.9   1.5
 769        ZZ
```

SCHEMATIC DIAGRAM OF STREAM NETWORK

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

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

  23     SUB39
           .
           .
  35       .     SUB40
           .       .
           .       .
  41     CP41............
           V
           V
  44     SUB41 ***
           .
           .
  50       .     SUB42
           .       .
           .       .
  56       .       .     SUB43
           .       .       .
           .       .       .
  62       .       .       .     SUB44
           .       .       .       .
           .       .       .       .
  68       .       .     CP45............
           .       .       V
           .       .       V
  71       .       .     SUB45 ***
           .       .       .
           .       .       .
  77       .       .       .     SUB45A
           .       .       .       .
           .       .       .       .
  83       .       .       .       .     SUB46
           .       .       .       .       .
           .       .       .       .       .
  90       .       .     CP47........................
           .       .       V
           .       .       V
  93       .       .     SUB47 ***
           .       .       .
           .       .       .
  99     CP48........................
           V
           V
 102     SUB48 ***
           .
           .
 108       .     SUB50
           .       .
           .       .
 115     CP51............
           .
           .
 123       .-------->   2003
 118     2004
           .
           .
 126       .     2000
           .       V
           .       V
```

```
141     .     2010 ***
        .     .
        .     .
149     .     .     .<-------   2003
147     .     .   2003
        .     .     V
        .     .     V
150     .     .   2003A
        .     .     V
        .     .     V
156     .     .   2005 ***
        .     .     V
        .     .     V
162     .     .   2011
        .     .     .
        .     .     .
168     .   2012.............
        .     V
        .     V
171     .   2015A ***
        .     .
        .     .
178     .     .   2015B
        .     .     .
        .     .     .
184     .     .     .     2020
        .     .     .       V
        .     .     .       V
191     .     .     .     2016
        .     .     .       .
        .     .     .       .
194     .   2017........................
        .     .
        .     .
199     .     .------->   2019
197     .   2018
        .     V
        .     V
202     .   2030B1
        .     .
        .     .
208     .     .   2030B
        .     .     .
        .     .     .
215     .   2030B2.............
        .     V
        .     V
218     .   2080B1
        .     .
        .     .
224     .     .   2040
        .     .     .
        .     .     .
231     .     .     .     2050
        .     .     .       .
        .     .     .       .
238     .     .   2051.............
        .     .     V
        .     .     V
241     .     .   2060 ***
        .     .     .
        .     .     .
248     .     .     .     2070
        .     .     .       .
        .     .     .       .
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```
258     .       .       .       .-------> 2072
256     .       .       .     2071
        .       .       .      V
        .       .       .      V
261     .       .       .     2065 ***
        .       .       .      .
        .       .       .      .
269     .       .       .       .      .<------- 2072
267     .       .       .       .    2072
        .       .       .       .     V
        .       .       .       .     V
270     .       .       .       .    2131
        .       .       .       .     .
        .       .       .       .     .
273     .       .       .       .      .     2130
        .       .       .       .     .       .
        .       .       .       .     .       .
279     .       .       .       .    2132............
        .       .       .       .     .
        .       .       .       .     .
284     .       .       .       .      .-------> 2134
282     .       .       .       .    2133
        .       .       .       .     V
        .       .       .       .     V
287     .       .       .       .    2066
        .       .       .       .     .
        .       .       .       .     .
290     .       .     2067........................
        .       .      V
        .       .      V
293     .       .     2080B ***
        .       .      .
        .       .      .
299     .     2080B2............
        .       .
        .       .
304     .       .-------> 2080B4
302     .     2080B3
        .       V
        .       V
307     .     2140B1
        .       .
        .       .
315     .       .       .<------- 2134
313     .       .     2134
        .       .      V
        .       .      V
316     .       .     2135 ***
        .       .      V
        .       .      V
323     .       .     2140B ***
        .       .      .
        .       .      .
329     .     2140B2............
        .       .
        .       .
334     .       .-------> 2140B4
332     .     2140B3
        .       V
        .       V
337     .     2140A1
        .       .
        .       .
343     .       .     2140A
        .       .      .
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          .        .        .
350       .     2140A2............
          .        .
          .        .
353       .        .        2150
          .        .        .
          .        .        .
361       .     2140A3............
          .        V
          .        V
364       .     2160C1
          .        .
          .        .
370       .        .        2160C
          .        .        .
          .        .        .
376       .        .        .        2160B
          .        .        .        .
          .        .        .        .
383       .     2160C2........................
          .        .
          .        .
388       .        .-------> 2160C4
386       .     2160C3
          .        V
          .        V
391       .     2170B1
          .        .
          .        .
397       .        .        2170B
          .        .        .
          .        .        .
403       .     2170B2............
          .        .
          .        .
408       .        .-------> 2170B4
406       .     2170B3
          .        V
          .        V
411       .     2190A
          .        .
          .        .
417       .        .        2180
          .        .         V
          .        .         V
424       .        .        2190 ***
          .        .        .
          .        .        .
430       .     2190B............
          .        .
          .        .
433       .        .        2200
          .        .        .
          .        .        .
439       .        .        .        2210
          .        .        .        .
          .        .        .        .
446       .     2210A........................
          .        .
          .        .
451       .        .-------> 2210C
449       .     2210B
          .        V
          .        V
454       .     2220C1
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          .        .
          .        .
460       .        .      2220C
          .        .        .
          .        .        .
466       .     2220C2............
          .       V
          .       V
469       .     2220B1
          .        .
          .        .
475       .        .      2220B
          .        .        .
          .        .        .
481       .     2220B2............
          .        .
          .        .
486       .        .-------> 2220B4
484       .     2220B3
          .       V
          .       V
489       .     2230B1
          .        .
          .        .
495       .        .      2230B
          .        .        .
          .        .        .
