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Flood Control District of Maricopa County

Volume II- Appendices

Hydrology Study

Dambreak Analyses for Powerline, Vineyard, and Rittenhouse Flood Retarding Structures (FCD 88-37)

August 1989

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VOLUME II

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APPENDIX A

References

APPENDIX A

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APPENDIX B

HEC-1 Input and Output Files

APPENDIX B

This appendix contains printouts for the following HEC-1 computer models:

Flood	Drainage Areas	File Names
100-year	Vineyard and Rittenhouse	DM1IN, DM1OUT
50-year	Vineyard and Rittenhouse	DM2IN, DM2OUT
25-year	Vineyard and Rittenhouse	DM3IN, DM3OUT
25- and 50-year	Powerline	DM4IN, DM4OUT
PMF (6-hour)	Vineyard and Rittenhouse	DM5IN, DM5OUT
PMF (72-hour)	Vineyard and Rittenhouse	DM6IN, DM6OUT
100-year	Powerline	FCDP100, FCDP100O
PMF (6-hour)	Powerline	FCDP6, FCDP6O
PMF (72-hour)	Powerline	FCDP72, FCDP72O

DM1 - Vineyard & Rittenhouse
100-year

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

****

THIS HEC-1 VERSION CONTAINS ALL OPTIONS EXCEPT ECONOMICS, AND THE NUMBER OF PLANS ARE REDUCED TO 3

1 HEC-1 INPUT PAGE 1

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

              *DIAGRAM
   1          ID    VINEYARD AND RITTENHOUSE F.R.S. ANALYSIS
   2          ID    100-YEAR, 24-HOUR STORM: SCS EXCESS & HYDROGRAPH DEVELOPMENT.
   3          ID    MUSKINGUM ROUTING
   4          ID    TIME INCREMENT = 5 MINUTES
   5          ID    FILENAME = DM1IN, DM1OUT
   6          IT      5      0      0    300
   7          IO      5
   8          IN     15
   9          JD   4.14   0.25
  10          PC      0   .002   .005   .008   .011   .014   .017   .020   .023   .026
  11          PC   .029   .032   .035   .038   .041   .044   .048   .052   .056   .060
  12          PC   .064   .068   .072   .076   .080   .085   .090   .095   .100   .105
  13          PC   .110   .115   .120   .126   .133   .140   .147   .155   .163   .172
  14          PC   .181   .191   .203   .218   .236   .257   .283   .387   .663   .707
  15          PC   .735   .758   .766   .791   .804   .815   .825   .834   .842   .849
  16          PC   .856   .863   .869   .875   .881   .887   .893   .898   .903   .908
  17          PC   .913   .918   .922   .926   .930   .934   .938   .942   .946   .950
  18          PC   .953   .956   .959   .962   .965   .968   .971   .974   .977   .980
  19          PC   .983   .986   .992   .995   .998  1.000
  20          JD   4.06    5.0
  21          JD   3.85   15.0
  22          JD   3.73   30.0
  23          JD   3.60   53.0

  24          KK   SUBR1
  25          KM    HYDROGRAPH FOR SUBBASIN R1
  26          BA   1.56
  27          LS      0    80.
  28          UD    .72

  29          KK   RR2a
  30          KM   ROUTE HYDROGRAPH FROM SUBBASIN R1 TO R2 ACROSS HWY 60
  31          RS      1   STOR      0
  32          SA      0      1     26    115    224    326
  33          SE   1800 1810.6   1820   1830   1840   1850
  34          SQ      0    290    692   1204   2198   6601  17223  34714
  35          SE 1810.6   1812   1813   1814 1815.9 1818.5 1819.5 1820.5

  36          KK   RR2-1
  37          KM    ROUTE HYDROGRAPH FROM SUBBASIN R1 THRU REACH R2-1
```

```
38          RM      9    1.06      .3

39          KK   RR2-2
40          KM     ROUTE HYDROGRAPH FROM SUBBASIN R1 THRU REACH R2-2
41          RM      9    1.06      .3

42          KK   RR2-3
43          KM     ROUTE HYDROGRAPH FROM SUBBASIN R1 THRU REACH R2-3
44          RM      9    1.06      .3
```



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

45          KK   SUBR2
46          KM     HYDROGRAPH FOR SUBBASIN R2
47          BA    8.43
48          LS      0     78.
49          UD    1.90

50          KK    HCR2
51          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R1 & R2
52          HC      2

53          KK   SUBR3
54          KM     HYDROGRAPH FOR SUBBASIN R3
55          BA    1.10
56          LS      0     81.
57          UD     .69

58          KK    RR4a
59          KM    ROUTE HYDROGRAPH FROM SUBBASIN R3 TO R4 ACROSS HWY 60
60          RS      1    STOR      0
61          SA      0       1      26     115     205
62          SE  1823.4  1827.8    1840    1850    1860
63          SQ      0     412    1127    1832    9597   23670   46850
64          SE  1827.8    1830    1832  1833.6    1837    1838    1839

65          KK   RR4-1
66          KM     ROUTE HYDROGRAPH FROM SUBBASIN R3 THRU REACH R4-1
67          RM      7     .85      .3

68          KK   RR4-2
69          KM     ROUTE HYDROGRAPH FROM SUBBASIN R3 THRU REACH R4-2
70          RM      7     .85      .3

71          KK   SUBR4
72          KM     HYDROGRAPH FOR SUBBASIN R4
73          BA    2.67
74          LS      0     78.
75          UD    1.01

76          KK    HCR4
77          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R3 & R4
78          HC      2

79          KK   SUBR5
80          KM     HYDROGRAPH FOR SUBBASIN R5
81          BA    2.71
82          LS      0     88.
```

```
 83          UD     .39

 84          KK     RR6
 85          KM     ROUTE HYDROGRAPH FROM SUBBASIN R5
 86          RM      5     .51      .3
```



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

 87          KK   SUBR6
 88          KM     HYDROGRAPH FOR SUBBASIN R6
 89          BA    4.19
 90          LS      0     87.
 91          UD     .70

 92          KK    HCR6
 93          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R5 & R6
 94          HC      2

 95          KK     RR7
 96          KM     ROUTE HYDROGRAPH FROM SUBBASINS R5 & R6
 97          RM      6     .68      .3

 98          KK   SUBR7
 99          KM     HYDROGRAPH FOR SUBBASIN R7
100          BA    2.67
101          LS      0     86.
102          UD     .41

103          KK    HCR7
104          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R5 THRU R7
105          HC      2

106          KK   RR8-1
107          KM     ROUTE HYDROGRAPH FROM SUBBASINS R5 THRU R7 THRU REACH R8-1
108          RM      6     .70      .3

109          KK   RR8-2
110          KM     ROUTE HYDROGRAPH FROM SUBBASINS R5 THRU R7 THRU REACH R8-2
111          RM      6     .70      .3

112          KK   SUBR8
113          KM     HYDROGRAPH FOR SUBBASIN R8
114          BA    2.00
115          LS      0     79.
116          UD     .83

117          KK    HCR8
118          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R5 THRU R8
119          HC      2

120          KK    RR9a
121          KM    ROUTE HYDROGRAPH FROM SUBBASINS R5 THRU R8 TO R9 ACROSS HWY 60
122          RS      1    STOR      0
123          SA      0       1     26      77     141
124          SE  1813.9  1829.5   1840    1850    1860
125          SQ      0     563   2236    4601    5986   27109
126          SE  1829.5    1831   1833    1835    1836    1840
```

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

 127          KK     RR9
 128          KM     ROUTE HYDROGRAPH FROM SUBBASINS R5 THRU R8
 129          RM       4     .44      .3

 130          KK   SUBR9
 131          KM     HYDROGRAPH FOR SUBBASIN R9
 132          BA    0.26
 133          LS       0     74.
 134          UD     .27

 135          KK    HCR9
 136          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R5 THRU R9
 137          HC       2

 138          KK  SUBR10
 139          KM     HYDROGRAPH FOR SUBBASIN R10
 140          BA    3.35
 141          LS       0     84.
 142          UD     .92

 143          KK  SUBR11
 144          KM     HYDROGRAPH FOR SUBBASIN R11
 145          BA    3.90
 146          LS       0     84.
 147          UD     .78

 148          KK   HCR11
 149          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R10 & R11
 150          HC       2

 151          KK    RR12
 152          KM     ROUTE HYDROGRAPH FROM SUBBASINS R10 & R11
 153          RM       5     .55      .3

 154          KK  SUBR12
 155          KM     HYDROGRAPH FOR SUBBASIN R12
 156          BA    4.46
 157          LS       0     81.
 158          UD     .76

 159          KK   HCR12
 160          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R10 THRU R12
 161          HC       2

 162          KK   RR13a
 163          KM    ROUTE HYDROGRAPH FROM SUBBASINS R10 THRU R12 TO R13 ACROSS HWY 60
 164          RS       1    STOR       0
 165          SA       0       1      83     186     358
 166          SE  1793.6  1819.4    1840    1850    1860
 167          SQ       0    2071    5240    9357   14240   18616   62142
 168          SE  1819.4    1822    1824    1826    1828  1829.6  1834.5
```


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

```
169          KK    RR13
170          KM     ROUTE HYDROGRAPH FROM SUBBASINS R10 THRU R13
171          RM       4     .41      .3

172          KK  SUBR13
173          KM     HYDROGRAPH FOR SUBBASIN R13
174          BA    1.27
175          LS       0     81.
176          UD     .85

177          KK  HCR13a
178          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R10 THRU R13
179          HC       2

180          KK  HCR13b
181          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R5 THRU R13
182          HC       2

183          KK    RR14
184          KM     ROUTE HYDROGRAPH FROM SUBBASINS R5 THRU R13
185          RM       9    1.10      .3

186          KK  SUBR14
187          KM     HYDROGRAPH FOR SUBBASIN R14
188          BA    2.82
189          LS       0     77.
190          UD     .76

191          KK  HCR14a
192          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R5 THRU R14
193          HC       2

194          KK  HCR14b
195          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R3 THRU R14
196          HC       2

197          KK  RR15-1
198          KM     ROUTE HYDROGRAPH FROM SUBBASINS R3 THRU R14 THRU REACH R15-1
199          RM       5     .63      .3

200          KK  RR15-2
201          KM     ROUTE HYDROGRAPH FROM SUBBASINS R3 THRU R14 THRU REACH R15-2
202          RM       5     .63      .3

203          KK  SUBR15
204          KM     HYDROGRAPH FOR SUBBASIN R15
205          BA    6.30
206          LS       0     79.
207          UD    1.47
```



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

208          KK  HCR15a
209          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R3 THRU R15
210          HC       2

211          KK  HCR15b
212          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R1 THRU R15
```

```
213          HC      2

214          KK   HDR16
215          KM     DIVERT FLOW FROM RITTENHOUSE (TO VINEYARD FRS)
216          DT   DVR16
217          DI      0     100     500    1000  100000
218          DQ      0      50     105     105     105

219          KK    RESR
220          KM    RESERVOIR ROUTING THRU RITTENHOUSE F.R.S.
221          KO      1       2
222          RS      1    STOR       0
223          SA      0     118     200     400     600     800
224          SE   1585  1587.5  1589.1  1592.9  1596.5  1600.5
225          SL 1577.7    5.94     .62     1.5
226          SS 1597.6     600       3     1.5
227          ST 1602.3   19000     3.3     1.5

228          KK   SUBV1
229          KM     HYDROGRAPH FOR SUBBASIN V1
230          BA   3.03
231          LS      0     85.
232          UD    .53

233          KK   SUBV2
234          KM     HYDROGRAPH FOR SUBBASIN V2
235          BA   3.34
236          LS      0     84.
237          UD    .47

238          KK     RV3
239          KM     ROUTE HYDROGRAPH FROM SUBBASIN V2
240          RM      4     .38      .3

241          KK   SUBV3
242          KM     HYDROGRAPH FOR SUBBASIN V3
243          BA   0.40
244          LS      0     81.
245          UD    .30

246          KK    HCV3
247          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V1 THRU V3
248          HC      3
```



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

249          KK     RV4
250          KM     ROUTE HYDROGRAPH FROM SUBBASINS V1 THRU V3
251          RM      4     .43      .3

252          KK   SUBV4
253          KM     HYDROGRAPH FOR SUBBASIN V4
254          BA   1.85
255          LS      0     81.      15
256          UD    .52

257          KK    HCV4
258          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V1 THRU V4
```

```
259          HC      2

260          KK    RV5
261          KM    ROUTE HYDROGRAPH FROM SUBBASINS V1 THRU V4
262          RM      8     .66      .3

263          KK   SUBV5
264          KM    HYDROGRAPH FOR SUBBASIN V5
265          BA   1.66
266          LS      0     82.
267          UD    .45

268          KK   HCV5
269          KM   COMBINE HYDROGRAPHS FOR SUBBASINS V1 THRU V5
270          HC      2

271          KK   RV6a
272          KM   ROUTE HYDROGRAPH FROM SUBBASINS V1 THRU V5 TO V6 ACROSS HWY 60
273          RS      1    STOR      0
274          SA      0      1      45     147     205
275          SE  1719.9  1739.7   1750    1760    1770
276          SQ      0     387   2348    6889   19775   36999
277          SE  1739.7  1740.7  1742.7  1745.6    1749    1750

278          KK   RV6-1
279          KM    ROUTE HYDROGRAPH FROM SUBBASINS V1 THRU V5 THRU REACH RV6-1
280          RM      9     .83      .3

281          KK   RV6-2
282          KM    ROUTE HYDROGRAPH FROM SUBBASINS V1 THRU V5 THRU REACH RV6-2
283          RM      9     .83      .3

284          KK   SUBV6
285          KM    HYDROGRAPH FOR SUBBASIN V6
286          BA   3.59
287          LS      0     70.
288          UD    .99
```



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

289          KK   HCV6
290          KM    COMBINE HYDROGRAPHS FOR SUBBASINS V1 THRU V6
291          HC      2

292          KK   SUBV7
293          KM    HYDROGRAPH FOR SUBBASIN V7
294          BA   1.69
295          LS      0     86.
296          UD    .74

297          KK   SUBV8
298          KM    HYDROGRAPH FOR SUBBASIN V8
299          BA   0.73
300          LS      0     81.     50
301          UD    .33

302          KK   HCV8
303          KM    COMBINE HYDROGRAPHS FOR SUBBASINS V7 & V8
```

```
304          HC       2

305          KK     RV9
306          KM     ROUTE HYDROGRAPH FROM SUBBASINS V7 & V8
307          RM       3     .23      .3

308          KK   SUBV9
309          KM     HYDROGRAPH FOR SUBBASIN V9
310          BA    0.95
311          LS       0     83.
312          UD     .41

313          KK    HCV9
314          KM    COMBINE HYDROGRAPHS FOR SUBBASINS V7 THRU V9
315          HC       2

316          KK   RV10a
317          KM    ROUTE HYDROGRAPH FROM SUBBASINS V7 THRU V9 TO V10 ACROSS HWY 60
318          RS       1    STOR       0
319          SA       0      19      77     179     294
320          SE    1745    1770    1780    1790    1800
321          SQ       0    1211    3230    6108    9716   14201   63126
322          SE    1773    1775    1777    1779    1781  1783.3  1788.5

323          KK  RV10-1
324          KM     ROUTE HYDROGRAPH FROM SUBBASINS V7 THRU V9 THRU REACH V10-1
325          RM       9     .86      .3

326          KK  RV10-2
327          KM     ROUTE HYDROGRAPH FROM SUBBASINS V7 THRU V9 THRU REACH V10-2
328          RM       9     .86      .3
```



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

329          KK  RV10-3
330          KM     ROUTE HYDROGRAPH FROM SUBBASINS V7 THRU V9 THRU REACH V10-3
331          RM       9     .86      .3

332          KK  SUBV10
333          KM     HYDROGRAPH FOR SUBBASIN V10
334          BA    5.48
335          LS       0     82.
336          UD    1.54

337          KK   HCV10
338          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V7 THRU V10
339          HC       2

340          KK  SUBV11
341          KM     HYDROGRAPH FOR SUBBASIN V11
342          BA    0.44
343          LS       0     85.
344          UD     .93

345          KK   RV12a
346          KM    ROUTE HYDROGRAPH FROM SUBBASIN V11 TO V12 ACROSS HWY 60
347          RS       1    STOR       0
348          SA       0      32      64      96
```

```
349          SE  1773.7    1790    1800    1810
350          SQ       0      24     237     363    5249   12106   38086
351          SE  1773.7  1774.7  1778.7  1780.7  1784.5  1785.5  1787.5

352          KK  RV12-1
353          KM     ROUTE HYDROGRAPH FROM SUBBASIN V11 THRU REACH V12-1
354          RM       9    1.15      .3

355          KK  RV12-2
356          KM     ROUTE HYDROGRAPH FROM SUBBASIN V11 THRU REACH V12-2
357          RM       9    1.15      .3

358          KK  SUBV12
359          KM     HYDROGRAPH FOR SUBBASIN V12
360          BA    3.32
361          LS       0     82.
362          UD    1.38

363          KK   HCV12
364          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V11 & V12
365          HC       2

366          KK  SUBV13
367          KM     HYDROGRAPH FOR SUBBASIN V13
368          BA    2.35
369          LS       0     85.
370          UD     .99
```



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

371          KK   RV14a
372          KM    ROUTE HYDROGRAPH FROM SUBBASIN V13 TO V14 ACROSS HWY 60
373          RS       1    STOR       0
374          SA       0       1      38      96     154
375          SE  1780.4  1786.9    1800    1810    1820
376          SQ       0     120     372    1191    1925   16426   62329
377          SE  1786.9    1788    1789  1791.5    1794    1796    1798

378          KK  RV14-1
379          KM     ROUTE HYDROGRAPH FROM SUBBASIN V13 THRU REACH V14-1
380          RM       9     .96      .3

381          KK  RV14-2
382          KM     ROUTE HYDROGRAPH FROM SUBBASIN V13 THRU REACH V14-2
383          RM       9     .96      .3

384          KK  RV14-3
385          KM     ROUTE HYDROGRAPH FROM SUBBASIN V13 THRU REACH V14-3
386          RM       9     .96      .3

387          KK  SUBV14
388          KM     HYDROGRAPH FOR SUBBASIN V14
389          BA    4.09
390          LS       0     82.
391          UD    1.73

392          KK   HCV14
393          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V13 & V14
```

```
394          HC      2

395          KK  SUBV15
396          KM    HYDROGRAPH FOR SUBBASIN V15
397          BA   1.64
398          LS      0     85.
399          UD    .62

400          KK   RV16a
401          KM    ROUTE HYDROGRAPH FROM SUBBASIN V15 TO V16 ACROSS HWY 60
402          RS      1    STOR       0
403          SA      0       1      58     141     160
404          SE  1779.4    1786    1800    1810    1820
405          SQ      0     192     572    1061    1866    9058   26139
406          SE   1786  1787.5    1789  1790.5  1792.6    1796    1797

407          KK    RV16
408          KM    ROUTE HYDROGRAPH FROM SUBBASIN V15
409          RM      4     .48      .3

410          KK  SUBV16
411          KM    HYDROGRAPH FOR SUBBASIN V16
412          BA   0.76
413          LS      0     85.
414          UD    .29
```



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

415          KK   HCV16
416          KM    COMBINE HYDROGRAPHS FOR SUBBASINS V15 & V16
417          HC      2

418          KK  SUBV17
419          KM    HYDROGRAPH FOR SUBBASIN V17
420          BA   4.06
421          LS      0     87.
422          UD    .69

423          KK    RV18
424          KM    ROUTE HYDROGRAPH FROM SUBBASIN V17
425          RM      9    1.14      .3

426          KK  SUBV18
427          KM    HYDROGRAPH FOR SUBBASIN V18
428          BA   5.06
429          LS      0     85.
430          UD    .93

431          KK   HCV18
432          KM    COMBINE HYDROGRAPHS FOR SUBBASINS V17 & V18
433          HC      2

434          KK    RV19
435          KM    ROUTE HYDROGRAPH FROM SUBBASINS V17 & V18
436          RM      6     .38      .3

437          KK  SUBV19
438          KM    HYDROGRAPH FOR SUBBASIN V19
```

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12320 281. . . . . 0 . . . . . .
12325 282.       .       .       .       .  0    .       .       .       .       .       .       .
12330 283.       .       .       .       .  0    .       .       .       .       .       .       .
12335 284.       .       .       .       .  0    .       .       .       .       .       .       .
12340 285.       .       .       .       .  0    .       .       .       .       .       .       .
12345 286.       .       .       .       . 0     .       .       .       .       .       .       .
12350 287.       .       .       .       . 0     .       .       .       .       .       .       .
12355 288.       .       .       .       . 0     .       .       .       .       .       .       .
20000 289.       .       .       .       . 0     .       .       .       .       .       .       .
20005 290.       .       .       .       . 0     .       .       .       .       .       .       .
20010 291. . . . . . . . . . . . . . . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . .
20015 292.       .       .       .       . 0     .       .       .       .       .       .       .
20020 293.       .       .       .       . 0     .       .       .       .       .       .       .
20025 294.       .       .       .       . 0     .       .       .       .       .       .       .
20030 295.       .       .       .       . 0     .       .       .       .       .       .       .
20035 296.       .       .       .       . 0     .       .       .       .       .       .       .
20040 297.       .       .       .       . 0     .       .       .       .       .       .       .
20045 298.       .       .       .       . 0     .       .       .       .       .       .       .
20050 299.       .       .       .       . 0     .       .       .       .       .       .       .
20055 300.---------.---------.---------.---------.---------.--0------.---------.---------.---------.---------.---------.---------.
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*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN    19775. TO    36999.
                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    70561.
                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     1925. TO   337747.
                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     9058. TO    77382.
                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     1226.
                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.)