501       .     2230B2............
          .        .
          .        .
506       .        .-------> 2230B4
504       .     2230B3
          .       V
          .       V
509       .     2220A2
          .        .
          .        .
517       .        .        .<-------   2019
515       .        .      2019
          .        .        V
          .        .        V
518       .        .      2030A ***
          .        .        .
          .        .        .
527       .        .        .        .<-------  2080B4
525       .        .        .     2080B4
          .        .        .        V
          .        .        .        V
528       .        .        .     2080A ***
          .        .        .        .
          .        .        .        .
534       .        .      2081............
          .        .        V
          .        .        V
537       .        .      2090A ***
          .        .        .
          .        .        .
543       .        .        .      2100
          .        .        .        .
          .        .        .        .
549       .        .      2101............
          .        .        V
          .        .        V
552       .        .      2110 ***
          .        .        .
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                .   .   .
560             .   .   .       .<------- 2140B4
558             .   .   .   2140B4
                .   .   .     V
                .   .   .     V
561             .   .   .   2160A1
                .   .   .     .
                .   .   .     .
566             .   .   .     .       .<------- 2160C4
564             .   .   .     .     2160C4
                .   .   .     .       .
                .   .   .     .       .
567             .   .   .   2160A2.............
                .   .   .     V
                .   .   .     V
570             .   .   .   2160A ***
                .   .   .     .
                .   .   .     .
579             .   .   .     .       .<------- 2170B4
577             .   .   .     .     2170B4
                .   .   .     .       V
                .   .   .     .       V
580             .   .   .     .     2170A ***
                .   .   .     .       .
                .   .   .     .       .
588             .   .   .     .       .       .<------- 2210C
586             .   .   .     .       .     2210C
                .   .   .     .       .       .
                .   .   .     .       .       .
591             .   .   .     .       .       .       .<------- 2220B4
589             .   .   .     .       .       .     2220B4
                .   .   .     .       .       .       .
                .   .   .     .       .       .       .
592             .   .   .     .       .     2220A1.............
                .   .   .     .       .       V
                .   .   .     .       .       V
595             .   .   .     .       .     2220A ***
                .   .   .     .       .       .
                .   .   .     .       .       .
603             .   .   .     .       .       .       .<------- 2230B4
601             .   .   .     .       .       .     2230B4
                .   .   .     .       .       .       V
                .   .   .     .       .       .       V
604             .   .   .     .       .       .     2230A ***
                .   .   .     .       .       .       V
                .   .   .     .       .       .       V
610             .   .   .     .       .       .     2230A1
                .   .   .     .       .       .       .
                .   .   .     .       .       .       .
613             .   .   .     .       .       .       .       2120
                .   .   .     .       .       .       .       .
                .   .   .     .       .       .       .       .
619             .   .   .     .       .       .       .       .       2125
                .   .   .     .       .       .       .       .         V
                .   .   .     .       .       .       .       .         V
625             .   .   .     .       .       .       .       .       2126
                .   .   .     .       .       .       .       .         .
                .   .   .     .       .       .       .       .         .
628             .   COMB8.......................................................
                .   .
                .   .
634             .   .   2240A
                .   .     .
                .   .     .
646             .   .   .   2260
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          .         .         .         .
          .         .         .         .
652       .         .         .         .         2255
          .         .         .         .         .
          .         .         .         .         .
660       .         .         .         .         .         2270
          .         .         .         .         .         .
          .         .         .         .         .         .
668       .         .         .         .         2271............
          .         .         .         .         V
          .         .         .         .         V
671       .         .         .         .         2250 ***
          .         .         .         .         .
          .         .         .         .         .
678       .         .         .         2251............
          .         .         .         V
          .         .         .         V
681       .         .         .         2280 ***
          .         .         .         .
          .         .         .         .
687       .         .         .         .         2290
          .         .         .         .         .
          .         .         .         .         .
693       .         .         .         .         .         2300
          .         .         .         .         .         .
          .         .         .         .         .         .
703       .         .         .         .         .         .-------->   2302
701       .         .         .         .         .         2301
          .         .         .         .         .         V
          .         .         .         .         .         V
706       .         .         .         .         .         2310 ***
          .         .         .         .         .         .
          .         .         .         .         .         .
712       .         .         .         .         .         .         2320
          .         .         .         .         .         .         .
          .         .         .         .         .         .         .
718       .         .         2321.............................................
          .         .         .
          .         .         .
723       .         .         .         .<-------   2302
721       .         .         .         2302
          .         .         .         V
          .         .         .         V
724       .         .         .         2331
          .         .         .         .
          .         .         .         .
727       .         .         .         .         2330
          .         .         .         .         .
          .         .         .         .         .
734       .         .         .         2332............
          .         .         .         V
          .         .         .         V
737       .         .         .         2335 ***
          .         .         .         .
          .         .         .         .
743       .         .         .         .         2340
          .         .         .         .         .
          .         .         .         .         .
752       .         .         2322........................
          .         .         .
          .         .         .
756       .         4IN............
          .         V
          .         V
760       .         DIKE4
```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

1 ****

FLOOD HYDROGRAPH PACKAGE HEC-1 (IBM XT 512K VERSION) -FEB 1,1985
U.S. ARMY CORPS OF ENGINEERS, THE HYDROLOGIC ENGINEERING CENTER, 609 SECOND STREET, DAVIS, CA. 95616
****

UPPER INDIAN BEND WASH REGIONAL FLOOD CONTROL & DRAINAGE PLAN

MODEL RP7.24I -- SUB-BASIN SERIES 2000 TO 2340 & 39 TO 50

REATA PASS CHANNEL ALIGNMENT ALONG THOMPSON PEAK PARKWAY
100% OF FLOW FROM THE REATA PASS APEX IS DIVERTED WEST TO CAP DIKE 3

A RESERVOIR ROUTING OPERATION IS IN-PLACE FOR CAP DIKE 4.

FUTURE LAND USE CONDITIONS WITH EXISTING DRAINAGE PATTERN

LOW-FLOW CULVERT DIVERTS ARE ACTIVATED

100-YEAR, 24-HOUR STORM, USING SCS TYPE IIA RAINFALL DISTRIBUTION
RAINFALL FROM NOAA ATLAS, USING 25 SQ MI AREAL REDUCTION FACTOR (.968)

LAND USE DENSITIES FROM GENERAL PLAN & TONTO FOOTHILLS PLAN.
PERCENT OF IMPERVIOUS COVER HAS BEEN ADJUSTED TO REFLECT
CITY OF SCOTTSDALE NAOS REQUIREMENTS.