*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***


          **************
          *            *
486 KK    *      RESV  *
          *            *
          **************

488 KO          OUTPUT CONTROL VARIABLES
                     IPRNT          1  PRINT CONTROL
                     IPLOT          2  PLOT CONTROL
                     QSCAL         0.  HYDROGRAPH PLOT SCALE

             HYDROGRAPH ROUTING DATA
```

```
489 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

490 SA            AREA          .0      65.0     200.0     400.0     600.0     800.0    1000.0    1200.0

491 SE        ELEVATION     1564.20   1565.00   1566.60   1569.50   1571.80   1574.20   1576.10   1579.20

492 SL        LOW-LEVEL OUTLET
                   ELEVL     1561.50  ELEVATION AT CENTER OF OUTLET
                   CAREA       15.90  CROSS-SECTIONAL AREA
                    COQL         .70  COEFFICIENT
                    EXPL        1.50  EXPONENT OF HEAD

493 SS        SPILLWAY
                    CREL     1574.80  SPILLWAY CREST ELEVATION
                   SPWID      600.00  SPILLWAY WIDTH
                    COQW        3.00  WEIR COEFFICIENT
                    EXPW        1.50  EXPONENT OF HEAD

494 ST        TOP OF DAM
                   TOPEL     1579.50  ELEVATION AT TOP OF DAM
                  DAMWID    28829.00  DAM WIDTH
                    COQD        3.30  WEIR COEFFICIENT
                    EXPD        1.50  EXPONENT OF HEAD
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***

COMPUTED STORAGE-ELEVATION DATA

STORAGE	.00	17.33	219.47	1072.90	2215.18	3889.36	5595.86	9001.12
ELEVATION	1564.20	1565.00	1566.60	1569.50	1571.80	1574.20	1576.10	1579.20

COMPUTED OUTFLOW-ELEVATION DATA

(EXCLUDING FLOW OVER DAM)

OUTFLOW	.00	579.78	813.08	1101.82	1451.91	1869.30	2359.81	2929.45	3584.08	4329.62
ELEVATION	1564.20	1564.98	1565.86	1566.84	1567.92	1569.10	1570.37	1571.75	1573.23	1574.80
OUTFLOW	4490.64	4809.33	5388.79	6306.65	7639.98	9465.85	11863.04	14908.50	18681.66	23259.61
ELEVATION	1574.94	1575.12	1575.37	1575.70	1576.10	1576.57	1577.12	1577.74	1578.43	1579.20

COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

(INCLUDING FLOW OVER DAM)

STORAGE	.00	16.14	17.33	99.16	219.47	269.37	536.29	918.36	1072.90	1453.39
OUTFLOW	396.01	579.78	584.48	813.08	1028.07	1101.82	1451.91	1869.30	2019.78	2359.81
ELEVATION	1564.20	1564.98	1565.00	1565.86	1566.60	1566.84	1567.92	1569.10	1569.50	1570.37
STORAGE	2185.56	2215.18	3151.59	3889.36	4387.56	4508.02	4666.85	4896.32	5202.67	5593.78
OUTFLOW	2929.45	2950.72	3584.08	4039.92	4329.62	4490.64	4809.33	5388.79	6306.65	7639.98
ELEVATION	1571.75	1571.80	1573.23	1574.20	1574.80	1574.94	1575.12	1575.37	1575.70	1576.10
STORAGE	6074.04	6646.43	7318.59	8100.04	9001.12					
OUTFLOW	9465.85	11863.04	14908.50	18681.66	23259.61					

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439          BA    2.77
440          LS       0     84.
441          UD     .59

442          KK   HCV19
443          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V17 THRU V19
444          HC       2

445          KK   RV20a
446          KM    ROUTE HYDROGRAPH FROM SUBBASINS V17 THRU V19 TO V20 ACROSS HWY 60
447          RS       1    STOR       0
448          SA       0       1      13      51     154     294
449          SE    1768  1796.4    1800    1810    1820    1830
450          SQ       0    1226    4652    9549   16620   41739
451          SE  1796.4    1798    1800    1802  1804.3  1808.5

452          KK    RV20
453          KM     ROUTE HYDROGRAPH FROM SUBBASINS V17 THRU V19
454          RM       6     .72      .3
```



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


455          KK  SUBV20
456          KM     HYDROGRAPH FOR SUBBASIN V20
457          BA    0.48
458          LS       0     81.
459          UD     .43

460          KK  HCV20a
461          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V17 THRU V20
462          HC       2

463          KK  HCV20b
464          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V15 THRU V20
465          HC       2

466          KK    RV21
467          KM     ROUTE HYDROGRAPH FROM SUBBASINS V15 THRU V20
468          RM       9    1.21      .3

469          KK  SUBV21
470          KM     HYDROGRAPH FOR SUBBASIN V21
471          BA    4.43
472          LS       0     80.
473          UD    1.83

474          KK  HCV21a
475          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V15 THRU V21
476          HC       2

477          KK  HCV21b
478          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V1 THRU V21
479          HC       5

480          KK  HCV22a
481          KM     DIVERSION FROM RITTENHOUSE FRS
482          DR   DVR16
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483          KK  HCV22b
484          KM     COMBINING DIVERSION WITH UPSTREAM HYDROGRAPH
485          HC       2

486          KK    RESV
487          KM    RESERVOIR ROUTING THRU VINEYARD F.R.S.
488          KO       1       2
489          RS       1    STOR       0
490          SA       0      65     200     400     600     800    1000    1200
491          SE  1564.2    1565  1566.6  1569.5  1571.8  1574.2  1576.1  1579.2
492          SL  1561.5    15.9      .7     1.5
493          SS  1574.8     600       3     1.5
494          ST  1579.5   28829     3.3     1.5
495          ZZ
```

```
I
                SCHEMATIC DIAGRAM OF STREAM NETWORK
INPUT
 LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

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

   24       SUBR1
                V
                V
   29        RR2a
                V
                V
   36       RR2-1
                V
                V
   39       RR2-2
                V
                V
   42       RR2-3
                .
                .
   45           .       SUBR2
                .           .
                .           .
   50        HCR2............
                .
                .
   53           .       SUBR3
                .           V
                .           V
   58           .        RR4a
                .           V
                .           V
   65           .       RR4-1
                .           V
                .           V
   68           .       RR4-2
                .           .
                .           .
   71           .           .       SUBR4
                .           .           .
                .           .           .
   76           .        HCR4............
                .           .
                .           .
```

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79          .           .       SUBR5
            .           .         V
            .           .         V
84          .           .       RR6
            .           .         .
            .           .         .
87          .           .         .       SUBR6
            .           .         .         .
            .           .         .         .
92          .           .       HCR6............
            .           .         V
            .           .         V
95          .           .       RR7
            .           .         .
            .           .         .
98          .           .         .       SUBR7
            .           .         .         .
            .           .         .         .
103         .           .       HCR7............
            .           .         V
            .           .         V
106         .           .       RR8-1
            .           .         V
            .           .         V
109         .           .       RR8-2
            .           .         .
            .           .         .
112         .           .         .       SUBR8
            .           .         .         .
            .           .         .         .
117         .           .       HCR8............
            .           .         V
            .           .         V
120         .           .       RR9a
            .           .         V
            .           .         V
127         .           .       RR9
            .           .         .
            .           .         .
130         .           .         .       SUBR9
            .           .         .         .
            .           .         .         .
135         .           .       HCR9............
            .           .         .
            .           .         .
138         .           .         .       SUBR10
            .           .         .         .
            .           .         .         .
143         .           .         .         .       SUBR11
            .           .         .         .         .
            .           .         .         .         .
148         .           .         .       HCR11............
            .           .         .         V
            .           .         .         V
151         .           .         .       RR12
            .           .         .         .
            .           .         .         .
154         .           .         .         .       SUBR12
            .           .         .         .         .
            .           .         .         .         .
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```
159          .          .          .      HCR12............
             .          .          .        V
             .          .          .        V
162          .          .          .      RR13a
             .          .          .        V
             .          .          .        V
169          .          .          .      RR13
             .          .          .        .
             .          .          .        .
172          .          .          .        .      SUBR13
             .          .          .        .          .
             .          .          .        .          .
177          .          .          .    HCR13a...........
             .          .          .        .
             .          .          .        .
180          .          .     HCR13b...........
             .          .          V
             .          .          V
183          .          .       RR14
             .          .          .
             .          .          .
186          .          .          .    SUBR14
             .          .          .        .
             .          .          .        .
191          .          .     HCR14a...........
             .          .          .
             .          .          .
194          .     HCR14b...........
             .          V
             .          V
197          .     RR15-1
             .          V
             .          V
200          .     RR15-2
             .          .
             .          .
203          .          .     SUBR15
             .          .          .
             .          .          .
208          .     HCR15a...........
             .          .
             .          .
211     HCR15b...........
             .
             .
216          .-------> DVR16
214      HDR16
             V
             V
219       RESR
             .
             .
228          .      SUBV1
             .          .
             .          .
233          .          .      SUBV2
             .          .          V
             .          .          V
238          .          .       RV3
             .          .          .
```

```
241          .          .          .
             .          .          .      SUBV3
             .          .          .          .
             .          .          .          .
246          .       HCV3.......................
             .          V
             .          V
249          .        RV4
             .          .
             .          .
252          .          .      SUBV4
             .          .          .
             .          .          .
257          .       HCV4............
             .          V
             .          V
260          .        RV5
             .          .
             .          .
263          .          .      SUBV5
             .          .          .
             .          .          .
268          .       HCV5............
             .          V
             .          V
271          .       RV6a
             .          V
             .          V
278          .      RV6-1
             .          V
             .          V
281          .      RV6-2
             .          .
             .          .
284          .          .      SUBV6
             .          .          .
             .          .          .
289          .       HCV6............
             .          .
             .          .
292          .          .      SUBV7
             .          .          .
             .          .          .
297          .          .          .      SUBV8
             .          .          .          .
             .          .          .          .
302          .          .       HCV8............
             .          .          V
             .          .          V
305          .          .        RV9
             .          .          .
             .          .          .
308          .          .          .      SUBV9
             .          .          .          .
             .          .          .          .
313          .          .       HCV9............
             .          .          V
             .          .          V
316          .          .      RV10a
             .          .          V
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                 .         .         V
323              .         .     RV10-1
                 .         .         V
                 .         .         V
326              .         .     RV10-2
                 .         .         V
                 .         .         V
329              .         .     RV10-3
                 .         .         .
                 .         .         .
332              .         .         .     SUBV10
                 .         .         .         .
                 .         .         .         .
337              .         .      HCV10............
                 .         .         .
                 .         .         .
340              .         .         .     SUBV11
                 .         .         .         V
                 .         .         .         V
345              .         .         .      RV12a
                 .         .         .         V
                 .         .         .         V
352              .         .         .     RV12-1
                 .         .         .         V
                 .         .         .         V
355              .         .         .     RV12-2
                 .         .         .         .
                 .         .         .         .
358              .         .         .         .     SUBV12
                 .         .         .         .         .
                 .         .         .         .         .
363              .         .         .         .    HCV12............
                 .         .         .         .
                 .         .         .         .
366              .         .         .         .     SUBV13
                 .         .         .         .         V
                 .         .         .         .         V
371              .         .         .         .      RV14a
                 .         .         .         .         V
                 .         .         .         .         V
378              .         .         .         .     RV14-1
                 .         .         .         .         V
                 .         .         .         .         V
381              .         .         .         .     RV14-2
                 .         .         .         .         V
                 .         .         .         .         V
384              .         .         .         .     RV14-3
                 .         .         .         .         .
                 .         .         .         .         .
387              .         .         .         .         .     SUBV14
                 .         .         .         .         .         .
                 .         .         .         .         .         .
392              .         .         .         .      HCV14............
                 .         .         .         .         .
                 .         .         .         .         .
395              .         .         .         .         .     SUBV15
                 .         .         .         .         .         V
                 .         .         .         .         .         V
400              .         .         .         .         .      RV16a
                 .         .         .         .         .         V
```

```
407                                  RV16
                                       .
                                       .
410                                    .      SUBV16
                                       .         .
                                       .         .
415                                  HCV16............
                                       .
                                       .
418                                    .      SUBV17
                                       .         V
                                       .         V
423                                    .       RV18
                                       .         .
                                       .         .
426                                    .         .      SUBV18
                                       .         .         .
                                       .         .         .
431                                    .      HCV18............
                                       .         V
                                       .         V
434                                    .       RV19
                                       .         .
                                       .         .
437                                    .         .      SUBV19
                                       .         .         .
                                       .         .         .
442                                    .      HCV19............
                                       .         V
                                       .         V
445                                    .      RV20a
                                       .         V
                                       .         V
452                                    .       RV20
                                       .         .
                                       .         .
455                                    .         .      SUBV20
                                       .         .         .
                                       .         .         .
460                                    .      HCV20a...........
                                       .         .
                                       .         .
463                                  HCV20b............
                                       V
                                       V
466                                  RV21
                                       .
                                       .
469                                    .      SUBV21
                                       .         .
                                       .         .
474                                  HCV21a...........
                                       .
                                       .
477                  HCV21b.............................................
                       .
                       .
482                    .        .<-------   DVR16
480                    .     HCV22a
```

```
                .          .          .
                .          .          .
  483           .      HCV22b...      ....
                .          V
                .          V
  486           .        RESV

(***) 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
                                                     ****


                    VINEYARD AND RITTENHOUSE F.R.S. ANALYSIS
                    100-YEAR, 24-HOUR STORM; SCS EXCESS & HYDROGRAPH DEVELOPMENT,
                    MUSKINGUM ROUTING
                    TIME INCREMENT = 5 MINUTES
                    FILENAME = DM1IN, DM1OUT

  7 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      1   0  STARTING DATE
                  ITIME       0000  STARTING TIME
                     NQ        300  NUMBER OF HYDROGRAPH ORDINATES
                 NDDATE      2   0  ENDING DATE
                 NDTIME       0055  ENDING TIME

            COMPUTATION INTERVAL     .08 HOURS
                 TOTAL TIME BASE   24.92 HOURS

        ENGLISH UNITS

  9 JD        INDEX STORM NO. 1
                   STRM       4.14  PRECIPITATION DEPTH
                   TRDA        .25  TRANSPOSITION DRAINAGE AREA

 10 PI          PRECIPITATION PATTERN
                  .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                  .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                  .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                  .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                  .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                  .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                  .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                  .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                  .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                  .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                  .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                  .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                  .00      .00      .00      .00      .00      .00      .00      .01      .00      .01
                  .01      .01      .01      .01      .01      .01      .01      .01      .03      .03
                  .03      .09      .09      .09      .01      .01      .01      .01      .01      .01
```

```
.01     .01     .01     .00     .00     .00     .01     .01     .01     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00
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20 JD INDEX STORM NO. 2

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STRM        4.06  PRECIPITATION DEPTH
TRDA        5.00  TRANSPOSITION DRAINAGE AREA
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0 PI PRECIPITATION PATTERN

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.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .01     .00     .01
.01     .01     .01     .01     .01     .01     .01     .01     .03     .03
.03     .09     .09     .09     .01     .01     .01     .01     .01     .01
.01     .01     .01     .00     .00     .00     .01     .01     .01     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
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.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00
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21 JD INDEX STORM NO. 3

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STRM        3.85  PRECIPITATION DEPTH
TRDA       15.00  TRANSPOSITION DRAINAGE AREA
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0 PI PRECIPITATION PATTERN

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.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
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.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.01	.00	.01
.01	.01	.01	.01	.01	.01	.01	.01	.03	.03
.03	.09	.09	.09	.01	.01	.01	.01	.01	.01
.01	.01	.01	.00	.00	.00	.01	.01	.01	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
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.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00					

22 JD INDEX STORM NO. 4

STRM 3.73 PRECIPITATION DEPTH

TRDA 30.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.01	.00	.01
.01	.01	.01	.01	.01	.01	.01	.01	.03	.03
.03	.09	.09	.09	.01	.01	.01	.01	.01	.01
.01	.01	.01	.00	.00	.00	.01	.01	.01	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00					

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 23 JD          INDEX STORM NO. 5
                     STRM        3.60  PRECIPITATION DEPTH
                     TRDA       53.00  TRANSPOSITION DRAINAGE AREA

  0 PI            PRECIPITATION PATTERN
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .01       .00       .01
                     .01       .01       .01       .01       .01       .01       .01       .01       .03       .03
                     .03       .09       .09       .09       .01       .01       .01       .01       .01       .01
                     .01       .01       .01       .00       .00       .00       .01       .01       .01       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
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                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00
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*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 6601. TO 34714.
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 9597. TO 301830.
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 *** TIME INTERVAL IS GREATER THAN .29*LAG

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 0. TO 2071.
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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            *            *
 219 KK     *      RESR  *
            *            *
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221 KO        OUTPUT CONTROL VARIABLES
                   IPRNT          1  PRINT CONTROL
                   IPLOT          2  PLOT CONTROL
                   QSCAL         0.  HYDROGRAPH PLOT SCALE

          HYDROGRAPH ROUTING DATA

222 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

223 SA             AREA         .0     118.0     200.0     400.0     600.0     800.0

224 SE        ELEVATION     1585.00   1587.50   1589.10   1592.90   1596.50   1600.50

225 SL        LOW-LEVEL OUTLET
                   ELEVL     1577.70  ELEVATION AT CENTER OF OUTLET
                   CAREA        5.94  CROSS-SECTIONAL AREA
                    COQL         .62  COEFFICIENT
                    EXPL        1.50  EXPONENT OF HEAD

226 SS        SPILLWAY
                    CREL     1597.60  SPILLWAY CREST ELEVATION
                   SPWID      600.00  SPILLWAY WIDTH
                    COQW        3.00  WEIR COEFFICIENT
                    EXPW        1.50  EXPONENT OF HEAD

227 ST        TOP OF DAM
                   TOPEL     1602.30  ELEVATION AT TOP OF DAM
                  DAMWID    19000.00  DAM WIDTH
                    COQD        3.30  WEIR COEFFICIENT
                    EXPD        1.50  EXPONENT OF HEAD
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***

COMPUTED STORAGE-ELEVATION DATA

STORAGE	.00	98.33	349.86	1468.14	3256.01	6046.44
ELEVATION	1585.00	1587.50	1589.10	1592.90	1596.50	1600.50

COMPUTED OUTFLOW-ELEVATION DATA

(EXCLUDING FLOW OVER DAM)

OUTFLOW	.00	718.35	873.76	1050.11	1248.72	1470.92	1718.01	1991.35	2292.22	2622.00
ELEVATION	1585.00	1586.09	1587.27	1588.51	1589.84	1591.24	1592.71	1594.27	1595.89	1597.60
OUTFLOW	2656.75	2768.00	3004.52	3412.79	4040.19	4933.41	6139.43	7705.24	9677.88	12105.01
ELEVATION	1597.66	1597.76	1597.92	1598.13	1598.39	1598.70	1599.07	1599.50	1599.97	1600.50

COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

(INCLUDING FLOW OVER DAM)

STORAGE	.00	8.25	73.14	98.33	242.06	349.86	509.18	884.24	1394.13	1468.14
OUTFLOW	582.56	718.35	873.76	906.14	1050.11	1136.87	1248.72	1470.92	1718.01	1750.33
ELEVATION	1585.00	1586.09	1587.27	1587.50	1588.51	1589.10	1589.84	1591.24	1592.71	1592.90

STORAGE	2062.05	2903.69	3256.01	3944.47	3980.93	4048.97	4153.00	4294.06	4474.00	4694.84
OUTFLOW	1991.35	2292.22	2407.64	2622.00	2656.75	2768.00	3004.52	3412.79	4040.19	4933.41
ELEVATION	1594.27	1595.89	1596.50	1597.60	1597.66	1597.76	1597.92	1598.13	1598.39	1598.70

STORAGE	4959.15	5270.01	5631.03	6046.44
OUTFLOW	6139.43	7705.24	9677.88	12105.01
ELEVATION	1599.07	1599.50	1599.97	1600.50