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

  IT         HYDROGRAPH TIME DATA
               NMIN        5  MINUTES IN COMPUTATION INTERVAL
              IDATE   25APR90  STARTING DATE
              ITIME     0000  STARTING TIME
                 NQ      289  NUMBER OF HYDROGRAPH ORDINATES
             NDDATE   26APR90  ENDING DATE
             NDTIME     0000  ENDING TIME

            COMPUTATION INTERVAL     .08 HOURS
              TOTAL TIME BASE   24.00 HOURS

       ENGLISH UNITS

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN      122. TO    42087.
          THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
          THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN     9817. TO    42087.
          THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
          THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN      122. TO    42087.
          THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
          THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN        0. TO    42087.
          THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
          THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN    18313. TO    42087.
          THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
          THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)
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*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 122. TO 42087.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 18313. TO 42087.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 122. TO 42087.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 780. TO 42087.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 780. TO 42087.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 1278. TO 42087.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

1

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

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT SUB39	4477.	6.08	489.	148.	148.	1.93			
+	HYDROGRAPH AT SUB40	1343.	6.08	132.	40.	40.	.58			
+	2 COMBINED AT CP41	5821.	6.08	622.	187.	187.	2.51			
+	HYDROGRAPH AT SUB41	6325.	6.17	775.	234.	234.	3.31			
+	HYDROGRAPH AT SUB42	1252.	6.08	126.	38.	38.	.58			
+	HYDROGRAPH AT SUB43	2512.	6.08	255.	77.	77.	1.07			
+	HYDROGRAPH AT SUB44	1951.	6.08	198.	60.	60.	.84			
+	2 COMBINED AT CP45	4463.	6.08	453.	137.	137.	1.91			
+	HYDROGRAPH AT SUB45	4602.	6.08	498.	150.	150.	2.11			
+	HYDROGRAPH AT SUB45A	425.	6.08	43.	13.	13.	.17			
+	HYDROGRAPH AT SUB46	2271.	6.08	230.	68.	68.	.93			
+	3 COMBINED AT CP47	7298.	6.08	771.	231.	231.	3.21			
+	HYDROGRAPH AT SUB47	7150.	6.17	870.	261.	261.	3.58			
+	3 COMBINED AT CP48	14513.	6.17	1769.	533.	533.	7.47			
+	HYDROGRAPH AT SUB48	14273.	6.17	1774.	535.	535.	7.52			
+	HYDROGRAPH AT SUB50	824.	6.08	81.	24.	24.	.36			
+	2 COMBINED AT CP51	14935.	6.17	1855.	560.	560.	7.88			
+	DIVERSION TO 2003	0.	6.17	0.	0.	0.	7.88			
+	HYDROGRAPH AT 2004	14935.	6.17	1855.	560.	560.	7.88			

	HYDROGRAPH AT							
+	2000	1745.	6.08	173.	52.	52.	.80	
	HYDROGRAPH AT							
+	2010	1729.	6.08	196.	59.	59.	.89	
	HYDROGRAPH AT							
+	2003	0.	.08	0.	0.	0.	.00	
	ROUTED TO							
+	2003A	0.	.08	0.	0.	0.	.00	
	HYDROGRAPH AT							
+	2005	179.	6.08	19.	6.	6.	.14	
	ROUTED TO							
+	2011	114.	6.25	19.	6.	6.	.14	
+							.49	6.25
	2 COMBINED AT							
+	2012	1805.	6.08	215.	65.	65.	1.03	
	HYDROGRAPH AT							
+	2015A	2154.	6.25	296.	90.	90.	1.39	
	HYDROGRAPH AT							
+	2015B	33.	6.08	4.	1.	1.	.04	
	HYDROGRAPH AT							
+	2020	256.	6.08	25.	8.	8.	.11	
	ROUTED TO							
+	2016	247.	6.08	26.	8.	8.	.11	
	3 COMBINED AT							
+	2017	2414.	6.08	326.	99.	99.	1.54	
	DIVERSION TO							
+	2019	608.	6.08	191.	65.	65.	1.54	
	HYDROGRAPH AT							
+	2018	1806.	6.08	135.	34.	34.	1.54	
	ROUTED TO							
+	2030B1	1902.	6.17	135.	34.	34.	1.54	
+							2.65	6.17
	HYDROGRAPH AT							
+	2030B	20.	6.08	2.	1.	1.	.01	
	2 COMBINED AT							
+	2030B2	1917.	6.17	137.	35.	35.	1.55	
	ROUTED TO							
+	2080B1	1949.	6.17	137.	35.	35.	1.55	
+							2.68	6.17
	HYDROGRAPH AT							
+	2040	1945.	6.08	193.	58.	58.	.93	
	HYDROGRAPH AT							
+	2050	1757.	6.08	174.	53.	53.	.86	
	2 COMBINED AT							

+	2051	3702.	6.08	367.	111.	111.	1.79	
	HYDROGRAPH AT							
+	2060	3569.	6.08	398.	120.	120.	1.94	
	HYDROGRAPH AT							
+	2070	3255.	6.08	320.	97.	97.	1.46	
	DIVERSION TO							
+	2072	2170.	6.08	214.	64.	64.	1.46	
	HYDROGRAPH AT							
+	2071	1085.	6.08	107.	32.	32.	1.46	
	HYDROGRAPH AT							
+	2065	1309.	6.17	139.	42.	42.	1.63	
	HYDROGRAPH AT							
+	2072	2170.	6.08	214.	64.	64.	.00	
	ROUTED TO							
+	2131	2081.	6.17	218.	66.	66.	.00	
	HYDROGRAPH AT							
+	2130	567.	6.08	64.	19.	19.	.30	
	2 COMBINED AT							
+	2132	2591.	6.17	281.	85.	85.	.30	
	DIVERSION TO							
+	2134	1964.	6.17	246.	76.	76.	.30	
	HYDROGRAPH AT							
+	2133	627.	6.17	36.	9.	9.	.30	
	ROUTED TO							
+	2066	628.	6.25	37.	9.	9.	.30	
	3 COMBINED AT							
+	2067	5455.	6.17	574.	172.	172.	3.87	
	HYDROGRAPH AT							
+	2080B	5455.	6.17	582.	175.	175.	3.92	
	2 COMBINED AT							
+	2080B2	7404.	6.17	719.	210.	210.	5.47	
	DIVERSION TO							
+	2080B4	435.	6.17	216.	84.	84.	5.47	
	HYDROGRAPH AT							
+	2080B3	6969.	6.17	503.	126.	126.	5.47	
	ROUTED TO							
+	2140B1	6128.	6.25	503.	126.	126.	5.47	
+							4.36	6.25
	HYDROGRAPH AT							
+	2134	1964.	6.17	246.	76.	76.	.00	
	HYDROGRAPH AT							
+	2135	2038.	6.17	267.	83.	83.	.11	
	HYDROGRAPH AT							
+	2140B	2106.	6.17	282.	88.	88.	.19	

	2 COMBINED AT							
+	2140B2	7988.	6.25	785.	214.	214.	5.65	
	DIVERSION TO							
+	2140B4	118.	6.25	83.	38.	38.	5.65	
	HYDROGRAPH AT							
+	2140B3	7870.	6.25	702.	176.	176.	5.65	
	ROUTED TO							
+	2140A1	6929.	6.33	702.	176.	176.	5.65	
+							4.57	6.33
	HYDROGRAPH AT							
+	2140A	192.	6.17	25.	8.	8.	.12	
	2 COMBINED AT							
+	2140A2	7031.	6.33	727.	183.	183.	5.77	
	HYDROGRAPH AT							
+	2150	1357.	6.08	142.	43.	43.	.69	
	2 COMBINED AT							
+	2140A3	7407.	6.33	869.	226.	226.	6.46	
	ROUTED TO							
+	2160C1	7403.	6.33	869.	226.	226.	6.46	
+							4.70	6.33
	HYDROGRAPH AT							
+	2160C	64.	6.08	7.	2.	2.	.04	
	HYDROGRAPH AT							
+	2160B	225.	6.08	26.	8.	8.	.14	
	3 COMBINED AT							
+	2160C2	7531.	6.33	903.	237.	237.	6.64	
	DIVERSION TO							
+	2160C4	436.	6.33	185.	57.	57.	6.64	
	HYDROGRAPH AT							
+	2160C3	7095.	6.33	717.	179.	179.	6.64	
	ROUTED TO							
+	2170B1	6679.	6.42	717.	179.	179.	6.64	
+							4.51	6.42
	HYDROGRAPH AT							
+	2170B	259.	6.08	28.	9.	9.	.13	
	2 COMBINED AT							
+	2170B2	6748.	6.42	745.	188.	188.	6.77	
	DIVERSION TO							
+	2170B4	292.	6.42	79.	21.	21.	6.77	
	HYDROGRAPH AT							
+	2170B3	6456.	6.42	666.	167.	167.	6.77	
	ROUTED TO							
+	2190A	6467.	6.42	666.	167.	167.	6.77	
+							4.45	6.42