****

HYDROGRAPH AT RESR
TRANSPOSITION AREA .3 SQ MI

****

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1		0000	1	583.	.0	1585.0	*	1		0820	101	583.	.0	1585.0	*	1		1640	201	2103.	2361.9	1594.9
1		0005	2	0.	.0	1585.0	*	1		0825	102	0.	.0	1585.0	*	1		1645	202	2125.	2421.4	1595.0
1		0010	3	0.	.0	1585.0	*	1		0830	103	583.	.0	1585.0	*	1		1650	203	2145.	2479.3	1595.1
1		0015	4	0.	.0	1585.0	*	1		0835	104	0.	.0	1585.0	*	1		1655	204	2166.	2535.7	1595.2
1		0020	5	0.	.0	1585.0	*	1		0840	105	583.	.0	1585.0	*	1		1700	205	2185.	2590.7	1595.3
1		0025	6	0.	.0	1585.0	*	1		0845	106	0.	.0	1585.0	*	1		1705	206	2204.	2644.5	1595.4
1		0030	7	0.	.0	1585.0	*	1		0850	107	583.	.0	1585.0	*	1		1710	207	2222.	2697.2	1595.5
1		0035	8	0.	.0	1585.0	*	1		0855	108	0.	.0	1585.0	*	1		1715	208	2240.	2749.0	1595.6
1		0040	9	0.	.0	1585.0	*	1		0900	109	583.	.0	1585.0	*	1		1720	209	2257.	2799.8	1595.7
1		0045	10	0.	.0	1585.0	*	1		0905	110	0.	.0	1585.0	*	1		1725	210	2274.	2849.6	1595.8
1		0050	11	0.	.0	1585.0	*	1		0910	111	583.	.0	1585.0	*	1		1730	211	2290.	2898.2	1595.9
1		0055	12	0.	.0	1585.0	*	1		0915	112	0.	.0	1585.0	*	1		1735	212	2306.	2945.5	1596.0
1		0100	13	0.	.0	1585.0	*	1		0920	113	583.	.0	1585.0	*	1		1740	213	2321.	2991.4	1596.0
1		0105	14	0.	.0	1585.0	*	1		0925	114	0.	.0	1585.0	*	1		1745	214	2336.	3035.6	1596.1
1		0110	15	0.	.0	1585.0	*	1		0930	115	583.	.0	1585.0	*	1		1750	215	2350.	3077.7	1596.2
1		0115	16	0.	.0	1585.0	*	1		0935	116	0.	.0	1585.0	*	1		1755	216	2363.	3117.7	1596.3
1		0120	17	0.	.0	1585.0	*	1		0940	117	583.	.0	1585.0	*	1		1800	217	2375.	3155.4	1596.3
1		0125	18	0.	.0	1585.0	*	1		0945	118	0.	.0	1585.0	*	1		1805	218	2387.	3190.5	1596.4
1		0130	19	0.	.0	1585.0	*	1		0950	119	583.	.0	1585.0	*	1		1810	219	2397.	3223.1	1596.4
1		0135	20	0.	.0	1585.0	*	1		0955	120	0.	.0	1585.0	*	1		1815	220	2407.	3253.0	1596.5
1		0140	21	0.	.0	1585.0	*	1		1000	121	583.	.0	1585.0	*	1		1820	221	2415.	3280.3	1596.5
1		0145	22	0.	.0	1585.0	*	1		1005	122	0.	.0	1585.0	*	1		1825	222	2423.	3305.0	1596.6
1		0150	23	0.	.0	1585.0	*	1		1010	123	583.	.0	1585.0	*	1		1830	223	2430.	3327.3	1596.6
1		0155	24	0.	.0	1585.0	*	1		1015	124	0.	.0	1585.0	*	1		1835	224	2437.	3347.2	1596.7
1		0200	25	0.	.0	1585.0	*	1		1020	125	583.	.0	1585.0	*	1		1840	225	2442.	3364.9	1596.7
1		0205	26	0.	.0	1585.0	*	1		1025	126	0.	.0	1585.0	*	1		1845	226	2447.	3380.7	1596.7
1		0210	27	0.	.0	1585.0	*	1		1030	127	583.	.0	1585.0	*	1		1850	227	2452.	3394.6	1596.7
1		0215	28	0.	.0	1585.0	*	1		1035	128	0.	.0	1585.0	*	1		1855	228	2456.	3406.8	1596.7
1		0220	29	0.	.0	1585.0	*	1		1040	129	583.	.0	1585.0	*	1		1900	229	2459.	3417.5	1596.8
1		0225	30	0.	.0	1585.0	*	1		1045	130	0.	.0	1585.0	*	1		1905	230	2462.	3426.8	1596.8
1		0230	31	0.	.0	1585.0	*	1		1050	131	583.	.0	1585.0	*	1		1910	231	2464.	3434.7	1596.8
1		0235	32	0.	.0	1585.0	*	1		1055	132	0.	.0	1585.0	*	1		1915	232	2467.	3441.7	1596.8
1		0240	33	0.	.0	1585.0	*	1		1100	133	583.	.0	1585.0	*	1		1920	233	2468.	3447.5	1596.8
1		0245	34	0.	.0	1585.0	*	1		1105	134	0.	.0	1585.0	*	1		1925	234	2470.	3452.5	1596.8
1		0250	35	0.	.0	1585.0	*	1		1110	135	583.	.0	1585.0	*	1		1930	235	2471.	3456.6	1596.8
1		0255	36	0.	.0	1585.0	*	1		1115	136	0.	.0	1585.0	*	1		1935	236	2472.	3460.1	1596.8
1		0300	37	0.	.0	1585.0	*	1		1120	137	583.	.0	1585.0	*	1		1940	237	2473.	3462.8	1596.8
1		0305	38	0.	.0	1585.0	*	1		1125	138	0.	.0	1585.0	*	1		1945	238	2474.	3465.0	1596.8
1		0310	39	0.	.0	1585.0	*	1		1130	139	583.	.0	1585.0	*	1		1950	239	2474.	3466.7	1596.8
1		0315	40	0.	.0	1585.0	*	1		1135	140	0.	.0	1585.0	*	1		1955	240	2475.	3467.8	1596.8
1		0320	41	0.	.0	1585.0	*	1		1140	141	583.	.0	1585.0	*	1		2000	241	2475.	3468.5	1596.8
1		0325	42	0.	.0	1585.0	*	1		1145	142	0.	.0	1585.0	*	1		2005	242	2475.	3468.8	1596.8

1	0330	43	0.	.0	1585.0	*	1	1150	143	583.	.0	1585.0	*	1	2010	243	2475.	3468.7	1596.8
1	0335	44	0.	.0	1585.0	*	1	1155	144	583.	.0	1585.0	*	1	2015	244	2475.	3468.2	1596.8
1	0340	45	0.	.0	1585.0	*	1	1200	145	583.	.0	1585.0	*	1	2020	245	2475.	3467.4	1596.8
1	0345	46	0.	.0	1585.0	*	1	1205	146	583.	.0	1585.0	*	1	2025	246	2474.	3466.3	1596.8
1	0350	47	0.	.0	1585.0	*	1	1210	147	634.	.5	1585.4	*	1	2030	247	2474.	3464.9	1596.8
1	0355	48	0.	.0	1585.0	*	1	1215	148	666.	2.0	1585.7	*	1	2035	248	2473.	3463.3	1596.8
1	0400	49	0.	.0	1585.0	*	1	1220	149	696.	4.9	1585.9	*	1	2040	249	2473.	3461.4	1596.8
1	0405	50	0.	.0	1585.0	*	1	1225	150	724.	9.3	1586.1	*	1	2045	250	2472.	3459.2	1596.8
1	0410	51	0.	.0	1585.0	*	1	1230	151	751.	15.4	1586.3	*	1	2050	251	2471.	3456.8	1596.8
1	0415	52	0.	.0	1585.0	*	1	1235	152	778.	23.6	1586.6	*	1	2055	252	2471.	3454.3	1596.8
1	0420	53	0.	.0	1585.0	*	1	1240	153	805.	34.1	1586.8	*	1	2100	253	2470.	3451.5	1596.8
1	0425	54	0.	.0	1585.0	*	1	1245	154	832.	47.0	1587.0	*	1	2105	254	2469.	3448.5	1596.8
1	0430	55	0.	.0	1585.0	*	1	1250	155	858.	62.5	1587.1	*	1	2110	255	2468.	3445.3	1596.8
1	0435	56	0.	.0	1585.0	*	1	1255	156	884.	80.5	1587.3	*	1	2115	256	2467.	3441.9	1596.8
1	0440	57	0.	.0	1585.0	*	1	1300	157	909.	101.1	1587.5	*	1	2120	257	2466.	3438.3	1596.8
1	0445	58	0.	.0	1585.0	*	1	1305	158	936.	124.4	1587.7	*	1	2125	258	2464.	3434.5	1596.8
1	0450	59	0.	.0	1585.0	*	1	1310	159	963.	150.2	1587.9	*	1	2130	259	2463.	3430.6	1596.8
1	0455	60	0.	.0	1585.0	*	1	1315	160	992.	178.6	1588.1	*	1	2135	260	2462.	3426.5	1596.8
1	0500	61	0.	.0	1585.0	*	1	1320	161	1021.	209.6	1588.3	*	1	2140	261	2460.	3422.2	1596.8
1	0505	62	0.	.0	1585.0	*	1	1325	162	1051.	243.2	1588.5	*	1	2145	262	2459.	3417.7	1596.8
1	0510	63	0.	.0	1585.0	*	1	1330	163	1081.	279.1	1588.7	*	1	2150	263	2458.	3413.1	1596.8
1	0515	64	0.	.0	1585.0	*	1	1335	164	1112.	317.3	1588.9	*	1	2155	264	2456.	3408.4	1596.8
1	0520	65	0.	.0	1585.0	*	1	1340	165	1143.	357.4	1589.1	*	1	2200	265	2455.	3403.6	1596.7
1	0525	66	0.	.0	1585.0	*	1	1345	166	1173.	399.2	1589.3	*	1	2205	266	2453.	3398.5	1596.7
1	0530	67	0.	.0	1585.0	*	1	1350	167	1203.	442.2	1589.5	*	1	2210	267	2451.	3393.4	1596.7
1	0535	68	0.	.0	1585.0	*	1	1355	168	1233.	486.2	1589.7	*	1	2215	268	2450.	3388.1	1596.7
1	0540	69	0.	.0	1585.0	*	1	1400	169	1263.	530.6	1589.9	*	1	2220	269	2448.	3382.6	1596.7
1	0545	70	0.	.0	1585.0	*	1	1405	170	1291.	575.2	1590.1	*	1	2225	270	2446.	3377.1	1596.7
1	0550	71	0.	.0	1585.0	*	1	1410	171	1319.	619.6	1590.3	*	1	2230	271	2444.	3371.5	1596.7
1	0555	72	0.	.0	1585.0	*	1	1415	172	1346.	663.6	1590.5	*	1	2235	272	2443.	3365.8	1596.7
1	0600	73	0.	.0	1585.0	*	1	1420	173	1372.	707.2	1590.6	*	1	2240	273	2441.	3359.9	1596.7
1	0605	74	0.	.0	1585.0	*	1	1425	174	1397.	750.4	1590.8	*	1	2245	274	2439.	3354.0	1596.7
1	0610	75	0.	.0	1585.0	*	1	1430	175	1421.	793.5	1590.9	*	1	2250	275	2437.	3348.0	1596.7
1	0615	76	0.	.0	1585.0	*	1	1435	176	1445.	836.6	1591.1	*	1	2255	276	2435.	3341.9	1596.6
1	0620	77	0.	.0	1585.0	*	1	1440	177	1469.	880.1	1591.2	*	1	2300	277	2433.	3335.7	1596.6
1	0625	78	0.	.0	1585.0	*	1	1445	178	1492.	924.3	1591.4	*	1	2305	278	2431.	3329.4	1596.6
1	0630	79	0.	.0	1585.0	*	1	1450	179	1516.	969.6	1591.5	*	1	2310	279	2429.	3323.0	1596.6
1	0635	80	0.	.0	1585.0	*	1	1455	180	1540.	1016.4	1591.7	*	1	2315	280	2427.	3316.6	1596.6
1	0640	81	0.	.0	1585.0	*	1	1500	181	1564.	1065.1	1591.8	*	1	2320	281	2425.	3310.1	1596.6
1	0645	82	0.	.0	1585.0	*	1	1505	182	1589.	1116.0	1592.0	*	1	2325	282	2423.	3303.5	1596.
1	0650	83	0.	.0	1585.0	*	1	1510	183	1615.	1169.3	1592.1	*	1	2330	283	2421.	3296.9	1596.6
1	0655	84	0.	.0	1585.0	*	1	1515	184	1641.	1225.4	1592.3	*	1	2335	284	2419.	3290.2	1596.6
1	0700	85	0.	.0	1585.0	*	1	1520	185	1668.	1284.0	1592.4	*	1	2340	285	2416.	3283.5	1596.5
1	0705	86	0.	.0	1585.0	*	1	1525	186	1696.	1345.3	1592.6	*	1	2345	286	2414.	3276.8	1596.
1	0710	87	0.	.0	1585.0	*	1	1530	187	1725.	1409.1	1592.8	*	1	2350	287	2412.	3269.9	1596.5
1	0715	88	0.	.0	1585.0	*	1	1535	188	1753.	1475.1	1592.9	*	1	2355	288	2410.	3263.0	1596.5
1	0720	89	0.	.0	1585.0	*	1	1540	189	1782.	1543.0	1593.1	*	2	0000	289	2408.	3256.1	1596.
1	0725	90	0.	.0	1585.0	*	1	1545	190	1812.	1612.4	1593.3	*	2	0005	290	2405.	3249.1	1596.
1	0730	91	0.	.0	1585.0	*	1	1550	191	1841.	1682.9	1593.4	*	2	0010	291	2403.	3242.0	1596.5
1	0735	92	0.	.0	1585.0	*	1	1555	192	1870.	1754.2	1593.6	*	2	0015	292	2401.	3234.9	1596.
1	0740	93	583.	.0	1585.0	*	1	1600	193	1899.	1825.6	1593.7	*	2	0020	293	2399.	3227.7	1596.
1	0745	94	0.	.0	1585.0	*	1	1605	194	1927.	1896.9	1593.9	*	2	0025	294	2396.	3220.5	1596.4
1	0750	95	583.	.0	1585.0	*	1	1610	195	1955.	1967.5	1594.1	*	2	0030	295	2394.	3213.2	1596.4
1	0755	96	0.	.0	1585.0	*	1	1615	196	1982.	2037.2	1594.2	*	2	0035	296	2392.	3205.9	1596.
1	0800	97	583.	.0	1585.0	*	1	1620	197	2008.	2105.5	1594.4	*	2	0040	297	2389.	3198.5	1596.
1	0805	98	0.	.0	1585.0	*	1	1625	198	2033.	2172.3	1594.5	*	2	0045	298	2387.	3191.0	1596.4
1	0810	99	583.	.0	1585.0	*	1	1630	199	2057.	2237.3	1594.6	*	2	0050	299	2384.	3183.4	1596.
1	0815	100	0.	.0	1585.0	*	1	1635	200	2081.	2300.5	1594.8	*	2	0055	300	2382.	3175.6	1596.
						*							*						

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PEAK OUTFLOW IS 2475. AT TIME 20.08 HOURS

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
		(CFS)				
+ 2475.	20.08		2450.	1148.	1106.	1106.
		(INCHES)	.478	.895	.896	.896
		(AC-FT)	1215.	2276.	2278.	2278.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
3469.	20.08	3389.	1289.	1241.	1241.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)				
1596.85	20.08	1596.72	1590.00	1589.81	1589.81

CUMULATIVE AREA = 47.69 SQ MI

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HYDROGRAPH AT RESR
TRANSPOSITION AREA 5.0 SQ MI

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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
1		0000	1	583.	.0	1585.0	1		0820	101	583.	.0	1585.0	1		1640	201	2070.	2271.3	1594.7
1		0005	2	0.	.0	1585.0	1		0825	102	0.	.0	1585.0	1		1645	202	2091.	2329.0	1594.8
1		0010	3	0.	.0	1585.0	1		0830	103	583.	.0	1585.0	1		1650	203	2112.	2385.1	1594.9
1		0015	4	0.	.0	1585.0	1		0835	104	0.	.0	1585.0	1		1655	204	2131.	2439.7	1595.0
1		0020	5	0.	.0	1585.0	1		0840	105	583.	.0	1585.0	1		1700	205	2150.	2492.9	1595.1
1		0025	6	0.	.0	1585.0	1		0845	106	0.	.0	1585.0	1		1705	206	2169.	2545.1	1595.2
1		0030	7	0.	.0	1585.0	1		0850	107	583.	.0	1585.0	1		1710	207	2187.	2596.2	1595.3
1		0035	8	0.	.0	1585.0	1		0855	108	0.	.0	1585.0	1		1715	208	2204.	2646.3	1595.4
1		0040	9	0.	.0	1585.0	1		0900	109	583.	.0	1585.0	1		1720	209	2221.	2695.5	1595.5
1		0045	10	0.	.0	1585.0	1		0905	110	0.	.0	1585.0	1		1725	210	2238.	2743.8	1595.6
1		0050	11	0.	.0	1585.0	1		0910	111	583.	.0	1585.0	1		1730	211	2254.	2791.0	1595.7
1		0055	12	0.	.0	1585.0	1		0915	112	0.	.0	1585.0	1		1735	212	2270.	2836.9	1595.8
1		0100	13	0.	.0	1585.0	1		0920	113	583.	.0	1585.0	1		1740	213	2285.	2881.4	1595.9
1		0105	14	0.	.0	1585.0	1		0925	114	0.	.0	1585.0	1		1745	214	2299.	2924.2	1595.9
1		0110	15	0.	.0	1585.0	1		0930	115	583.	.0	1585.0	1		1750	215	2313.	2965.1	1596.0
1		0115	16	0.	.0	1585.0	1		0935	116	0.	.0	1585.0	1		1755	216	2326.	3003.8	1596.1
1		0120	17	0.	.0	1585.0	1		0940	117	583.	.0	1585.0	1		1800	217	2338.	3040.3	1596.1
1		0125	18	0.	.0	1585.0	1		0945	118	0.	.0	1585.0	1		1805	218	2349.	3074.3	1596.2
1		0130	19	0.	.0	1585.0	1		0950	119	583.	.0	1585.0	1		1810	219	2359.	3105.8	1596.2
1		0135	20	0.	.0	1585.0	1		0955	120	0.	.0	1585.0	1		1815	220	2369.	3134.8	1596.3
1		0140	21	0.	.0	1585.0	1		1000	121	583.	.0	1585.0	1		1820	221	2377.	3161.2	1596.3
1		0145	22	0.	.0	1585.0	1		1005	122	0.	.0	1585.0	1		1825	222	2385.	3185.1	1596.4
1		0150	23	0.	.0	1585.0	1		1010	123	583.	.0	1585.0	1		1830	223	2392.	3206.6	1596.4
1		0155	24	0.	.0	1585.0	1		1015	124	0.	.0	1585.0	1		1835	224	2398.	3225.9	1596.4
1		0200	25	0.	.0	1585.0	1		1020	125	583.	.0	1585.0	1		1840	225	2403.	3243.1	1596.5
1		0205	26	0.	.0	1585.0	1		1025	126	0.	.0	1585.0	1		1845	226	2408.	3258.2	1596.5