	HYDROGRAPH AT							
+	2180	2279.	6.08	231.	69.	69.	1.00	
	HYDROGRAPH AT							
+	2190	2262.	6.17	260.	78.	78.	1.13	
	2 COMBINED AT							
+	2190B	7342.	6.42	926.	245.	245.	7.90	
	HYDROGRAPH AT							
+	2200	508.	6.08	50.	15.	15.	.25	
	HYDROGRAPH AT							
+	2210	3417.	6.08	349.	106.	106.	1.78	
	3 COMBINED AT							
+	2210A	8946.	6.17	1325.	367.	367.	9.93	
	DIVERSION TO							
+	2210C	443.	6.17	244.	96.	96.	9.93	
	HYDROGRAPH AT							
+	2210B	8503.	6.17	1081.	270.	270.	9.93	
	ROUTED TO							
+	2220C1	8214.	6.25	1081.	270.	270.	9.93	
+							4.89	6.25
	HYDROGRAPH AT							
+	2220C	134.	6.08	13.	4.	4.	.07	
	2 COMBINED AT							
+	2220C2	8258.	6.25	1095.	275.	275.	10.00	
	ROUTED TO							
+	2220B1	8401.	6.25	1095.	275.	275.	10.00	
+							4.94	6.25
	HYDROGRAPH AT							
+	2220B	299.	6.08	30.	9.	9.	.17	
	2 COMBINED AT							
+	2220B2	8533.	6.25	1125.	284.	284.	10.16	
	DIVERSION TO							
+	2220B4	355.	6.25	107.	28.	28.	10.16	
	HYDROGRAPH AT							
+	2220B3	8178.	6.25	1018.	256.	256.	10.16	
	ROUTED TO							
+	2230B1	7970.	6.33	1018.	256.	256.	10.16	
+							4.84	6.33
	HYDROGRAPH AT							
+	2230B	370.	6.08	46.	14.	14.	.23	
	2 COMBINED AT							
+	2230B2	8149.	6.33	1064.	270.	270.	10.39	
	DIVERSION TO							
+	2230B4	280.	6.33	75.	20.	20.	10.39	
	HYDROGRAPH AT							
+	2230B3	7869.	6.33	989.	249.	249.	10.39	

	ROUTED TO							
+	2220A2	7366.	6.50	989.	249.	249.	10.39	
+							4.69	6.50
	HYDROGRAPH AT							
+	2019	608.	6.08	191.	65.	65.	.00	
	HYDROGRAPH AT							
+	2030A	913.	6.17	227.	76.	76.	.23	
	HYDROGRAPH AT							
+	2080B4	435.	6.17	216.	84.	84.	.00	
	HYDROGRAPH AT							
+	2080A	576.	6.08	232.	89.	89.	.09	
	2 COMBINED AT							
+	2081	1462.	6.17	459.	166.	166.	.32	
	HYDROGRAPH AT							
+	2090A	1465.	6.33	509.	183.	183.	.68	
	HYDROGRAPH AT							
+	2100	245.	6.42	68.	21.	21.	.38	
	2 COMBINED AT							
+	2101	1706.	6.33	576.	204.	204.	1.06	
	HYDROGRAPH AT							
+	2110	1924.	6.33	666.	234.	234.	1.58	
	HYDROGRAPH AT							
+	2140B4	118.	6.25	83.	38.	38.	.00	
	ROUTED TO							
+	2160A1	114.	6.42	82.	38.	38.	.00	
	HYDROGRAPH AT							
+	2160C4	436.	6.33	185.	57.	57.	.00	
	2 COMBINED AT							
+	2160A2	549.	6.33	266.	95.	95.	.00	
	HYDROGRAPH AT							
+	2160A	1472.	6.25	425.	145.	145.	.82	
	HYDROGRAPH AT							
+	2170B4	292.	6.42	79.	21.	21.	.00	
	HYDROGRAPH AT							
+	2170A	579.	6.25	143.	40.	40.	.34	
	HYDROGRAPH AT							
+	2210C	443.	6.17	244.	96.	96.	.00	
	HYDROGRAPH AT							
+	2220B4	355.	6.25	107.	28.	28.	.00	
	2 COMBINED AT							
+	2220A1	795.	6.17	350.	125.	125.	.00	
	HYDROGRAPH AT							
+	2220A	1160.	6.17	399.	141.	141.	.33	