1	0210	27	0.	.0	1585.0	*	1	1030	127	583.	.0	1585.0	*	1	1850	227	2413.	3271.6	1596.5
1	0215	28	0.	.0	1585.0	*	1	1035	128	0.	.0	1585.0	*	1	1855	228	2416.	3283.3	1596.5
1	0220	29	0.	.0	1585.0	*	1	1040	129	583.	.0	1585.0	*	1	1900	229	2420.	3293.5	1596.6
1	0225	30	0.	.0	1585.0	*	1	1045	130	0.	.0	1585.0	*	1	1905	230	2422.	3302.4	1596.6
1	0230	31	0.	.0	1585.0	*	1	1050	131	583.	.0	1585.0	*	1	1910	231	2425.	3310.1	1596.6
1	0235	32	0.	.0	1585.0	*	1	1055	132	0.	.0	1585.0	*	1	1915	232	2427.	3316.6	1596.6
1	0240	33	0.	.0	1585.0	*	1	1100	133	583.	.0	1585.0	*	1	1920	233	2429.	3322.1	1596.6
1	0245	34	0.	.0	1585.0	*	1	1105	134	0.	.0	1585.0	*	1	1925	234	2430.	3326.8	1596.6
1	0250	35	0.	.0	1585.0	*	1	1110	135	583.	.0	1585.0	*	1	1930	235	2431.	3330.7	1596.6
1	0255	36	0.	.0	1585.0	*	1	1115	136	0.	.0	1585.0	*	1	1935	236	2432.	3333.9	1596.6
1	0300	37	0.	.0	1585.0	*	1	1120	137	583.	.0	1585.0	*	1	1940	237	2433.	3336.4	1596.6
1	0305	38	0.	.0	1585.0	*	1	1125	138	0.	.0	1585.0	*	1	1945	238	2434.	3338.4	1596.6
1	0310	39	0.	.0	1585.0	*	1	1130	139	583.	.0	1585.0	*	1	1950	239	2434.	3339.8	1596.6
1	0315	40	0.	.0	1585.0	*	1	1135	140	0.	.0	1585.0	*	1	1955	240	2435.	3340.8	1596.6
1	0320	41	0.	.0	1585.0	*	1	1140	141	583.	.0	1585.0	*	1	2000	241	2435.	3341.3	1596.6
1	0325	42	0.	.0	1585.0	*	1	1145	142	0.	.0	1585.0	*	1	2005	242	2435.	3341.4	1596.6
1	0330	43	0.	.0	1585.0	*	1	1150	143	583.	.0	1585.0	*	1	2010	243	2435.	3341.1	1596.6
1	0335	44	0.	.0	1585.0	*	1	1155	144	0.	.0	1585.0	*	1	2015	244	2435.	3340.5	1596.6
1	0340	45	0.	.0	1585.0	*	1	1200	145	627.	.3	1585.4	*	1	2020	245	2434.	3339.5	1596.6
1	0345	46	0.	.0	1585.0	*	1	1205	146	583.	.0	1585.0	*	1	2025	246	2434.	3338.3	1596.6
1	0350	47	0.	.0	1585.0	*	1	1210	147	621.	.2	1585.3	*	1	2030	247	2433.	3336.8	1596.6
1	0355	48	0.	.0	1585.0	*	1	1215	148	657.	1.4	1585.6	*	1	2035	248	2433.	3335.0	1596.6
1	0400	49	0.	.0	1585.0	*	1	1220	149	687.	3.9	1585.9	*	1	2040	249	2432.	3333.0	1596.6
1	0405	50	0.	.0	1585.0	*	1	1225	150	716.	7.8	1586.1	*	1	2045	250	2432.	3330.8	1596.6
1	0410	51	0.	.0	1585.0	*	1	1230	151	743.	13.4	1586.3	*	1	2050	251	2431.	3328.3	1596.6
1	0415	52	0.	.0	1585.0	*	1	1235	152	770.	20.9	1586.5	*	1	2055	252	2430.	3325.7	1596.6
1	0420	53	0.	.0	1585.0	*	1	1240	153	797.	30.7	1586.7	*	1	2100	253	2429.	3322.8	1596.6
1	0425	54	0.	.0	1585.0	*	1	1245	154	823.	42.7	1586.9	*	1	2105	254	2428.	3319.7	1596.6
1	0430	55	0.	.0	1585.0	*	1	1250	155	849.	57.2	1587.1	*	1	2110	255	2427.	3316.4	1596.6
1	0435	56	0.	.0	1585.0	*	1	1255	156	875.	74.2	1587.3	*	1	2115	256	2426.	3313.0	1596.6
1	0440	57	0.	.0	1585.0	*	1	1300	157	901.	93.7	1587.5	*	1	2120	257	2425.	3309.4	1596.6
1	0445	58	0.	.0	1585.0	*	1	1305	158	926.	115.8	1587.6	*	1	2125	258	2423.	3305.5	1596.6
1	0450	59	0.	.0	1585.0	*	1	1310	159	953.	140.3	1587.8	*	1	2130	259	2422.	3301.6	1596.6
1	0455	60	0.	.0	1585.0	*	1	1315	160	981.	167.4	1588.0	*	1	2135	260	2421.	3297.4	1596.6
1	0500	61	0.	.0	1585.0	*	1	1320	161	1009.	196.9	1588.2	*	1	2140	261	2419.	3293.1	1596.6
1	0505	62	0.	.0	1585.0	*	1	1325	162	1039.	228.9	1588.4	*	1	2145	262	2418.	3288.6	1596.6
1	0510	63	0.	.0	1585.0	*	1	1330	163	1068.	263.3	1588.6	*	1	2150	263	2417.	3284.0	1596.5
1	0515	64	0.	.0	1585.0	*	1	1335	164	1098.	299.8	1588.8	*	1	2155	264	2415.	3279.2	1596.5
1	0520	65	0.	.0	1585.0	*	1	1340	165	1128.	338.3	1589.0	*	1	2200	265	2413.	3274.3	1596.5
1	0525	66	0.	.0	1585.0	*	1	1345	166	1158.	378.3	1589.2	*	1	2205	266	2412.	3269.2	1596.5
1	0530	67	0.	.0	1585.0	*	1	1350	167	1188.	419.6	1589.4	*	1	2210	267	2410.	3264.0	1596.5
1	0535	68	0.	.0	1585.0	*	1	1355	168	1217.	461.7	1589.6	*	1	2215	268	2408.	3258.6	1596.5
1	0540	69	0.	.0	1585.0	*	1	1400	169	1246.	504.4	1589.8	*	1	2220	269	2407.	3253.2	1596.5
1	0545	70	0.	.0	1585.0	*	1	1405	170	1274.	547.2	1590.0	*	1	2225	270	2405.	3247.7	1596.5
1	0550	71	0.	.0	1585.0	*	1	1410	171	1301.	589.8	1590.2	*	1	2230	271	2403.	3242.0	1596.5
1	0555	72	0.	.0	1585.0	*	1	1415	172	1327.	632.0	1590.3	*	1	2235	272	2401.	3236.3	1596.5
1	0600	73	0.	.0	1585.0	*	1	1420	173	1352.	673.9	1590.5	*	1	2240	273	2399.	3230.4	1596.5
1	0605	74	0.	.0	1585.0	*	1	1425	174	1377.	715.4	1590.7	*	1	2245	274	2398.	3224.5	1596.4
1	0610	75	0.	.0	1585.0	*	1	1430	175	1400.	756.7	1590.8	*	1	2250	275	2396.	3218.5	1596.4
1	0615	76	0.	.0	1585.0	*	1	1435	176	1424.	798.1	1590.9	*	1	2255	276	2394.	3212.4	1596.4
1	0620	77	0.	.0	1585.0	*	1	1440	177	1447.	839.9	1591.1	*	1	2300	277	2392.	3206.2	1596.4
1	0625	78	0.	.0	1585.0	*	1	1445	178	1470.	882.3	1591.2	*	1	2305	278	2390.	3200.0	1596.4
1	0630	79	0.	.0	1585.0	*	1	1450	179	1493.	925.9	1591.4	*	1	2310	279	2388.	3193.6	1596.4
1	0635	80	0.	.0	1585.0	*	1	1455	180	1517.	970.9	1591.5	*	1	2315	280	2386.	3187.3	1596.4
1	0640	81	0.	.0	1585.0	*	1	1500	181	1540.	1017.8	1591.7	*	1	2320	281	2383.	3180.8	1596.4
1	0645	82	0.	.0	1585.0	*	1	1505	182	1565.	1066.8	1591.8	*	1	2325	282	2381.	3174.3	1596.4
1	0650	83	0.	.0	1585.0	*	1	1510	183	1590.	1118.2	1592.0	*	1	2330	283	2379.	3167.8	1596.4
1	0655	84	0.	.0	1585.0	*	1	1515	184	1616.	1172.2	1592.1	*	1	2335	284	2377.	3161.1	1596.
1	0700	85	0.	.0	1585.0	*	1	1520	185	1643.	1228.8	1592.3	*	1	2340	285	2375.	3154.4	1596.3
1	0705	86	0.	.0	1585.0	*	1	1525	186	1670.	1288.0	1592.4	*	1	2345	286	2373.	3147.7	1596.7

1	0710	87	0.	.0	1585.0	*	1	1530	187	1698.	1349.6	1592.6	*	1	2350	287	2370.	3140.8	1596.3
1	0715	88	0.	.0	1585.0	*	1	1535	188	1726.	1413.3	1592.8	*	1	2355	288	2368.	3134.0	1596.3
1	0720	89	0.	.0	1585.0	*	1	1540	189	1755.	1478.9	1592.9	*	2	0000	289	2366.	3127.1	1596.3
1	0725	90	0.	.0	1585.0	*	1	1545	190	1784.	1546.0	1593.1	*	2	0005	290	2364.	3120.1	1596.3
1	0730	91	0.	.0	1585.0	*	1	1550	191	1812.	1614.2	1593.3	*	2	0010	291	2361.	3113.1	1596.3
1	0735	92	0.	.0	1585.0	*	1	1555	192	1841.	1683.1	1593.4	*	2	0015	292	2359.	3106.1	1596.2
1	0740	93	0.	.0	1585.0	*	1	1600	193	1869.	1752.2	1593.6	*	2	0020	293	2357.	3098.9	1596.2
1	0745	94	0.	.0	1585.0	*	1	1605	194	1897.	1821.2	1593.7	*	2	0025	294	2354.	3091.7	1596.2
1	0750	95	583.	.0	1585.0	*	1	1610	195	1924.	1889.6	1593.9	*	2	0030	295	2352.	3084.5	1596.2
1	0755	96	0.	.0	1585.0	*	1	1615	196	1951.	1957.0	1594.0	*	2	0035	296	2350.	3077.2	1596.2
1	0800	97	583.	.0	1585.0	*	1	1620	197	1976.	2023.1	1594.2	*	2	0040	297	2347.	3069.8	1596.2
1	0805	98	0.	.0	1585.0	*	1	1625	198	2001.	2087.8	1594.3	*	2	0045	298	2345.	3062.3	1596.2
1	0810	99	583.	.0	1585.0	*	1	1630	199	2025.	2150.7	1594.5	*	2	0050	299	2342.	3054.8	1596.2
1	0815	100	0.	.0	1585.0	*	1	1635	200	2048.	2211.9	1594.6	*	2	0055	300	2340.	3047.1	1596.1

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PEAK OUTFLOW IS 2435. AT TIME 20.08 HOURS

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
		(CFS)				
+ 2435.	20.08		2409.	1126.	1086.	1086.
		(INCHES)	.470	.878	.879	.879
		(AC-FT)	1195.	2234.	2236.	2236.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
3341.	20.08	3262.	1239.	1194.	1194.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)				
1596.64	20.08	1596.51	1589.90	1589.72	1589.72

CUMULATIVE AREA = 47.69 SQ MI

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HYDROGRAPH AT RESR
TRANSPOSITION AREA 15.0 SQ MI

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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
1		0000	1	583.	.0	1585.0	*	1		0820	101	0.	.0	1585.0	*	1		1640	201	1981.	2036.4	1594.2
1		0005	2	0.	.0	1585.0	*	1		0825	102	583.	.0	1585.0	*	1		1645	202	2002.	2089.2	1594.3
1		0010	3	0.	.0	1585.0	*	1		0830	103	0.	.0	1585.0	*	1		1650	203	2021.	2140.5	1594.4
1		0015	4	0.	.0	1585.0	*	1		0835	104	583.	.0	1585.0	*	1		1655	204	2040.	2190.5	1594.5
1		0020	5	0.	.0	1585.0	*	1		0840	105	0.	.0	1585.0	*	1		1700	205	2058.	2239.3	1594.6
1		0025	6	0.	.0	1585.0	*	1		0845	106	583.	.0	1585.0	*	1		1705	206	2076.	2287.1	1594.7
1		0030	7	0.	.0	1585.0	*	1		0850	107	0.	.0	1585.0	*	1		1710	207	2093.	2334.0	1594.8
1		0035	8	0.	.0	1585.0	*	1		0855	108	583.	.0	1585.0	*	1		1715	208	2110.	2380.0	1594.9
1		0040	9	0.	.0	1585.0	*	1		0900	109	0.	.0	1585.0	*	1		1720	209	2126.	2425.2	1595.0
1		0045	10	0.	.0	1585.0	*	1		0905	110	583.	.0	1585.0	*	1		1725	210	2142.	2469.5	1595.1

1	0050	11	0.	.0	1585.0	*	1	0910	111	0.	.0	1585.0	*	1	1730	211	2157.	2512.8	1595.2
1	0055	12	0.	.0	1585.0	*	1	0915	112	583.	.0	1585.0	*	1	1735	212	2172.	2554.9	1595.3
1	0100	13	0.	.0	1585.0	*	1	0920	113	0.	.0	1585.0	*	1	1740	213	2187.	2595.7	1595.3
1	0105	14	0.	.0	1585.0	*	1	0925	114	583.	.0	1585.0	*	1	1745	214	2200.	2635.0	1595.4
1	0110	15	0.	.0	1585.0	*	1	0930	115	0.	.0	1585.0	*	1	1750	215	2213.	2672.5	1595.5
1	0115	16	0.	.0	1585.0	*	1	0935	116	583.	.0	1585.0	*	1	1755	216	2226.	2708.0	1595.5
1	0120	17	0.	.0	1585.0	*	1	0940	117	0.	.0	1585.0	*	1	1800	217	2237.	2741.5	1595.6
1	0125	18	0.	.0	1585.0	*	1	0945	118	583.	.0	1585.0	*	1	1805	218	2248.	2772.6	1595.7
1	0130	19	0.	.0	1585.0	*	1	0950	119	0.	.0	1585.0	*	1	1810	219	2258.	2801.4	1595.7
1	0135	20	0.	.0	1585.0	*	1	0955	120	583.	.0	1585.0	*	1	1815	220	2267.	2827.9	1595.8
1	0140	21	0.	.0	1585.0	*	1	1000	121	0.	.0	1585.0	*	1	1820	221	2275.	2851.9	1595.8
1	0145	22	0.	.0	1585.0	*	1	1005	122	583.	.0	1585.0	*	1	1825	222	2282.	2873.7	1595.8
1	0150	23	0.	.0	1585.0	*	1	1010	123	0.	.0	1585.0	*	1	1830	223	2289.	2893.2	1595.9
1	0155	24	0.	.0	1585.0	*	1	1015	124	583.	.0	1585.0	*	1	1835	224	2295.	2910.7	1595.9
1	0200	25	0.	.0	1585.0	*	1	1020	125	0.	.0	1585.0	*	1	1840	225	2300.	2926.2	1595.9
1	0205	26	0.	.0	1585.0	*	1	1025	126	583.	.0	1585.0	*	1	1845	226	2304.	2939.8	1596.0
1	0210	27	0.	.0	1585.0	*	1	1030	127	0.	.0	1585.0	*	1	1850	227	2308.	2951.8	1596.0
1	0215	28	0.	.0	1585.0	*	1	1035	128	583.	.0	1585.0	*	1	1855	228	2312.	2962.3	1596.0
1	0220	29	0.	.0	1585.0	*	1	1040	129	0.	.0	1585.0	*	1	1900	229	2315.	2971.3	1596.0
1	0225	30	0.	.0	1585.0	*	1	1045	130	583.	.0	1585.0	*	1	1905	230	2317.	2979.1	1596.0
1	0230	31	0.	.0	1585.0	*	1	1050	131	0.	.0	1585.0	*	1	1910	231	2320.	2985.8	1596.0
1	0235	32	0.	.0	1585.0	*	1	1055	132	583.	.0	1585.0	*	1	1915	232	2322.	2991.6	1596.0
1	0240	33	0.	.0	1585.0	*	1	1100	133	0.	.0	1585.0	*	1	1920	233	2323.	2996.4	1596.1
1	0245	34	0.	.0	1585.0	*	1	1105	134	583.	.0	1585.0	*	1	1925	234	2324.	3000.3	1596.1
1	0250	35	0.	.0	1585.0	*	1	1110	135	0.	.0	1585.0	*	1	1930	235	2325.	3003.6	1596.1
1	0255	36	0.	.0	1585.0	*	1	1115	136	583.	.0	1585.0	*	1	1935	236	2326.	3006.1	1596.1
1	0300	37	0.	.0	1585.0	*	1	1120	137	0.	.0	1585.0	*	1	1940	237	2327.	3008.1	1596.1
1	0305	38	0.	.0	1585.0	*	1	1125	138	583.	.0	1585.0	*	1	1945	238	2327.	3009.5	1596.1
1	0310	39	0.	.0	1585.0	*	1	1130	139	0.	.0	1585.0	*	1	1950	239	2328.	3010.4	1596.1
1	0315	40	0.	.0	1585.0	*	1	1135	140	583.	.0	1585.0	*	1	1955	240	2328.	3010.9	1596.1
1	0320	41	0.	.0	1585.0	*	1	1140	141	0.	.0	1585.0	*	1	2000	241	2328.	3011.0	1596.1
1	0325	42	0.	.0	1585.0	*	1	1145	142	583.	.0	1585.0	*	1	2005	242	2328.	3010.7	1596.1
1	0330	43	0.	.0	1585.0	*	1	1150	143	0.	.0	1585.0	*	1	2010	243	2328.	3010.0	1596.1
1	0335	44	0.	.0	1585.0	*	1	1155	144	583.	.0	1585.0	*	1	2015	244	2327.	3009.1	1596.1
1	0340	45	0.	.0	1585.0	*	1	1200	145	583.	.0	1585.0	*	1	2020	245	2327.	3007.8	1596.1
1	0345	46	0.	.0	1585.0	*	1	1205	146	583.	.0	1585.0	*	1	2025	246	2326.	3006.3	1596.1
1	0350	47	0.	.0	1585.0	*	1	1210	147	583.	.0	1585.0	*	1	2030	247	2326.	3004.4	1596.1
1	0355	48	0.	.0	1585.0	*	1	1215	148	637.	.6	1585.4	*	1	2035	248	2325.	3002.4	1596.1
1	0400	49	0.	.0	1585.0	*	1	1220	149	667.	2.1	1585.7	*	1	2040	249	2324.	3000.1	1596.1
1	0405	50	0.	.0	1585.0	*	1	1225	150	696.	4.9	1585.9	*	1	2045	250	2324.	2997.6	1596.1
1	0410	51	0.	.0	1585.0	*	1	1230	151	724.	9.2	1586.1	*	1	2050	251	2323.	2994.8	1596.1
1	0415	52	0.	.0	1585.0	*	1	1235	152	750.	15.2	1586.3	*	1	2055	252	2322.	2991.9	1596.0
1	0420	53	0.	.0	1585.0	*	1	1240	153	776.	23.0	1586.5	*	1	2100	253	2321.	2988.8	1596.0
1	0425	54	0.	.0	1585.0	*	1	1245	154	802.	32.9	1586.7	*	1	2105	254	2320.	2985.5	1596.0
1	0430	55	0.	.0	1585.0	*	1	1250	155	828.	45.0	1586.9	*	1	2110	255	2318.	2982.1	1596.0
1	0435	56	0.	.0	1585.0	*	1	1255	156	853.	59.3	1587.1	*	1	2115	256	2317.	2978.5	1596.0
1	0440	57	0.	.0	1585.0	*	1	1300	157	878.	75.9	1587.3	*	1	2120	257	2316.	2974.7	1596.0
1	0445	58	0.	.0	1585.0	*	1	1305	158	902.	94.8	1587.5	*	1	2125	258	2315.	2970.7	1596.0
1	0450	59	0.	.0	1585.0	*	1	1310	159	926.	116.0	1587.6	*	1	2130	259	2313.	2966.6	1596.0
1	0455	60	0.	.0	1585.0	*	1	1315	160	952.	139.4	1587.8	*	1	2135	260	2312.	2962.3	1596.0
1	0500	61	0.	.0	1585.0	*	1	1320	161	979.	165.2	1588.0	*	1	2140	261	2310.	2957.8	1596.0
1	0505	62	0.	.0	1585.0	*	1	1325	162	1006.	193.3	1588.2	*	1	2145	262	2309.	2953.2	1596.0
1	0510	63	0.	.0	1585.0	*	1	1330	163	1034.	223.5	1588.4	*	1	2150	263	2307.	2948.5	1596.0
1	0515	64	0.	.0	1585.0	*	1	1335	164	1062.	255.8	1588.6	*	1	2155	264	2306.	2943.7	1596.0
1	0520	65	0.	.0	1585.0	*	1	1340	165	1090.	289.8	1588.8	*	1	2200	265	2304.	2938.7	1596.0
1	0525	66	0.	.0	1585.0	*	1	1345	166	1118.	325.3	1589.0	*	1	2205	266	2302.	2933.6	1595.9
1	0530	67	0.	.0	1585.0	*	1	1350	167	1146.	361.9	1589.2	*	1	2210	267	2300.	2928.3	1595.9
1	0535	68	0.	.0	1585.0	*	1	1355	168	1173.	399.4	1589.3	*	1	2215	268	2299.	2923.0	1595.9
1	0540	69	0.	.0	1585.0	*	1	1400	169	1200.	437.4	1589.5	*	1	2220	269	2297.	2917.5	1595.9
1	0545	70	0.	.0	1585.0	*	1	1405	170	1226.	475.6	1589.7	*	1	2225	270	2295.	2911.9	1595.9