	HYDROGRAPH AT						
+	2230B4	280.	6.33	75.	20.	20.	.00
	HYDROGRAPH AT						
+	2230A	390.	6.17	92.	26.	26.	.10
	ROUTED TO						
+	2230A1	387.	6.17	92.	26.	26.	.10
	HYDROGRAPH AT						
+	2120	912.	6.50	278.	87.	87.	1.43
	HYDROGRAPH AT						
+	2125	191.	6.08	22.	7.	7.	.07
	ROUTED TO						
+	2126	182.	6.17	23.	7.	7.	.07
	8 COMBINED AT						
+	COMB8	13223.	6.42	3012.	929.	929.	15.05
	HYDROGRAPH AT						
+	2240A	917.	6.08	113.	35.	35.	.59
	HYDROGRAPH AT						
+	2260	366.	6.17	50.	16.	16.	.26
	HYDROGRAPH AT						
+	2255	550.	6.00	59.	18.	18.	.30
	HYDROGRAPH AT						
+	2270	1868.	6.00	193.	58.	58.	.97
	2 COMBINED AT						
+	2271	2418.	6.00	252.	76.	76.	1.27
	HYDROGRAPH AT						
+	2250	2806.	6.08	309.	93.	93.	1.49
	2 COMBINED AT						
+	2251	3149.	6.08	359.	109.	109.	1.76
	HYDROGRAPH AT						
+	2280	3172.	6.17	393.	119.	119.	1.94
	HYDROGRAPH AT						
+	2290	1192.	6.08	128.	39.	39.	.60
	HYDROGRAPH AT						
+	2300	3893.	6.08	380.	115.	115.	1.80
	DIVERSION TO						
+	2302	1947.	6.08	190.	58.	58.	1.80
	HYDROGRAPH AT						
+	2301	1947.	6.08	190.	58.	58.	1.80
	HYDROGRAPH AT						
+	2310	2215.	6.08	264.	80.	80.	2.10
	HYDROGRAPH AT						
+	2320	746.	6.08	73.	22.	22.	.37
	5 COMBINED AT						
+	2321	8170.	6.08	970.	296.	296.	5.61

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     HYDROGRAPH AT
+                2302   1947.  6.08     190.     58.     58.     .00

     ROUTED TO
+                2331   1874.  6.17     192.     58.     58.     .00

     HYDROGRAPH AT
+                2330   1015.  6.08     100.     30.     30.     .48

     2 COMBINED AT
+                2332   2721.  6.17     292.     88.     88.     .48

     HYDROGRAPH AT
+                2335   3275.  6.17     375.    114.    114.     .83

     HYDROGRAPH AT
+                2340    628.  6.00      70.     21.     21.     .28

     3 COMBINED AT
+                2322  11552.  6.17    1413.    431.    431.    6.71

     2 COMBINED AT
+                 4IN  20866.  6.25    4420.   1360.   1360.   21.76

     ROUTED TO
+               DIKE4      0.   .08       0.      0.      0.   21.76
+                                                            1523.68    24.00
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SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION DIKE4

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1496.00	1533.00	1534.00
STORAGE	0.	6207.	6686.
OUTFLOW	0.	0.	290.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	MAXIMUM OVER TOP HOURS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1523.68	.00	2696.	0.	.00	.00	.00	

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