1	0550	71	0.	.0	1585.0	*	1	1410	171	1252.	513.6	1589.9	*	1	2250	271	2293.	2906.5	1595.9
1	0555	72	0.	.0	1585.0	*	1	1415	172	1276.	551.3	1590.0	*	1	2235	272	2291.	2900.6	1595.9
1	0600	73	0.	.0	1585.0	*	1	1420	173	1300.	588.7	1590.2	*	1	2240	273	2289.	2894.8	1595.9
1	0605	74	0.	.0	1585.0	*	1	1425	174	1323.	625.7	1590.3	*	1	2245	274	2287.	2888.8	1595.9
1	0610	75	0.	.0	1585.0	*	1	1430	175	1345.	662.6	1590.5	*	1	2250	275	2285.	2882.9	1595.9
1	0615	76	0.	.0	1585.0	*	1	1435	176	1367.	699.5	1590.6	*	1	2255	276	2283.	2876.9	1595.8
1	0620	77	0.	.0	1585.0	*	1	1440	177	1389.	736.8	1590.7	*	1	2300	277	2281.	2870.7	1595.8
1	0625	78	0.	.0	1585.0	*	1	1445	178	1411.	774.8	1590.9	*	1	2305	278	2279.	2864.5	1595.8
1	0630	79	0.	.0	1585.0	*	1	1450	179	1433.	813.8	1591.0	*	1	2310	279	2277.	2858.2	1595.8
1	0635	80	0.	.0	1585.0	*	1	1455	180	1455.	854.2	1591.1	*	1	2315	280	2275.	2851.9	1595.8
1	0640	81	0.	.0	1585.0	*	1	1500	181	1477.	896.2	1591.3	*	1	2320	281	2273.	2845.5	1595.8
1	0645	82	0.	.0	1585.0	*	1	1505	182	1501.	940.3	1591.4	*	1	2325	282	2270.	2839.0	1595.8
1	0650	83	0.	.0	1585.0	*	1	1510	183	1525.	986.6	1591.6	*	1	2330	283	2268.	2832.5	1595.8
1	0655	84	0.	.0	1585.0	*	1	1515	184	1549.	1035.4	1591.7	*	1	2335	284	2266.	2825.9	1595.8
1	0700	85	0.	.0	1585.0	*	1	1520	185	1575.	1086.5	1591.9	*	1	2340	285	2264.	2819.3	1595.7
1	0705	86	0.	.0	1585.0	*	1	1525	186	1601.	1140.1	1592.0	*	1	2345	286	2261.	2812.6	1595.7
1	0710	87	0.	.0	1585.0	*	1	1530	187	1628.	1195.9	1592.2	*	1	2350	287	2259.	2805.9	1595.7
1	0715	88	0.	.0	1585.0	*	1	1535	188	1655.	1253.8	1592.3	*	1	2355	288	2257.	2799.2	1595.7
1	0720	89	0.	.0	1585.0	*	1	1540	189	1682.	1313.4	1592.5	*	2	0000	289	2255.	2792.4	1595.7
1	0725	90	0.	.0	1585.0	*	1	1545	190	1709.	1374.4	1592.7	*	2	0005	290	2252.	2785.5	1595.7
1	0730	91	0.	.0	1585.0	*	1	1550	191	1737.	1436.5	1592.8	*	2	0010	291	2250.	2778.6	1595.7
1	0735	92	0.	.0	1585.0	*	1	1555	192	1764.	1499.3	1593.0	*	2	0015	292	2248.	2771.7	1595.7
1	0740	93	0.	.0	1585.0	*	1	1600	193	1791.	1562.3	1593.1	*	2	0020	293	2245.	2764.7	1595.6
1	0745	94	0.	.0	1585.0	*	1	1605	194	1817.	1625.2	1593.3	*	2	0025	294	2243.	2757.7	1595.6
1	0750	95	0.	.0	1585.0	*	1	1610	195	1843.	1687.6	1593.4	*	2	0030	295	2240.	2750.6	1595.6
1	0755	96	0.	.0	1585.0	*	1	1615	196	1868.	1749.1	1593.6	*	2	0035	296	2238.	2743.5	1595.6
1	0800	97	0.	.0	1585.0	*	1	1620	197	1892.	1809.5	1593.7	*	2	0040	297	2235.	2736.3	1595.6
1	0805	98	583.	.0	1585.0	*	1	1625	198	1916.	1868.6	1593.8	*	2	0045	298	2233.	2728.9	1595.6
1	0810	99	0.	.0	1585.0	*	1	1630	199	1939.	1926.1	1594.0	*	2	0050	299	2230.	2721.6	1595.6
1	0815	100	583.	.0	1585.0	*	1	1635	200	1961.	1982.0	1594.1	*	2	0055	300	2228.	2714.1	1595.6
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PEAK OUTFLOW IS 2328. AT TIME 20.00 HOURS

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
		(CFS)				
+ 2328.	20.00		2301.	1078.	1039.	1039.
		(INCHES)	.449	.840	.841	.841
		(AC-FT)	1141.	2138.	2140.	2140.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
3011.	20.00	2932.	1111.	1070.	1070.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)				
1596.08	20.00	1595.94	1589.65	1589.48	1589.48

CUMULATIVE AREA = 47.69 SQ MI

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HYDROGRAPH AT RESR

TRANSPOSITION AREA 30.0 SQ MI

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1		0000	1	583.	.0	1585.0	1		0820	101	0.	.0	1585.0	1		1640	201	1930.	1904.2	1593.9
1		0005	2	0.	.0	1585.0	1		0825	102	583.	.0	1585.0	1		1645	202	1950.	1954.2	1594.0
1		0010	3	0.	.0	1585.0	1		0830	103	0.	.0	1585.0	1		1650	203	1969.	2002.8	1594.1
1		0015	4	0.	.0	1585.0	1		0835	104	583.	.0	1585.0	1		1655	204	1987.	2050.2	1594.2
1		0020	5	0.	.0	1585.0	1		0840	105	0.	.0	1585.0	1		1700	205	2005.	2096.5	1594.3
1		0025	6	0.	.0	1585.0	1		0845	106	583.	.0	1585.0	1		1705	206	2022.	2141.9	1594.4
1		0030	7	0.	.0	1585.0	1		0850	107	0.	.0	1585.0	1		1710	207	2038.	2186.4	1594.5
1		0035	8	0.	.0	1585.0	1		0855	108	583.	.0	1585.0	1		1715	208	2055.	2230.1	1594.6
1		0040	9	0.	.0	1585.0	1		0900	109	0.	.0	1585.0	1		1720	209	2071.	2273.0	1594.7
1		0045	10	0.	.0	1585.0	1		0905	110	583.	.0	1585.0	1		1725	210	2086.	2315.0	1594.8
1		0050	11	0.	.0	1585.0	1		0910	111	0.	.0	1585.0	1		1730	211	2101.	2356.2	1594.9
1		0055	12	0.	.0	1585.0	1		0915	112	583.	.0	1585.0	1		1735	212	2116.	2396.2	1594.9
1		0100	13	0.	.0	1585.0	1		0920	113	0.	.0	1585.0	1		1740	213	2130.	2434.9	1595.0
1		0105	14	0.	.0	1585.0	1		0925	114	583.	.0	1585.0	1		1745	214	2143.	2472.2	1595.1
1		0110	15	0.	.0	1585.0	1		0930	115	0.	.0	1585.0	1		1750	215	2156.	2507.8	1595.2
1		0115	16	0.	.0	1585.0	1		0935	116	583.	.0	1585.0	1		1755	216	2168.	2541.5	1595.2
1		0120	17	0.	.0	1585.0	1		0940	117	0.	.0	1585.0	1		1800	217	2179.	2573.2	1595.3
1		0125	18	0.	.0	1585.0	1		0945	118	583.	.0	1585.0	1		1805	218	2189.	2602.7	1595.3
1		0130	19	0.	.0	1585.0	1		0950	119	0.	.0	1585.0	1		1810	219	2199.	2630.1	1595.4
1		0135	20	0.	.0	1585.0	1		0955	120	583.	.0	1585.0	1		1815	220	2207.	2655.1	1595.4
1		0140	21	0.	.0	1585.0	1		1000	121	0.	.0	1585.0	1		1820	221	2215.	2677.8	1595.5
1		0145	22	0.	.0	1585.0	1		1005	122	583.	.0	1585.0	1		1825	222	2222.	2698.4	1595.5
1		0150	23	0.	.0	1585.0	1		1010	123	0.	.0	1585.0	1		1830	223	2229.	2716.8	1595.6
1		0155	24	0.	.0	1585.0	1		1015	124	583.	.0	1585.0	1		1835	224	2234.	2733.3	1595.6
1		0200	25	0.	.0	1585.0	1		1020	125	0.	.0	1585.0	1		1840	225	2239.	2747.8	1595.6
1		0205	26	0.	.0	1585.0	1		1025	126	583.	.0	1585.0	1		1845	226	2244.	2760.6	1595.6
1		0210	27	0.	.0	1585.0	1		1030	127	0.	.0	1585.0	1		1850	227	2248.	2771.8	1595.7
1		0215	28	0.	.0	1585.0	1		1035	128	583.	.0	1585.0	1		1855	228	2251.	2781.6	1595.7
1		0220	29	0.	.0	1585.0	1		1040	129	0.	.0	1585.0	1		1900	229	2254.	2790.0	1595.7
1		0225	30	0.	.0	1585.0	1		1045	130	583.	.0	1585.0	1		1905	230	2256.	2797.2	1595.7
1		0230	31	0.	.0	1585.0	1		1050	131	0.	.0	1585.0	1		1910	231	2258.	2803.5	1595.7
1		0235	32	0.	.0	1585.0	1		1055	132	583.	.0	1585.0	1		1915	232	2260.	2808.7	1595.7
1		0240	33	0.	.0	1585.0	1		1100	133	0.	.0	1585.0	1		1920	233	2262.	2813.0	1595.7
1		0245	34	0.	.0	1585.0	1		1105	134	583.	.0	1585.0	1		1925	234	2263.	2816.5	1595.7
1		0250	35	0.	.0	1585.0	1		1110	135	0.	.0	1585.0	1		1930	235	2264.	2819.3	1595.7
1		0255	36	0.	.0	1585.0	1		1115	136	583.	.0	1585.0	1		1935	236	2265.	2821.5	1595.7
1		0300	37	0.	.0	1585.0	1		1120	137	0.	.0	1585.0	1		1940	237	2265.	2823.1	1595.8
1		0305	38	0.	.0	1585.0	1		1125	138	583.	.0	1585.0	1		1945	238	2265.	2824.2	1595.8
1		0310	39	0.	.0	1585.0	1		1130	139	0.	.0	1585.0	1		1950	239	2266.	2824.9	1595.8
1		0315	40	0.	.0	1585.0	1		1135	140	583.	.0	1585.0	1		1955	240	2266.	2825.1	1595.8
1		0320	41	0.	.0	1585.0	1		1140	141	0.	.0	1585.0	1		2000	241	2266.	2824.9	1595.8
1		0325	42	0.	.0	1585.0	1		1145	142	583.	.0	1585.0	1		2005	242	2265.	2824.3	1595.8
1		0330	43	0.	.0	1585.0	1		1150	143	0.	.0	1585.0	1		2010	243	2265.	2823.5	1595.8
1		0335	44	0.	.0	1585.0	1		1155	144	583.	.0	1585.0	1		2015	244	2265.	2822.3	1595.7
1		0340	45	0.	.0	1585.0	1		1200	145	0.	.0	1585.0	1		2020	245	2264.	2820.9	1595.7
1		0345	46	0.	.0	1585.0	1		1205	146	623.	.2	1585.3	1		2025	246	2264.	2819.2	1595.7
1		0350	47	0.	.0	1585.0	1		1210	147	583.	.0	1585.0	1		2030	247	2263.	2817.2	1595.7
1		0355	48	0.	.0	1585.0	1		1215	148	617.	.1	1585.3	1		2035	248	2262.	2815.0	1595.7
1		0400	49	0.	.0	1585.0	1		1220	149	654.	1.3	1585.6	1		2040	249	2261.	2812.6	1595.7
1		0405	50	0.	.0	1585.0	1		1225	150	684.	3.5	1585.8	1		2045	250	2261.	2809.9	1595.7
1		0410	51	0.	.0	1585.0	1		1230	151	712.	7.1	1586.0	1		2050	251	2260.	2807.1	1595.7
1		0415	52	0.	.0	1585.0	1		1235	152	739.	12.3	1586.3	1		2055	252	2259.	2804.1	1595.7
1		0420	53	0.	.0	1585.0	1		1240	153	765.	19.2	1586.5	1		2100	253	2258.	2800.9	1595.7
1		0425	54	0.	.0	1585.0	1		1245	154	790.	28.1	1586.6	1		2105	254	2256.	2797.4	1595.7

1	0430	55	0.	.0	1585.0	*	1	1250	155	815.	38.9	1586.8	*	1	2110	255	2255.	2793.9	1595.7
1	0435	56	0.	.0	1585.0	*	1	1255	156	840.	51.8	1587.0	*	1	2115	256	2254.	2790.2	1595.7
1	0440	57	0.	.0	1585.0	*	1	1300	157	864.	66.8	1587.2	*	1	2120	257	2253.	2786.3	1595.7
1	0445	58	0.	.0	1585.0	*	1	1305	158	888.	83.9	1587.4	*	1	2125	258	2251.	2782.2	1595.7
1	0450	59	0.	.0	1585.0	*	1	1310	159	912.	103.2	1587.5	*	1	2130	259	2250.	2778.0	1595.7
1	0455	60	0.	.0	1585.0	*	1	1315	160	936.	124.6	1587.7	*	1	2135	260	2248.	2773.6	1595.7
1	0500	61	0.	.0	1585.0	*	1	1320	161	961.	148.2	1587.9	*	1	2140	261	2247.	2769.1	1595.7
1	0505	62	0.	.0	1585.0	*	1	1325	162	987.	174.0	1588.1	*	1	2145	262	2245.	2764.5	1595.6
1	0510	63	0.	.0	1585.0	*	1	1330	163	1014.	201.9	1588.3	*	1	2150	263	2243.	2759.8	1595.6
1	0515	64	0.	.0	1585.0	*	1	1335	164	1041.	231.7	1588.4	*	1	2155	264	2242.	2754.9	1595.6
1	0520	65	0.	.0	1585.0	*	1	1340	165	1068.	263.2	1588.6	*	1	2200	265	2240.	2749.9	1595.6
1	0525	66	0.	.0	1585.0	*	1	1345	166	1095.	296.1	1588.8	*	1	2205	266	2238.	2744.7	1595.6
1	0530	67	0.	.0	1585.0	*	1	1350	167	1122.	330.1	1589.0	*	1	2210	267	2237.	2739.5	1595.6
1	0535	68	0.	.0	1585.0	*	1	1355	168	1148.	365.0	1589.2	*	1	2215	268	2235.	2734.1	1595.6
1	0540	69	0.	.0	1585.0	*	1	1400	169	1174.	400.4	1589.3	*	1	2220	269	2233.	2728.7	1595.6
1	0545	70	0.	.0	1585.0	*	1	1405	170	1199.	435.9	1589.5	*	1	2225	270	2231.	2723.1	1595.6
1	0550	71	0.	.0	1585.0	*	1	1410	171	1223.	471.3	1589.7	*	1	2230	271	2229.	2717.5	1595.6
1	0555	72	0.	.0	1585.0	*	1	1415	172	1247.	506.4	1589.8	*	1	2235	272	2227.	2711.8	1595.5
1	0600	73	0.	.0	1585.0	*	1	1420	173	1270.	541.2	1590.0	*	1	2240	273	2225.	2706.0	1595.5
1	0605	74	0.	.0	1585.0	*	1	1425	174	1292.	575.8	1590.1	*	1	2245	274	2223.	2700.1	1595.5
1	0610	75	0.	.0	1585.0	*	1	1430	175	1313.	610.2	1590.3	*	1	2250	275	2221.	2694.1	1595.5
1	0615	76	0.	.0	1585.0	*	1	1435	176	1334.	644.6	1590.4	*	1	2255	276	2219.	2688.1	1595.5
1	0620	77	0.	.0	1585.0	*	1	1440	177	1355.	679.4	1590.5	*	1	2300	277	2217.	2682.1	1595.5
1	0625	78	0.	.0	1585.0	*	1	1445	178	1376.	714.9	1590.6	*	1	2305	278	2215.	2675.9	1595.5
1	0630	79	0.	.0	1585.0	*	1	1450	179	1397.	751.3	1590.8	*	1	2310	279	2212.	2669.7	1595.5
1	0635	80	0.	.0	1585.0	*	1	1455	180	1419.	789.0	1590.9	*	1	2315	280	2210.	2663.5	1595.5
1	0640	81	0.	.0	1585.0	*	1	1500	181	1441.	828.4	1591.0	*	1	2320	281	2208.	2657.1	1595.4
1	0645	82	0.	.0	1585.0	*	1	1505	182	1463.	869.7	1591.2	*	1	2325	282	2206.	2650.8	1595.4
1	0650	83	0.	.0	1585.0	*	1	1510	183	1486.	913.1	1591.3	*	1	2330	283	2204.	2644.4	1595.4
1	0655	84	0.	.0	1585.0	*	1	1515	184	1510.	958.9	1591.5	*	1	2335	284	2201.	2637.9	1595.4
1	0700	85	0.	.0	1585.0	*	1	1520	185	1535.	1007.0	1591.6	*	1	2340	285	2199.	2631.4	1595.4
1	0705	86	0.	.0	1585.0	*	1	1525	186	1560.	1057.4	1591.8	*	1	2345	286	2197.	2624.8	1595.4
1	0710	87	0.	.0	1585.0	*	1	1530	187	1586.	1109.9	1591.9	*	1	2350	287	2194.	2618.1	1595.4
1	0715	88	0.	.0	1585.0	*	1	1535	188	1613.	1164.5	1592.1	*	1	2355	288	2192.	2611.4	1595.4
1	0720	89	0.	.0	1585.0	*	1	1540	189	1639.	1220.7	1592.2	*	2	0000	289	2190.	2604.7	1595.3
1	0725	90	0.	.0	1585.0	*	1	1545	190	1666.	1278.3	1592.4	*	2	0005	290	2187.	2597.9	1595.3
1	0730	91	0.	.0	1585.0	*	1	1550	191	1693.	1336.9	1592.6	*	2	0010	291	2185.	2591.1	1595.3
1	0735	92	0.	.0	1585.0	*	1	1555	192	1719.	1396.2	1592.7	*	2	0015	292	2183.	2584.3	1595.3
1	0740	93	0.	.0	1585.0	*	1	1600	193	1745.	1455.8	1592.9	*	2	0020	293	2180.	2577.4	1595.3
1	0745	94	0.	.0	1585.0	*	1	1605	194	1771.	1515.2	1593.0	*	2	0025	294	2178.	2570.4	1595.3
1	0750	95	0.	.0	1585.0	*	1	1610	195	1796.	1574.2	1593.2	*	2	0030	295	2175.	2563.4	1595.3
1	0755	96	0.	.0	1585.0	*	1	1615	196	1820.	1632.4	1593.3	*	2	0035	296	2173.	2556.3	1595.3
1	0800	97	0.	.0	1585.0	*	1	1620	197	1844.	1689.5	1593.4	*	2	0040	297	2170.	2549.2	1595.2
1	0805	98	0.	.0	1585.0	*	1	1625	198	1866.	1745.4	1593.6	*	2	0045	298	2168.	2542.0	1595.2
1	0810	99	0.	.0	1585.0	*	1	1630	199	1888.	1799.8	1593.7	*	2	0050	299	2165.	2534.7	1595.2
1	0815	100	583.	.0	1585.0	*	1	1635	200	1910.	1852.8	1593.8	*	2	0055	300	2163.	2527.4	1595.2
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PEAK OUTFLOW IS 2266. AT TIME 19.92 HOURS

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
		(CFS)				
+ 2266.	19.92		2239.	1047.	1009.	1009.
		(INCHES)	.436	.816	.817	.817
		(AC-FT)	1110.	2077.	2079.	2079.

PEAK STORAGE (AC-FT)	TIME (HR)	MAXIMUM AVERAGE STORAGE 6-HR	24-HR	72-HR	24.92-HR
2825.	19.92	2746.	1039.	1000.	1000.

PEAK STAGE (FEET)	TIME (HR)	MAXIMUM AVERAGE STAGE 6-HR	24-HR	72-HR	24.92-HR
1595.75	19.92	1595.61	1589.50	1589.34	1589.34

CUMULATIVE AREA = 47.69 SQ MI

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HYDROGRAPH AT RESR
TRANSPOSITION AREA 53.0 SQ MI

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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
1		0000	1	583.	.0	1585.0	1		0820	101	0.	.0	1585.0	1		1640	201	1874.	1763.8	1593.6
1		0005	2	0.	.0	1585.0	1		0825	102	583.	.0	1585.0	1		1645	202	1893.	1810.8	1593.7
1		0010	3	0.	.0	1585.0	1		0830	103	0.	.0	1585.0	1		1650	203	1911.	1856.5	1593.8
1		0015	4	0.	.0	1585.0	1		0835	104	583.	.0	1585.0	1		1655	204	1929.	1901.1	1593.9
1		0020	5	0.	.0	1585.0	1		0840	105	0.	.0	1585.0	1		1700	205	1946.	1944.7	1594.0
1		0025	6	0.	.0	1585.0	1		0845	106	583.	.0	1585.0	1		1705	206	1963.	1987.3	1594.1
1		0030	7	0.	.0	1585.0	1		0850	107	0.	.0	1585.0	1		1710	207	1979.	2029.2	1594.2
1		0035	8	0.	.0	1585.0	1		0855	108	583.	.0	1585.0	1		1715	208	1995.	2070.4	1594.3
1		0040	9	0.	.0	1585.0	1		0900	109	0.	.0	1585.0	1		1720	209	2010.	2110.8	1594.4
1		0045	10	0.	.0	1585.0	1		0905	110	583.	.0	1585.0	1		1725	210	2025.	2150.4	1594.5
1		0050	11	0.	.0	1585.0	1		0910	111	0.	.0	1585.0	1		1730	211	2039.	2189.2	1594.5
1		0055	12	0.	.0	1585.0	1		0915	112	583.	.0	1585.0	1		1735	212	2054.	2227.0	1594.6
1		0100	13	0.	.0	1585.0	1		0920	113	0.	.0	1585.0	1		1740	213	2067.	2263.5	1594.7
1		0105	14	0.	.0	1585.0	1		0925	114	583.	.0	1585.0	1		1745	214	2080.	2298.6	1594.8
1		0110	15	0.	.0	1585.0	1		0930	115	0.	.0	1585.0	1		1750	215	2092.	2332.1	1594.8
1		0115	16	0.	.0	1585.0	1		0935	116	583.	.0	1585.0	1		1755	216	2104.	2363.9	1594.9
1		0120	17	0.	.0	1585.0	1		0940	117	0.	.0	1585.0	1		1800	217	2115.	2393.7	1594.9
1		0125	18	0.	.0	1585.0	1		0945	118	583.	.0	1585.0	1		1805	218	2125.	2421.5	1595.0
1		0130	19	0.	.0	1585.0	1		0950	119	0.	.0	1585.0	1		1810	219	2134.	2447.2	1595.0
1		0135	20	0.	.0	1585.0	1		0955	120	583.	.0	1585.0	1		1815	220	2142.	2470.7	1595.1
1		0140	21	0.	.0	1585.0	1		1000	121	0.	.0	1585.0	1		1820	221	2150.	2492.0	1595.1
1		0145	22	0.	.0	1585.0	1		1005	122	583.	.0	1585.0	1		1825	222	2157.	2511.3	1595.2
1		0150	23	0.	.0	1585.0	1		1010	123	0.	.0	1585.0	1		1830	223	2163.	2528.5	1595.2
1		0155	24	0.	.0	1585.0	1		1015	124	583.	.0	1585.0	1		1835	224	2168.	2543.9	1595.2
1		0200	25	0.	.0	1585.0	1		1020	125	0.	.0	1585.0	1		1840	225	2173.	2557.4	1595.3
1		0205	26	0.	.0	1585.0	1		1025	126	583.	.0	1585.0	1		1845	226	2177.	2569.3	1595.3
1		0210	27	0.	.0	1585.0	1		1030	127	0.	.0	1585.0	1		1850	227	2181.	2579.7	1595.3
1		0215	28	0.	.0	1585.0	1		1035	128	583.	.0	1585.0	1		1855	228	2184.	2588.7	1595.3
1		0220	29	0.	.0	1585.0	1		1040	129	0.	.0	1585.0	1		1900	229	2187.	2596.4	1595.3
1		0225	30	0.	.0	1585.0	1		1045	130	583.	.0	1585.0	1		1905	230	2189.	2603.1	1595.3
1		0230	31	0.	.0	1585.0	1		1050	131	0.	.0	1585.0	1		1910	231	2191.	2608.6	1595.4
1		0235	32	0.	.0	1585.0	1		1055	132	583.	.0	1585.0	1		1915	232	2193.	2613.3	1595.4
1		0240	33	0.	.0	1585.0	1		1100	133	0.	.0	1585.0	1		1920	233	2194.	2617.2	1595.4
1		0245	34	0.	.0	1585.0	1		1105	134	583.	.0	1585.0	1		1925	234	2195.	2620.3	1595.4
1		0250	35	0.	.0	1585.0	1		1110	135	0.	.0	1585.0	1		1930	235	2196.	2622.7	1595.4
1		0255	36	0.	.0	1585.0	1		1115	136	583.	.0	1585.0	1		1935	236	2197.	2624.5	1595.4
1		0300	37	0.	.0	1585.0	1		1120	137	0.	.0	1585.0	1		1940	237	2197.	2625.8	1595.4
1		0305	38	0.	.0	1585.0	1		1125	138	583.	.0	1585.0	1		1945	238	2197.	2626.6	1595.4

1	0310	39	0.	.0	1585.0	*	1	1130	139	0.	.0	1585.0	*	1	1950	239	2198.	2626.9	1595.4
1	0315	40	0.	.0	1585.0	*	1	1135	140	583.	.0	1585.0	*	1	1955	240	2198.	2626.9	1595.4
1	0320	41	0.	.0	1585.0	*	1	1140	141	0.	.0	1585.0	*	1	2000	241	2197.	2626.4	1595.4
1	0325	42	0.	.0	1585.0	*	1	1145	142	583.	.0	1585.0	*	1	2005	242	2197.	2625.6	1595.4
1	0330	43	0.	.0	1585.0	*	1	1150	143	0.	.0	1585.0	*	1	2010	243	2197.	2624.5	1595.4
1	0335	44	0.	.0	1585.0	*	1	1155	144	583.	.0	1585.0	*	1	2015	244	2196.	2623.1	1595.4
1	0340	45	0.	.0	1585.0	*	1	1200	145	0.	.0	1585.0	*	1	2020	245	2196.	2621.5	1595.4
1	0345	46	0.	.0	1585.0	*	1	1205	146	600.	.0	1585.1	*	1	2025	246	2195.	2619.6	1595.4
1	0350	47	0.	.0	1585.0	*	1	1210	147	583.	.0	1585.0	*	1	2030	247	2194.	2617.5	1595.4
1	0355	48	0.	.0	1585.0	*	1	1215	148	583.	.0	1585.0	*	1	2035	248	2193.	2615.1	1595.4
1	0400	49	0.	.0	1585.0	*	1	1220	149	641.	.7	1585.5	*	1	2040	249	2193.	2612.5	1595.4
1	0405	50	0.	.0	1585.0	*	1	1225	150	671.	2.4	1585.7	*	1	2045	250	2192.	2609.7	1595.4
1	0410	51	0.	.0	1585.0	*	1	1230	151	699.	5.3	1585.9	*	1	2050	251	2191.	2606.8	1595.4
1	0415	52	0.	.0	1585.0	*	1	1235	152	726.	9.7	1586.2	*	1	2055	252	2189.	2603.6	1595.3
1	0420	53	0.	.0	1585.0	*	1	1240	153	752.	15.7	1586.4	*	1	2100	253	2188.	2600.2	1595.3
1	0425	54	0.	.0	1585.0	*	1	1245	154	778.	23.4	1586.5	*	1	2105	254	2187.	2596.7	1595.3
1	0430	55	0.	.0	1585.0	*	1	1250	155	802.	33.0	1586.7	*	1	2110	255	2186.	2593.0	1595.3
1	0435	56	0.	.0	1585.0	*	1	1255	156	827.	44.4	1586.9	*	1	2115	256	2184.	2589.2	1595.3
1	0440	57	0.	.0	1585.0	*	1	1300	157	850.	57.8	1587.1	*	1	2120	257	2183.	2585.3	1595.3
1	0445	58	0.	.0	1585.0	*	1	1305	158	874.	73.2	1587.3	*	1	2125	258	2182.	2581.1	1595.3
1	0450	59	0.	.0	1585.0	*	1	1310	159	897.	90.5	1587.4	*	1	2130	259	2180.	2576.9	1595.3
1	0455	60	0.	.0	1585.0	*	1	1315	160	919.	109.8	1587.6	*	1	2135	260	2178.	2572.5	1595.3
1	0500	61	0.	.0	1585.0	*	1	1320	161	943.	131.2	1587.8	*	1	2140	261	2177.	2568.0	1595.3
1	0505	62	0.	.0	1585.0	*	1	1325	162	968.	154.5	1587.9	*	1	2145	262	2175.	2563.3	1595.3
1	0510	63	0.	.0	1585.0	*	1	1330	163	993.	179.9	1588.1	*	1	2150	263	2174.	2558.6	1595.3
1	0515	64	0.	.0	1585.0	*	1	1335	164	1019.	207.0	1588.3	*	1	2155	264	2172.	2553.7	1595.3
1	0520	65	0.	.0	1585.0	*	1	1340	165	1045.	235.8	1588.5	*	1	2200	265	2170.	2548.7	1595.2
1	0525	66	0.	.0	1585.0	*	1	1345	166	1070.	265.9	1588.7	*	1	2205	266	2168.	2543.5	1595.2
1	0530	67	0.	.0	1585.0	*	1	1350	167	1096.	297.1	1588.8	*	1	2210	267	2166.	2538.3	1595.2
1	0535	68	0.	.0	1585.0	*	1	1355	168	1121.	329.1	1589.0	*	1	2215	268	2165.	2532.9	1595.2
1	0540	69	0.	.0	1585.0	*	1	1400	169	1146.	361.6	1589.2	*	1	2220	269	2163.	2527.5	1595.2
1	0545	70	0.	.0	1585.0	*	1	1405	170	1170.	394.3	1589.3	*	1	2225	270	2161.	2521.9	1595.2
1	0550	71	0.	.0	1585.0	*	1	1410	171	1193.	427.0	1589.5	*	1	2230	271	2159.	2516.3	1595.2
1	0555	72	0.	.0	1585.0	*	1	1415	172	1215.	459.4	1589.6	*	1	2235	272	2157.	2510.6	1595.2
1	0600	73	0.	.0	1585.0	*	1	1420	173	1237.	491.5	1589.8	*	1	2240	273	2155.	2504.8	1595.2
1	0605	74	0.	.0	1585.0	*	1	1425	174	1258.	523.3	1589.9	*	1	2245	274	2152.	2499.0	1595.1
1	0610	75	0.	.0	1585.0	*	1	1430	175	1279.	555.0	1590.0	*	1	2250	275	2150.	2493.1	1595.1
1	0615	76	0.	.0	1585.0	*	1	1435	176	1299.	586.8	1590.2	*	1	2255	276	2148.	2487.1	1595.1
1	0620	77	0.	.0	1585.0	*	1	1440	177	1319.	619.0	1590.3	*	1	2300	277	2146.	2481.0	1595.1
1	0625	78	0.	.0	1585.0	*	1	1445	178	1339.	651.7	1590.4	*	1	2305	278	2144.	2474.9	1595.1
1	0630	79	0.	.0	1585.0	*	1	1450	179	1359.	685.4	1590.5	*	1	2310	279	2142.	2468.7	1595.1
1	0635	80	0.	.0	1585.0	*	1	1455	180	1379.	720.3	1590.7	*	1	2315	280	2139.	2462.5	1595.1
1	0640	81	0.	.0	1585.0	*	1	1500	181	1400.	756.8	1590.8	*	1	2320	281	2137.	2456.2	1595.1
1	0645	82	0.	.0	1585.0	*	1	1505	182	1422.	795.1	1590.9	*	1	2325	282	2135.	2449.8	1595.1
1	0650	83	0.	.0	1585.0	*	1	1510	183	1444.	835.5	1591.1	*	1	2330	283	2133.	2443.4	1595.0
1	0655	84	0.	.0	1585.0	*	1	1515	184	1468.	878.0	1591.2	*	1	2335	284	2130.	2437.0	1595.0
1	0700	85	0.	.0	1585.0	*	1	1520	185	1491.	922.8	1591.4	*	1	2340	285	2128.	2430.5	1595.0
1	0705	86	0.	.0	1585.0	*	1	1525	186	1516.	969.8	1591.5	*	1	2345	286	2126.	2424.0	1595.0
1	0710	87	0.	.0	1585.0	*	1	1530	187	1541.	1018.9	1591.7	*	1	2350	287	2123.	2417.5	1595.0
1	0715	88	0.	.0	1585.0	*	1	1535	188	1567.	1069.8	1591.8	*	1	2355	288	2121.	2410.8	1595.0
1	0720	89	0.	.0	1585.0	*	1	1540	189	1592.	1122.4	1592.0	*	2	0000	289	2119.	2404.2	1595.0
1	0725	90	0.	.0	1585.0	*	1	1545	190	1618.	1176.4	1592.1	*	2	0005	290	2116.	2397.5	1594.9
1	0730	91	0.	.0	1585.0	*	1	1550	191	1644.	1231.3	1592.3	*	2	0010	291	2114.	2390.8	1594.9
1	0735	92	0.	.0	1585.0	*	1	1555	192	1670.	1286.8	1592.4	*	2	0015	292	2111.	2384.0	1594.9
1	0740	93	0.	.0	1585.0	*	1	1600	193	1695.	1342.7	1592.6	*	2	0020	293	2109.	2377.2	1594.9
1	0745	94	0.	.0	1585.0	*	1	1605	194	1720.	1398.4	1592.7	*	2	0025	294	2106.	2370.3	1594.9
1	0750	95	0.	.0	1585.0	*	1	1610	195	1744.	1453.8	1592.9	*	2	0030	295	2104.	2363.4	1594.9
1	0755	96	0.	.0	1585.0	*	1	1615	196	1768.	1508.4	1593.0	*	2	0035	296	2101.	2356.5	1594.9
1	0800	97	0.	.0	1585.0	*	1	1620	197	1790.	1562.1	1593.1	*	2	0040	297	2099.	2349.4	1594.9
1	0805	98	0.	.0	1585.0	*	1	1625	198	1813.	1614.5	1593.3	*	2	0045	298	2096.	2342.4	1594.8

1	0810	99	0.	.0	1585.0	*	1	1630	199	1834.	1665.7	1593.4	*	2	0050	299	2093.	2335.2	1594.8
1	0815	100	0.	.0	1585.0	*	1	1635	200	1854.	1715.4	1593.5	*	2	0055	300	2091.	2328.0	1594.8

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PEAK OUTFLOW IS 2198. AT TIME 19.83 HOURS

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
		(CFS)				
+ 2198.	19.83		2170.	1015.	979.	979.
		(INCHES)	.423	.792	.793	.793
		(AC-FT)	1076.	2014.	2016.	2016.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
2627.	19.83	2548.	962.	927.	927.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)				
1595.39	19.83	1595.24	1589.34	1589.18	1589.18

CUMULATIVE AREA = 47.69 SQ MI

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INTERPOLATED HYDROGRAPH AT RESR

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DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW
1		0000	1	583.	*	1		0615	76	0.	*	1		1230	151	702.	*	1		1845	226	2190.
1		0005	2	0.	*	1		0620	77	0.	*	1		1235	152	729.	*	1		1850	227	2193.
1		0010	3	0.	*	1		0625	78	0.	*	1		1240	153	754.	*	1		1855	228	2197.
1		0015	4	0.	*	1		0630	79	0.	*	1		1245	154	780.	*	1		1900	229	2199.
1		0020	5	0.	*	1		0635	80	0.	*	1		1250	155	805.	*	1		1905	230	2202.
1		0025	6	0.	*	1		0640	81	0.	*	1		1255	156	829.	*	1		1910	231	2204.
1		0030	7	0.	*	1		0645	82	0.	*	1		1300	157	853.	*	1		1915	232	2205.
1		0035	8	0.	*	1		0650	83	0.	*	1		1305	158	876.	*	1		1920	233	2207.
1		0040	9	0.	*	1		0655	84	0.	*	1		1310	159	900.	*	1		1925	234	2208.
1		0045	10	0.	*	1		0700	85	0.	*	1		1315	160	923.	*	1		1930	235	2209.
1		0050	11	0.	*	1		0705	86	0.	*	1		1320	161	946.	*	1		1935	236	2209.
1		0055	12	0.	*	1		0710	87	0.	*	1		1325	162	971.	*	1		1940	237	2210.
1		0100	13	0.	*	1		0715	88	0.	*	1		1330	163	997.	*	1		1945	238	2210.
1		0105	14	0.	*	1		0720	89	0.	*	1		1335	164	1023.	*	1		1950	239	2210.
1		0110	15	0.	*	1		0725	90	0.	*	1		1340	165	1049.	*	1		1955	240	2210.
1		0115	16	0.	*	1		0730	91	0.	*	1		1345	166	1075.	*	1		2000	241	2210.
1		0120	17	0.	*	1		0735	92	0.	*	1		1350	167	1101.	*	1		2005	242	2210.
1		0125	18	0.	*	1		0740	93	0.	*	1		1355	168	1126.	*	1		2010	243	2209.
1		0130	19	0.	*	1		0745	94	0.	*	1		1400	169	1151.	*	1		2015	244	2209.
1		0135	20	0.	*	1		0750	95	0.	*	1		1405	170	1175.	*	1		2020	245	2208.
1		0140	21	0.	*	1		0755	96	0.	*	1		1410	171	1198.	*	1		2025	246	2208.
1		0145	22	0.	*	1		0800	97	0.	*	1		1415	172	1221.	*	1		2030	247	2207.
1		0150	23	0.	*	1		0805	98	0.	*	1		1420	173	1243.	*	1		2035	248	2206.

1	0155	24	0.	*	1	0810	99	0.	*	1	1425	174	1264.	*	1	2040	249	2205.
1	0200	25	0.	*	1	0815	100	108.	*	1	1430	175	1285.	*	1	2045	250	2204.
1	0205	26	0.	*	1	0820	101	0.	*	1	1435	176	1305.	*	1	2050	251	2203.
1	0210	27	0.	*	1	0825	102	583.	*	1	1440	177	1326.	*	1	2055	252	2202.
1	0215	28	0.	*	1	0830	103	0.	*	1	1445	178	1346.	*	1	2100	253	2201.
1	0220	29	0.	*	1	0835	104	583.	*	1	1450	179	1366.	*	1	2105	254	2200.
1	0225	30	0.	*	1	0840	105	0.	*	1	1455	180	1387.	*	1	2110	255	2199.
1	0230	31	0.	*	1	0845	106	583.	*	1	1500	181	1408.	*	1	2115	256	2197.
1	0235	32	0.	*	1	0850	107	0.	*	1	1505	182	1430.	*	1	2120	257	2196.
1	0240	33	0.	*	1	0855	108	583.	*	1	1510	183	1452.	*	1	2125	258	2194.
1	0245	34	0.	*	1	0900	109	0.	*	1	1515	184	1475.	*	1	2130	259	2193.
1	0250	35	0.	*	1	0905	110	583.	*	1	1520	185	1499.	*	1	2135	260	2191.
1	0255	36	0.	*	1	0910	111	0.	*	1	1525	186	1524.	*	1	2140	261	2190.
1	0300	37	0.	*	1	0915	112	583.	*	1	1530	187	1549.	*	1	2145	262	2188.
1	0305	38	0.	*	1	0920	113	0.	*	1	1535	188	1575.	*	1	2150	263	2187.
1	0310	39	0.	*	1	0925	114	583.	*	1	1540	189	1601.	*	1	2155	264	2185.
1	0315	40	0.	*	1	0930	115	0.	*	1	1545	190	1627.	*	1	2200	265	2183.
1	0320	41	0.	*	1	0935	116	583.	*	1	1550	191	1653.	*	1	2205	266	2181.
1	0325	42	0.	*	1	0940	117	0.	*	1	1555	192	1679.	*	1	2210	267	2179.
1	0330	43	0.	*	1	0945	118	583.	*	1	1600	193	1704.	*	1	2215	268	2178.
1	0335	44	0.	*	1	0950	119	0.	*	1	1605	194	1729.	*	1	2220	269	2176.
1	0340	45	0.	*	1	0955	120	583.	*	1	1610	195	1754.	*	1	2225	270	2174.
1	0345	46	0.	*	1	1000	121	0.	*	1	1615	196	1777.	*	1	2230	271	2172.
1	0350	47	0.	*	1	1005	122	583.	*	1	1620	197	1800.	*	1	2235	272	2170.
1	0355	48	0.	*	1	1010	123	0.	*	1	1625	198	1823.	*	1	2240	273	2168.
1	0400	49	0.	*	1	1015	124	583.	*	1	1630	199	1844.	*	1	2245	274	2166.
1	0405	50	0.	*	1	1020	125	0.	*	1	1635	200	1865.	*	1	2250	275	2163.
1	0410	51	0.	*	1	1025	126	583.	*	1	1640	201	1884.	*	1	2255	276	2161.
1	0415	52	0.	*	1	1030	127	0.	*	1	1645	202	1903.	*	1	2300	277	2159.
1	0420	53	0.	*	1	1035	128	583.	*	1	1650	203	1922.	*	1	2305	278	2157.
1	0425	54	0.	*	1	1040	129	0.	*	1	1655	204	1940.	*	1	2310	279	2155.
1	0430	55	0.	*	1	1045	130	583.	*	1	1700	205	1957.	*	1	2315	280	2153.
1	0435	56	0.	*	1	1050	131	0.	*	1	1705	206	1974.	*	1	2320	281	2150.
1	0440	57	0.	*	1	1055	132	583.	*	1	1710	207	1990.	*	1	2325	282	2148.
1	0445	58	0.	*	1	1100	133	0.	*	1	1715	208	2006.	*	1	2330	283	2146.
1	0450	59	0.	*	1	1105	134	583.	*	1	1720	209	2021.	*	1	2335	284	2143.
1	0455	60	0.	*	1	1110	135	0.	*	1	1725	210	2036.	*	1	2340	285	2141.
1	0500	61	0.	*	1	1115	136	583.	*	1	1730	211	2051.	*	1	2345	286	2139.
1	0505	62	0.	*	1	1120	137	0.	*	1	1735	212	2065.	*	1	2350	287	2137.
1	0510	63	0.	*	1	1125	138	583.	*	1	1740	213	2079.	*	1	2355	288	2134.
1	0515	64	0.	*	1	1130	139	0.	*	1	1745	214	2092.	*	2	0000	289	2132.
1	0520	65	0.	*	1	1135	140	583.	*	1	1750	215	2104.	*	2	0005	290	2129.
1	0525	66	0.	*	1	1140	141	0.	*	1	1755	216	2116.	*	2	0010	291	2127.
1	0530	67	0.	*	1	1145	142	583.	*	1	1800	217	2127.	*	2	0015	292	2124.
1	0535	68	0.	*	1	1150	143	0.	*	1	1805	218	2137.	*	2	0020	293	2122.
1	0540	69	0.	*	1	1155	144	583.	*	1	1810	219	2146.	*	2	0025	294	2120.
1	0545	70	0.	*	1	1200	145	0.	*	1	1815	220	2154.	*	2	0030	295	2117.
1	0550	71	0.	*	1	1205	146	604.	*	1	1820	221	2162.	*	2	0035	296	2114.
1	0555	72	0.	*	1	1210	147	583.	*	1	1825	222	2169.	*	2	0040	297	2112.
1	0600	73	0.	*	1	1215	148	589.	*	1	1830	223	2175.	*	2	0045	298	2109.
1	0605	74	0.	*	1	1220	149	644.	*	1	1835	224	2181.	*	2	0050	299	2107.
1	0610	75	0.	*	1	1225	150	674.	*	1	1840	225	2185.	*	2	0055	300	2104.
				*					*					*				

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PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)	(CFS)			
+ 2210.	19.83	2182.	1021.	985.	985.

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                         INCHES)     .425       .796       .797         .797
                         (AC-FT)     1082.      2026.      2028.        2028.

 PEAK STORAGE   TIME                       MAXIMUM AVERAGE STORAGE
                                     6-HR       24-HR      72-HR     24.92-HR
+  (AC-FT)      (HR)
     2627.     19.83                 2548.       962.       927.         927.

  PEAK STAGE    TIME                       MAXIMUM AVERAGE STAGE
                                     6-HR       24-HR      72-HR     24.92-HR
+   (FEET)      (HR)
    1595.39    19.83               1595.24    1589.34    1589.18      1589.18

                         CUMULATIVE AREA =   47.69 SQ MI

1                                                     STATION      RESR

                          (O) OUTFLOW
          0.       400.      800.     1200.     1600.     2000.     2400.        0.        0.        0.        0.        0.        0
 DAHRMN PER
  10000   1.---------.----O----.---------.---------.---------.---------.---------.---------.---------.---------.---------.---------.
  10005  20          .         .         .         .         .         .         .         .         .         .         .         .
  10010  30          .         .         .         .         .         .         .         .         .         .         .         .
  10015  40          .         .         .         .         .         .         .         .         .         .         .         .
  10020  50          .         .         .         .         .         .         .         .         .         .         .         .
  10025  60          .         .         .         .         .         .         .         .         .         .         .         .
  10030  70          .         .         .         .         .         .         .         .         .         .         .         .
  10035  80          .         .         .         .         .         .         .         .         .         .         .         .
  10040  90          .         .         .         .         .         .         .         .         .         .         .         .
  10045 100          .         .         .         .         .         .         .         .         .         .         .         .
  10050 110 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
  10055 120          .         .         .         .         .         .         .         .         .         .         .         .
  10100 130          .         .         .         .         .         .         .         .         .         .         .         .
  10105 140          .         .         .         .         .         .         .         .         .         .         .         .
  10110 150          .         .         .         .         .         .         .         .         .         .         .         .
  10115 160          .         .         .         .         .         .         .         .         .         .         .         .
  10120 170          .         .         .         .         .         .         .         .         .         .         .         .
  10125 180          .         .         .         .         .         .         .         .         .         .         .         .
  10130 190          .         .         .         .         .         .         .         .         .         .         .         .
  10135 200          .         .         .         .         .         .         .         .         .         .         .         .
  10140 210 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
  10145 220          .         .         .         .         .         .         .         .         .         .         .         .
  10150 230          .         .         .         .         .         .         .         .         .         .         .         .
  10155 240          .         .         .         .         .         .         .         .         .         .         .         .
  10200 250          .         .         .         .         .         .         .         .         .         .         .         .
  10205 260          .         .         .         .         .         .         .         .         .         .         .         .
  10210 270          .         .         .         .         .         .         .         .         .         .         .         .
  10215 280          .         .         .         .         .         .         .         .         .         .         .         .
  10220 290          .         .         .         .         .         .         .         .         .         .         .         .
  10225 300          .         .         .         .         .         .         .         .         .         .         .         .
  10230 310 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
  10235 320          .         .         .         .         .         .         .         .         .         .         .         .
  10240 330          .         .         .         .         .         .         .         .         .         .         .         .
  10245 340          .         .         .         .         .         .         .         .         .         .         .         .
  10250 350          .         .         .         .         .         .         .         .         .         .         .         .
  10255 360          .         .         .         .         .         .         .         .         .         .         .         .
  10300 370          .         .         .         .         .         .         .         .         .         .         .         .
  10305 380          .         .         .         .         .         .         .         .         .         .         .         .
  10310 390          .         .         .         .         .         .         .         .         .         .         .         .
  10315 400          .         .         .         .         .         .         .         .         .         .         .         .
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10320 410
10325 420
10330 430
10335 440
10340 450
10345 460
10350 470
10355 480
10400 490
10405 500
10410 510
10415 520
10420 530
10425 540
10430 550
10435 560
10440 570
10445 580
10450 590
10455 600
10500 610
10505 620
10510 630
10515 640
10520 650
10525 660
10530 670
10535 680
10540 690
10545 700
10550 710
10555 720
10600 730
10605 740
10610 750
10615 760
10620 770
10625 780
10630 790
10635 800
10640 810
10645 820
10650 830
10655 840
10700 850
10705 860
10710 870
10715 880
10720 890
10725 900
10730 910
10735 920
10740 930
10745 940
10750 950
10755 960
10800 970
10805 980
10810 990
10815 100. 0

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10820 1010 . . . . . .
10825 102. . 0 . . . . . .
10830 1030 . . . . . .
10835 104. . 0 . . . . . .
10840 1050 . . . . . .
10845 106. . 0 . . . . . .
10850 1070 . . . . . .
10855 108. . 0 . . . . . .
10900 1090 . . . . . .
10905 110. . 0 . . . . . .
10910 1110 . . . . . .
10915 112. . 0 . . . . . .
10920 1130 . . . . . .
10925 114. . 0 . . . . . .
10930 1150 . . . . . .
10935 116. . 0 . . . . . .
10940 1170 . . . . . .
10945 118. . 0 . . . . . .
10950 1190 . . . . . .
10955 120. . 0 . . . . . .
11000 1210 . . . . . .
11005 122. . 0 . . . . . .
11010 1230 . . . . . .
11015 124. . 0 . . . . . .
11020 1250 . . . . . .
11025 126. . 0 . . . . . .
11030 1270 . . . . . .
11035 128. . 0 . . . . . .
11040 1290 . . . . . .
11045 130. . 0 . . . . . .
11050 1310 . . . . . .
11055 132. . 0 . . . . . .
11100 1330 . . . . . .
11105 134. . 0 . . . . . .
11110 1350 . . . . . .
11115 136. . 0 . . . . . .
11120 1370 . . . . . .
11125 138. . 0 . . . . . .
11130 1390 . . . . . .
11135 140. . 0 . . . . . .
11140 1410 . . . . . .
11145 142. . 0 . . . . . .
11150 1430 . . . . . .
11155 144. . 0 . . . . . .
11200 1450 . . . . . .
11205 146. . 0 . . . . . .
11210 147. . 0 . . . . . .
11215 148. . 0 . . . . . .
11220 149. . 0 . . . . . .
11225 150. . 0 . . . . . .
11230 151. . . . . 0 . . . . . .
11235 152. . 0 . . . . . .
11240 153. . 0. . . . . .
11245 154. . 0. . . . . .
11250 155. . 0 . . . . . .
11255 156. . .0 . . . . . .
11300 157. . .0 . . . . . .
11305 158. . . 0 . . . . . .
11310 159. . . 0 . . . . . .
11315 160. . . 0 . . . . . .
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11320 161. . . . . 0 . . . . . .
11325 162. . . . 0 . . . . . .
11330 163. . . . 0 . . . . . .
11335 164. . . . 0 . . . . . .
11340 165. . . . 0 . . . . . .
11345 166. . . . 0 . . . . . .
11350 167. . . . 0 . . . . . .
11355 168. . . . 0 . . . . . .
11400 169. . . . 0. . . . . .
11405 170. . . . 0. . . . . .
11410 171. . . . . 0 . . . . . .
11415 172. . . . .0 . . . . . .
11420 173. . . . .0 . . . . . .
11425 174. . . . . 0 . . . . . .
11430 175. . . . . 0 . . . . . .
11435 176. . . . . 0 . . . . . .
11440 177. . . . . 0 . . . . . .
11445 178. . . . . 0 . . . . . .
11450 179. . . . . 0 . . . . . .
11455 180. . . . . 0 . . . . . .
11500 181. . . . . .0. . . . . .
11505 182. . . . . 0 . . . . . .
11510 183. . . . . 0 . . . . . .
11515 184. . . . . 0 . . . . . .
11520 185. . . . . 0 . . . . . .
11525 186. . . . . 0 . . . . . .
11530 187. . . . . 0. . . . . .
11535 188. . . . . 0. . . . . .
11540 189. . . . . 0 . . . . . .
11545 190. . . . . .0 . . . . . .
11550 191. . . . . .0. . . . . .
11555 192. . . . . 0 . . . . . .
11600 193. . . . . 0 . . . . . .
11605 194. . . . . 0 . . . . . .
11610 195. . . . . 0 . . . . . .
11615 196. . . . . 0 . . . . . .
11620 197. . . . . 0 . . . . . .
11625 198. . . . . 0 . . . . . .
11630 199. . . . . 0 . . . . . .
11635 200. . . . . 0 . . . . . .
11640 201. . . . . .0. . . . . .
11645 202. . . . . 0 . . . . . .
11650 203. . . . . 0 . . . . . .
11655 204. . . . . 0 . . . . . .
11700 205. . . . . 0. . . . . .
11705 206. . . . . 0. . . . . .
11710 207. . . . . 0 . . . . . .
11715 208. . . . . 0 . . . . . .
11720 209. . . . . .0 . . . . . .
11725 210. . . . . .0 . . . . . .
11730 211. . . . . .0. . . . . .
11735 212. . . . . 0 . . . . . .
11740 213. . . . . 0 . . . . . .
11745 214. . . . . 0 . . . . . .
11750 215. . . . . 0 . . . . . .
11755 216. . . . . 0 . . . . . .
11800 217. . . . . 0 . . . . . .
11805 218. . . . . 0 . . . . . .
11810 219. . . . . 0 . . . . . .
11815 220. . . . . 0 . . . . . .
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11820 221.	0
11825 222.	0
11830 223.	0
11835 224.	0
11840 225.	0
11845 226.	0
11850 227.	0
11855 228.	0
11900 229.	0
11905 230.	0
11910 231.	0
11915 232.	0
11920 233.	0
11925 234.	0
11930 235.	0
11935 236.	0
11940 237.	0
11945 238.	0
11950 239.	0
11955 240.	0
12000 241.	0
12005 242.	0
12010 243.	0
12015 244.	0
12020 245.	0
12025 246.	0
12030 247.	0
12035 248.	0
12040 249.	0
12045 250.	0
12050 251.	0
12055 252.	0
12100 253.	0
12105 254.	0
12110 255.	0
12115 256.	0
12120 257.	0
12125 258.	0
12130 259.	0
12135 260.	0
12140 261.	0
12145 262.	0
12150 263.	0
12155 264.	0
12200 265.	0
12205 266.	0
12210 267.	0
12215 268.	0
12220 269.	0
12225 270.	0
12230 271.	0
12235 272.	0
12240 273.	0
12245 274.	0
12250 275.	0
12255 276.	0
12300 277.	0
12305 278.	0
12310 279.	0
12315 280.	0

ELEVATION 1576.57 1577.12 1577.74 1578.43 1579.20

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HYDROGRAPH AT RESV
TRANSPOSITION AREA .3 SQ MI

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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
1		0000	1	396.	.0	1564.2	1		0820	101	396.	.0	1564.2	1		1640	201	3735.	3390.7	1573.6
1		0005	2	0.	.0	1564.2	1		0825	102	0.	.0	1564.2	1		1645	202	3757.	3426.0	1573.6
1		0010	3	0.	.0	1564.2	1		0830	103	396.	.0	1564.2	1		1650	203	3777.	3457.7	1573.6
1		0015	4	0.	.0	1564.2	1		0835	104	0.	.0	1564.2	1		1655	204	3795.	3486.2	1573.7
1		0020	5	0.	.0	1564.2	1		0840	105	396.	.0	1564.2	1		1700	205	3811.	3511.6	1573.7
1		0025	6	0.	.0	1564.2	1		0845	106	0.	.0	1564.2	1		1705	206	3825.	3534.1	1573.7
1		0030	7	0.	.0	1564.2	1		0850	107	396.	.0	1564.2	1		1710	207	3837.	3554.0	1573.8
1		0035	8	0.	.0	1564.2	1		0855	108	0.	.0	1564.2	1		1715	208	3848.	3571.5	1573.8
1		0040	9	0.	.0	1564.2	1		0900	109	396.	.0	1564.2	1		1720	209	3857.	3586.7	1573.8
1		0045	10	0.	.0	1564.2	1		0905	110	0.	.0	1564.2	1		1725	210	3865.	3599.9	1573.8
1		0050	11	0.	.0	1564.2	1		0910	111	396.	.0	1564.2	1		1730	211	3872.	3611.3	1573.8
1		0055	12	0.	.0	1564.2	1		0915	112	0.	.0	1564.2	1		1735	212	3878.	3620.8	1573.9
1		0100	13	0.	.0	1564.2	1		0920	113	396.	.0	1564.2	1		1740	213	3883.	3628.8	1573.9
1		0105	14	0.	.0	1564.2	1		0925	114	0.	.0	1564.2	1		1745	214	3887.	3635.2	1573.9
1		0110	15	0.	.0	1564.2	1		0930	115	396.	.0	1564.2	1		1750	215	3890.	3640.3	1573.9
1		0115	16	0.	.0	1564.2	1		0935	116	0.	.0	1564.2	1		1755	216	3892.	3644.2	1573.9
1		0120	17	0.	.0	1564.2	1		0940	117	396.	.0	1564.2	1		1800	217	3894.	3647.0	1573.9
1		0125	18	0.	.0	1564.2	1		0945	118	0.	.0	1564.2	1		1805	218	3895.	3648.8	1573.9
1		0130	19	0.	.0	1564.2	1		0950	119	396.	.0	1564.2	1		1810	219	3895.	3649.6	1573.9
1		0135	20	0.	.0	1564.2	1		0955	120	0.	.0	1564.2	1		1815	220	3895.	3649.6	1573.9
1		0140	21	0.	.0	1564.2	1		1000	121	396.	.0	1564.2	1		1820	221	3895.	3648.9	1573.9
1		0145	22	0.	.0	1564.2	1		1005	122	0.	.0	1564.2	1		1825	222	3894.	3647.5	1573.9
1		0150	23	0.	.0	1564.2	1		1010	123	396.	.0	1564.2	1		1830	223	3893.	3645.4	1573.9
1		0155	24	0.	.0	1564.2	1		1015	124	0.	.0	1564.2	1		1835	224	3891.	3642.8	1573.9
1		0200	25	0.	.0	1564.2	1		1020	125	396.	.0	1564.2	1		1840	225	3889.	3639.5	1573.9
1		0205	26	0.	.0	1564.2	1		1025	126	0.	.0	1564.2	1		1845	226	3887.	3635.7	1573.9
1		0210	27	0.	.0	1564.2	1		1030	127	396.	.0	1564.2	1		1850	227	3884.	3631.4	1573.9
1		0215	28	0.	.0	1564.2	1		1035	128	396.	.0	1564.2	1		1855	228	3881.	3626.6	1573.9
1		0220	29	0.	.0	1564.2	1		1040	129	396.	.0	1564.2	1		1900	229	3878.	3621.3	1573.9
1		0225	30	0.	.0	1564.2	1		1045	130	396.	.0	1564.2	1		1905	230	3875.	3615.7	1573.9
1		0230	31	0.	.0	1564.2	1		1050	131	396.	.0	1564.2	1		1910	231	3871.	3609.7	1573.8
1		0235	32	0.	.0	1564.2	1		1055	132	396.	.0	1564.2	1		1915	232	3867.	3603.4	1573.8
1		0240	33	0.	.0	1564.2	1		1100	133	396.	.0	1564.2	1		1920	233	3863.	3596.7	1573.8
1		0245	34	0.	.0	1564.2	1		1105	134	396.	.0	1564.2	1		1925	234	3859.	3589.8	1573.8
1		0250	35	0.	.0	1564.2	1		1110	135	414.	.0	1564.3	1		1930	235	3854.	3582.6	1573.8
1		0255	36	0.	.0	1564.2	1		1115	136	435.	.2	1564.4	1		1935	236	3850.	3575.1	1573.8
1		0300	37	0.	.0	1564.2	1		1120	137	453.	.5	1564.5	1		1940	237	3845.	3567.4	1573.8
1		0305	38	0.	.0	1564.2	1		1125	138	470.	1.2	1564.5	1		1945	238	3840.	3559.5	1573.8
1		0310	39	0.	.0	1564.2	1		1130	139	486.	2.1	1564.6	1		1950	239	3835.	3551.4	1573.8
1		0315	40	0.	.0	1564.2	1		1135	140	502.	3.4	1564.7	1		1955	240	3830.	3543.0	1573.8
1		0320	41	0.	.0	1564.2	1		1140	141	519.	5.1	1564.7	1		2000	241	3825.	3534.5	1573.7
1		0325	42	0.	.0	1564.2	1		1145	142	536.	7.4	1564.8	1		2005	242	3819.	3525.8	1573.7
1		0330	43	0.	.0	1564.2	1		1150	143	553.	10.4	1564.9	1		2010	243	3814.	3516.9	1573.7
1		0335	44	0.	.0	1564.2	1		1155	144	573.	14.4	1565.0	1		2015	244	3808.	3507.8	1573.7
1		0340	45	0.	.0	1564.2	1		1200	145	594.	19.8	1565.0	1		2020	245	3803.	3498.6	1573.7
1		0345	46	0.	.0	1564.2	1		1205	146	620.	27.0	1565.1	1		2025	246	3797.	3489.2	1573.7
1		0350	47	0.	.0	1564.2	1		1210	147	651.	36.4	1565.3	1		2030	247	3791.	3479.6	1573.7
1		0355	48	0.	.0	1564.2	1		1215	148	686.	48.7	1565.4	1		2035	248	3785.	3469.9	1573.7
1		0400	49	0.	.0	1564.2	1		1220	149	727.	62.9	1565.5	1		2040	249	3779.	3459.9	1573.6

1	0405	50	0.	.0	1564.2	*	1	1225	150	772.	81.0	1565.7	*	1	2045	250	3772.	3450.0	1573.6
1	0410	51	0.	.0	1564.2	*	1	123[illegible]	151	820.	102.6	1565.9	*	1	2050	251	3766.	3439.8	1573.6
1	0415	52	0.	.0	1564.2	*	1	1[illegible]	152	872.	128.0	1566.1	*	1	2055	252	3760.	3429.5	1573.6
1	0420	53	0.	.0	1564.2	*	1	12[illegible]0	153	927.	157.5	1566.3	*	1	2100	253	3753.	3419.0	1573.6
1	0425	54	0.	.0	1564.2	*	1	1245	154	984.	191.1	1566.5	*	1	2105	254	3746.	3408.3	1573.6
1	0430	55	0.	.0	1564.2	*	1	1250	155	1042.	228.7	1566.6	*	1	2110	255	3740.	3397.6	1573.6
1	0435	56	0.	.0	1564.2	*	1	1255	156	1103.	270.3	1566.8	*	1	2115	256	3733.	3386.7	1573.5
1	0440	57	0.	.0	1564.2	*	1	1300	157	1168.	315.8	1567.1	*	1	2120	257	3726.	3375.7	1573.5
1	0445	58	0.	.0	1564.2	*	1	1305	158	1235.	364.7	1567.3	*	1	2125	258	3719.	3364.5	1573.5
1	0450	59	0.	.0	1564.2	*	1	1310	159	1303.	416.8	1567.5	*	1	2130	259	3712.	3353.3	1573.5
1	0455	60	0.	.0	1564.2	*	1	1315	160	1373.	471.6	1567.7	*	1	2135	260	3705.	3341.9	1573.5
1	0500	61	0.	.0	1564.2	*	1	1320	161	1443.	528.5	1567.9	*	1	2140	261	3698.	3330.5	1573.5
1	0505	62	0.	.0	1564.2	*	1	1325	162	1512.	587.2	1568.1	*	1	2145	262	3690.	3318.9	1573.5
1	0510	63	0.	.0	1564.2	*	1	1330	163	1581.	647.1	1568.3	*	1	2150	263	3683.	3307.2	1573.4
1	0515	64	0.	.0	1564.2	*	1	1335	164	1649.	708.3	1568.5	*	1	2155	264	3676.	3295.5	1573.4
1	0520	65	0.	.0	1564.2	*	1	1340	165	1717.	770.6	1568.7	*	1	2200	265	3668.	3283.7	1573.4
1	0525	66	0.	.0	1564.2	*	1	1345	166	1784.	834.2	1568.9	*	1	2205	266	3661.	3271.8	1573.4
1	0530	67	0.	.0	1564.2	*	1	1350	167	1850.	899.3	1569.0	*	1	2210	267	3653.	3259.8	1573.4
1	0535	68	0.	.0	1564.2	*	1	1355	168	1916.	965.8	1569.2	*	1	2215	268	3645.	3247.7	1573.4
1	0540	69	0.	.0	1564.2	*	1	1400	169	1983.	1033.8	1569.4	*	1	2220	269	3638.	3235.6	1573.3
1	0545	70	0.	.0	1564.2	*	1	1405	170	2048.	1103.3	1569.6	*	1	2225	270	3630.	3223.5	1573.3
1	0550	71	0.	.0	1564.2	*	1	1410	171	2114.	1174.1	1569.7	*	1	2230	271	3622.	3211.3	1573.3
1	0555	72	0.	.0	1564.2	*	1	1415	172	2179.	1246.3	1569.9	*	1	2235	272	3614.	3199.1	1573.3
1	0600	73	0.	.0	1564.2	*	1	1420	173	2245.	1319.7	1570.1	*	1	2240	273	3607.	3186.8	1573.3
1	0605	74	0.	.0	1564.2	*	1	1425	174	2310.	1394.5	1570.2	*	1	2245	274	3599.	3174.4	1573.3
1	0610	75	0.	.0	1564.2	*	1	1430	175	2374.	1470.6	1570.4	*	1	2250	275	3591.	3162.1	1573.2
1	0615	76	0.	.0	1564.2	*	1	1435	176	2439.	1548.2	1570.6	*	1	2255	276	3583.	3149.7	1573.2
1	0620	77	396.	.0	1564.2	*	1	1440	177	2504.	1627.3	1570.7	*	1	2300	277	3575.	3137.2	1573.2
1	0625	78	0.	.0	1564.2	*	1	1445	178	2569.	1708.0	1570.9	*	1	2305	278	3567.	3124.8	1573.2
1	0630	79	396.	.0	1564.2	*	1	1450	179	2633.	1790.2	1571.0	*	1	2310	279	3559.	3112.2	1573.2
1	0635	80	0.	.0	1564.2	*	1	1455	180	2698.	1873.9	1571.2	*	1	2315	280	3551.	3099.8	1573.2
1	0640	81	396.	.0	1564.2	*	1	1500	181	2763.	1959.1	1571.4	*	1	2320	281	3543.	3087.2	1573.1
1	0645	82	0.	.0	1564.2	*	1	1505	182	2827.	2045.6	1571.5	*	1	2325	282	3535.	3074.7	1573.1
1	0650	83	396.	.0	1564.2	*	1	1510	183	2891.	2133.0	1571.7	*	1	2330	283	3527.	3062.2	1573.1
1	0655	84	0.	.0	1564.2	*	1	1515	184	2955.	2221.1	1571.8	*	1	2335	284	3518.	3049.7	1573.1
1	0700	85	396.	.0	1564.2	*	1	1520	185	3018.	2309.4	1572.0	*	1	2340	285	3510.	3037.2	1573.1
1	0705	86	0.	.0	1564.2	*	1	1525	186	3080.	2397.4	1572.1	*	1	2345	286	3502.	3024.7	1573.0
1	0710	87	396.	.0	1564.2	*	1	1530	187	3140.	2484.6	1572.2	*	1	2350	287	3494.	3012.2	1573.0
1	0715	88	0.	.0	1564.2	*	1	1535	188	3199.	2570.5	1572.4	*	1	2355	288	3486.	2999.8	1573.0
1	0720	89	396.	.0	1564.2	*	1	1540	189	3257.	2654.5	1572.5	*	2	0000	289	3478.	2987.3	1573.0
1	0725	90	0.	.0	1564.2	*	1	1545	190	3312.	2736.2	1572.6	*	2	0005	290	3470.	2974.9	1573.0
1	0730	91	396.	.0	1564.2	*	1	1550	191	3364.	2815.0	1572.7	*	2	0010	291	3462.	2962.4	1573.0
1	0735	92	0.	.0	1564.2	*	1	1555	192	3414.	2890.6	1572.9	*	2	0015	292	3453.	2950.0	1572.9
1	0740	93	396.	.0	1564.2	*	1	1600	193	3462.	2962.6	1573.0	*	2	0020	293	3445.	2937.5	1572.9
1	0745	94	0.	.0	1564.2	*	1	1605	194	3506.	3030.7	1573.1	*	2	0025	294	3437.	2925.0	1572.9
1	0750	95	396.	.0	1564.2	*	1	1610	195	3548.	3094.8	1573.1	*	2	0030	295	3429.	2912.4	1572.9
1	0755	96	0.	.0	1564.2	*	1	1615	196	3586.	3154.7	1573.2	*	2	0035	296	3420.	2899.8	1572.9
1	0800	97	396.	.0	1564.2	*	1	1620	197	3622.	3210.3	1573.3	*	2	0040	297	3412.	2887.1	1572.8
1	0805	98	0.	.0	1564.2	*	1	1625	198	3654.	3261.6	1573.4	*	2	0045	298	3404.	2874.2	1572.8
1	0810	99	396.	.0	1564.2	*	1	1630	199	3684.	3308.7	1573.4	*	2	0050	299	3395.	2861.3	1572.8
1	0815	100	0.	.0	1564.2	*	1	1635	200	3711.	3351.6	1573.5	*	2	0055	300	3386.	2848.3	1572.8
						*							*						

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PEAK OUTFLOW IS 3895. AT TIME 18.17 HOURS

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)				

ELEVATION 1576.57 1577.12 1577.74 1578.43 1579.20

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HYDROGRAPH AT RESV
TRANSPOSITION AREA .3 SQ MI

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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
1		0000	1	396.	.0	1564.2	1		0820	101	396.	.0	1564.2	1		1640	201	3735.	3390.7	1573.6
1		0005	2	0.	.0	1564.2	1		0825	102	0.	.0	1564.2	1		1645	202	3757.	3426.0	1573.6
1		0010	3	0.	.0	1564.2	1		0830	103	396.	.0	1564.2	1		1650	203	3777.	3457.7	1573.6
1		0015	4	0.	.0	1564.2	1		0835	104	0.	.0	1564.2	1		1655	204	3795.	3486.2	1573.7
1		0020	5	0.	.0	1564.2	1		0840	105	396.	.0	1564.2	1		1700	205	3811.	3511.6	1573.7
1		0025	6	0.	.0	1564.2	1		0845	106	0.	.0	1564.2	1		1705	206	3825.	3534.1	1573.7
1		0030	7	0.	.0	1564.2	1		0850	107	396.	.0	1564.2	1		1710	207	3837.	3554.0	1573.8
1		0035	8	0.	.0	1564.2	1		0855	108	0.	.0	1564.2	1		1715	208	3848.	3571.5	1573.8
1		0040	9	0.	.0	1564.2	1		0900	109	396.	.0	1564.2	1		1720	209	3857.	3586.7	1573.8
1		0045	10	0.	.0	1564.2	1		0905	110	0.	.0	1564.2	1		1725	210	3865.	3599.9	1573.8
1		0050	11	0.	.0	1564.2	1		0910	111	396.	.0	1564.2	1		1730	211	3872.	3611.3	1573.8
1		0055	12	0.	.0	1564.2	1		0915	112	0.	.0	1564.2	1		1735	212	3878.	3620.8	1573.9
1		0100	13	0.	.0	1564.2	1		0920	113	396.	.0	1564.2	1		1740	213	3883.	3628.8	1573.9
1		0105	14	0.	.0	1564.2	1		0925	114	0.	.0	1564.2	1		1745	214	3887.	3635.2	1573.9
1		0110	15	0.	.0	1564.2	1		0930	115	396.	.0	1564.2	1		1750	215	3890.	3640.3	1573.9
1		0115	16	0.	.0	1564.2	1		0935	116	0.	.0	1564.2	1		1755	216	3892.	3644.2	1573.9
1		0120	17	0.	.0	1564.2	1		0940	117	396.	.0	1564.2	1		1800	217	3894.	3647.0	1573.9
1		0125	18	0.	.0	1564.2	1		0945	118	0.	.0	1564.2	1		1805	218	3895.	3648.8	1573.9
1		0130	19	0.	.0	1564.2	1		0950	119	396.	.0	1564.2	1		1810	219	3895.	3649.6	1573.9
1		0135	20	0.	.0	1564.2	1		0955	120	0.	.0	1564.2	1		1815	220	3895.	3649.6	1573.9
1		0140	21	0.	.0	1564.2	1		1000	121	396.	.0	1564.2	1		1820	221	3895.	3648.9	1573.9
1		0145	22	0.	.0	1564.2	1		1005	122	0.	.0	1564.2	1		1825	222	3894.	3647.5	1573.9
1		0150	23	0.	.0	1564.2	1		1010	123	396.	.0	1564.2	1		1830	223	3893.	3645.4	1573.9
1		0155	24	0.	.0	1564.2	1		1015	124	0.	.0	1564.2	1		1835	224	3891.	3642.8	1573.9
1		0200	25	0.	.0	1564.2	1		1020	125	396.	.0	1564.2	1		1840	225	3889.	3639.5	1573.9
1		0205	26	0.	.0	1564.2	1		1025	126	0.	.0	1564.2	1		1845	226	3887.	3635.7	1573.9
1		0210	27	0.	.0	1564.2	1		1030	127	396.	.0	1564.2	1		1850	227	3884.	3631.4	1573.9
1		0215	28	0.	.0	1564.2	1		1035	128	396.	.0	1564.2	1		1855	228	3881.	3626.6	1573.9
1		0220	29	0.	.0	1564.2	1		1040	129	396.	.0	1564.2	1		1900	229	3878.	3621.3	1573.9
1		0225	30	0.	.0	1564.2	1		1045	130	396.	.0	1564.2	1		1905	230	3875.	3615.7	1573.9
1		0230	31	0.	.0	1564.2	1		1050	131	396.	.0	1564.2	1		1910	231	3871.	3609.7	1573.8
1		0235	32	0.	.0	1564.2	1		1055	132	396.	.0	1564.2	1		1915	232	3867.	3603.4	1573.8
1		0240	33	0.	.0	1564.2	1		1100	133	396.	.0	1564.2	1		1920	233	3863.	3596.7	1573.8
1		0245	34	0.	.0	1564.2	1		1105	134	396.	.0	1564.2	1		1925	234	3859.	3589.8	1573.8
1		0250	35	0.	.0	1564.2	1		1110	135	414.	.0	1564.3	1		1930	235	3854.	3582.6	1573.8
1		0255	36	0.	.0	1564.2	1		1115	136	435.	.2	1564.4	1		1935	236	3850.	3575.1	1573.8
1		0300	37	0.	.0	1564.2	1		1120	137	453.	.5	1564.5	1		1940	237	3845.	3567.4	1573.8
1		0305	38	0.	.0	1564.2	1		1125	138	470.	1.2	1564.5	1		1945	238	3840.	3559.5	1573.8
1		0310	39	0.	.0	1564.2	1		1130	139	486.	2.1	1564.6	1		1950	239	3835.	3551.4	1573.8
1		0315	40	0.	.0	1564.2	1		1135	140	502.	3.4	1564.7	1		1955	240	3830.	3543.0	1573.8
1		0320	41	0.	.0	1564.2	1		1140	141	519.	5.1	1564.7	1		2000	241	3825.	3534.5	1573.7
1		0325	42	0.	.0	1564.2	1		1145	142	536.	7.4	1564.8	1		2005	242	3819.	3525.8	1573.7
1		0330	43	0.	.0	1564.2	1		1150	143	553.	10.4	1564.9	1		2010	243	3814.	3516.9	1573.7
1		0335	44	0.	.0	1564.2	1		1155	144	573.	14.4	1565.0	1		2015	244	3808.	3507.8	1573.7
1		0340	45	0.	.0	1564.2	1		1200	145	594.	19.8	1565.0	1		2020	245	3803.	3498.6	1573.7
1		0345	46	0.	.0	1564.2	1		1205	146	620.	27.0	1565.1	1		2025	246	3797.	3489.2	1573.7
1		0350	47	0.	.0	1564.2	1		1210	147	651.	36.4	1565.3	1		2030	247	3791.	3479.6	1573.7
1		0355	48	0.	.0	1564.2	1		1215	148	686.	48.7	1565.4	1		2035	248	3785.	3469.9	1573.7
1		0400	49	0.	.0	1564.2	1		1220	149	727.	62.9	1565.5	1		2040	249	3779.	3459.9	1573.6

1	0405	50	0.	.0	1564.2	*	1	1225	150	772.	81.0	1565.7	*	1	2045	250	3772.	3450.0	1573.6
1	0410	51	0.	.0	1564.2	*	1	1230	151	820.	102.6	1565.9	*	1	2050	251	3766.	3439.8	1573.6
1	0415	52	0.	.0	1564.2	*	1	1235	152	872.	128.0	1566.1	*	1	2055	252	3760.	3429.5	1573.6
1	0420	53	0.	.0	1564.2	*	1	1240	153	927.	157.5	1566.3	*	1	2100	253	3753.	3419.0	1573.6
1	0425	54	0.	.0	1564.2	*	1	1245	154	984.	191.1	1566.5	*	1	2105	254	3746.	3408.3	1573.6
1	0430	55	0.	.0	1564.2	*	1	1250	155	1042.	228.7	1566.6	*	1	2110	255	3740.	3397.6	1573.6
1	0435	56	0.	.0	1564.2	*	1	1255	156	1103.	270.3	1566.8	*	1	2115	256	3733.	3386.7	1573.5
1	0440	57	0.	.0	1564.2	*	1	1300	157	1168.	315.8	1567.1	*	1	2120	257	3726.	3375.7	1573.5
1	0445	58	0.	.0	1564.2	*	1	1305	158	1235.	364.7	1567.3	*	1	2125	258	3719.	3364.5	1573.5
1	0450	59	0.	.0	1564.2	*	1	1310	159	1303.	416.8	1567.5	*	1	2130	259	3712.	3353.3	1573.5
1	0455	60	0.	.0	1564.2	*	1	1315	160	1373.	471.6	1567.7	*	1	2135	260	3705.	3341.9	1573.5
1	0500	61	0.	.0	1564.2	*	1	1320	161	1443.	528.5	1567.9	*	1	2140	261	3698.	3330.5	1573.5
1	0505	62	0.	.0	1564.2	*	1	1325	162	1512.	587.2	1568.1	*	1	2145	262	3690.	3318.9	1573.5
1	0510	63	0.	.0	1564.2	*	1	1330	163	1581.	647.1	1568.3	*	1	2150	263	3683.	3307.2	1573.4
1	0515	64	0.	.0	1564.2	*	1	1335	164	1649.	708.3	1568.5	*	1	2155	264	3676.	3295.5	1573.4
1	0520	65	0.	.0	1564.2	*	1	1340	165	1717.	770.6	1568.7	*	1	2200	265	3668.	3283.7	1573.4
1	0525	66	0.	.0	1564.2	*	1	1345	166	1784.	834.2	1568.9	*	1	2205	266	3661.	3271.8	1573.4
1	0530	67	0.	.0	1564.2	*	1	1350	167	1850.	899.3	1569.0	*	1	2210	267	3653.	3259.8	1573.4
1	0535	68	0.	.0	1564.2	*	1	1355	168	1916.	965.8	1569.2	*	1	2215	268	3645.	3247.7	1573.4
1	0540	69	0.	.0	1564.2	*	1	1400	169	1983.	1033.8	1569.4	*	1	2220	269	3638.	3235.6	1573.3
1	0545	70	0.	.0	1564.2	*	1	1405	170	2048.	1103.3	1569.6	*	1	2225	270	3630.	3223.5	1573.3
1	0550	71	0.	.0	1564.2	*	1	1410	171	2114.	1174.1	1569.7	*	1	2230	271	3622.	3211.3	1573.3
1	0555	72	0.	.0	1564.2	*	1	1415	172	2179.	1246.3	1569.9	*	1	2235	272	3614.	3199.1	1573.3
1	0600	73	0.	.0	1564.2	*	1	1420	173	2245.	1319.7	1570.1	*	1	2240	273	3607.	3186.8	1573.3
1	0605	74	0.	.0	1564.2	*	1	1425	174	2310.	1394.5	1570.2	*	1	2245	274	3599.	3174.4	1573.3
1	0610	75	0.	.0	1564.2	*	1	1430	175	2374.	1470.6	1570.4	*	1	2250	275	3591.	3162.1	1573.2
1	0615	76	0.	.0	1564.2	*	1	1435	176	2439.	1548.2	1570.6	*	1	2255	276	3583.	3149.7	1573.2
1	0620	77	396.	.0	1564.2	*	1	1440	177	2504.	1627.3	1570.7	*	1	2300	277	3575.	3137.2	1573.2
1	0625	78	0.	.0	1564.2	*	1	1445	178	2569.	1708.0	1570.9	*	1	2305	278	3567.	3124.8	1573.2
1	0630	79	396.	.0	1564.2	*	1	1450	179	2633.	1790.2	1571.0	*	1	2310	279	3559.	3112.2	1573.2
1	0635	80	0.	.0	1564.2	*	1	1455	180	2698.	1873.9	1571.2	*	1	2315	280	3551.	3099.8	1573.2
1	0640	81	396.	.0	1564.2	*	1	1500	181	2763.	1959.1	1571.4	*	1	2320	281	3543.	3087.2	1573.1
1	0645	82	0.	.0	1564.2	*	1	1505	182	2827.	2045.6	1571.5	*	1	2325	282	3535.	3074.7	1573.1
1	0650	83	396.	.0	1564.2	*	1	1510	183	2891.	2133.0	1571.7	*	1	2330	283	3527.	3062.2	1573.1
1	0655	84	0.	.0	1564.2	*	1	1515	184	2955.	2221.1	1571.8	*	1	2335	284	3518.	3049.7	1573.1
1	0700	85	396.	.0	1564.2	*	1	1520	185	3018.	2309.4	1572.0	*	1	2340	285	3510.	3037.2	1573.1
1	0705	86	0.	.0	1564.2	*	1	1525	186	3080.	2397.4	1572.1	*	1	2345	286	3502.	3024.7	1573.0
1	0710	87	396.	.0	1564.2	*	1	1530	187	3140.	2484.6	1572.2	*	1	2350	287	3494.	3012.2	1573.0
1	0715	88	0.	.0	1564.2	*	1	1535	188	3199.	2570.5	1572.4	*	1	2355	288	3486.	2999.8	1573.0
1	0720	89	396.	.0	1564.2	*	1	1540	189	3257.	2654.5	1572.5	*	2	0000	289	3478.	2987.3	1573.0
1	0725	90	0.	.0	1564.2	*	1	1545	190	3312.	2736.2	1572.6	*	2	0005	290	3470.	2974.9	1573.0
1	0730	91	396.	.0	1564.2	*	1	1550	191	3364.	2815.0	1572.7	*	2	0010	291	3462.	2962.4	1573.0
1	0735	92	0.	.0	1564.2	*	1	1555	192	3414.	2890.6	1572.9	*	2	0015	292	3453.	2950.0	1572.9
1	0740	93	396.	.0	1564.2	*	1	1600	193	3462.	2962.6	1573.0	*	2	0020	293	3445.	2937.5	1572.9
1	0745	94	0.	.0	1564.2	*	1	1605	194	3506.	3030.7	1573.1	*	2	0025	294	3437.	2925.0	1572.9
1	0750	95	396.	.0	1564.2	*	1	1610	195	3548.	3094.8	1573.1	*	2	0030	295	3429.	2912.4	1572.9
1	0755	96	0.	.0	1564.2	*	1	1615	196	3586.	3154.7	1573.2	*	2	0035	296	3420.	2899.8	1572.9
1	0800	97	396.	.0	1564.2	*	1	1620	197	3622.	3210.3	1573.3	*	2	0040	297	3412.	2887.1	1572.8
1	0805	98	0.	.0	1564.2	*	1	1625	198	3654.	3261.6	1573.4	*	2	0045	298	3404.	2874.2	1572.8
1	0810	99	396.	.0	1564.2	*	1	1630	199	3684.	3308.7	1573.4	*	2	0050	299	3395.	2861.3	1572.8
1	0815	100	0.	.0	1564.2	*	1	1635	200	3711.	3351.6	1573.5	*	2	0055	300	3386.	2848.3	1572.8
						*							*						

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PEAK OUTFLOW IS 3895. AT TIME 18.17 HOURS

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)				

		(CFS)				
+ 3895.	18.17		3802.	1772.	1707.	1707.
		(INCHES)	.678	1.264	1.265	1.265
		(AC-FT)	1885.	3514.	3516.	3516.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
3650.	18.17	3499.	1443.	1390.	1390.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)				
1573.90	18.17	1573.69	1568.51	1568.35	1568.35

CUMULATIVE AREA = 52.12 SQ MI

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HYDROGRAPH AT RESV
TRANSPOSITION AREA 5.0 SQ MI

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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
1		0000	1	396.	.0	1564.2	*	1		0820	101	0.	.0	1564.2	*	1		1640	201	3661.	3272.9	1573.4
1		0005	2	0.	.0	1564.2	*	1		0825	102	396.	.0	1564.2	*	1		1645	202	3683.	3307.0	1573.4
1		0010	3	0.	.0	1564.2	*	1		0830	103	0.	.0	1564.2	*	1		1650	203	3702.	3337.6	1573.5
1		0015	4	0.	.0	1564.2	*	1		0835	104	396.	.0	1564.2	*	1		1655	204	3719.	3365.0	1573.5
1		0020	5	0.	.0	1564.2	*	1		0840	105	0.	.0	1564.2	*	1		1700	205	3735.	3389.4	1573.6
1		0025	6	0.	.0	1564.2	*	1		0845	106	396.	.0	1564.2	*	1		1705	206	3748.	3411.2	1573.6
1		0030	7	0.	.0	1564.2	*	1		0850	107	0.	.0	1564.2	*	1		1710	207	3760.	3430.3	1573.6
1		0035	8	0.	.0	1564.2	*	1		0855	108	396.	.0	1564.2	*	1		1715	208	3771.	3447.1	1573.6
1		0040	9	0.	.0	1564.2	*	1		0900	109	0.	.0	1564.2	*	1		1720	209	3780.	3461.8	1573.6
1		0045	10	0.	.0	1564.2	*	1		0905	110	396.	.0	1564.2	*	1		1725	210	3788.	3474.5	1573.7
1		0050	11	0.	.0	1564.2	*	1		0910	111	0.	.0	1564.2	*	1		1730	211	3794.	3485.3	1573.7
1		0055	12	0.	.0	1564.2	*	1		0915	112	396.	.0	1564.2	*	1		1735	212	3800.	3494.4	1573.7
1		0100	13	0.	.0	1564.2	*	1		0920	113	0.	.0	1564.2	*	1		1740	213	3805.	3502.1	1573.7
1		0105	14	0.	.0	1564.2	*	1		0925	114	396.	.0	1564.2	*	1		1745	214	3809.	3508.3	1573.7
1		0110	15	0.	.0	1564.2	*	1		0930	115	0.	.0	1564.2	*	1		1750	215	3812.	3513.1	1573.7
1		0115	16	0.	.0	1564.2	*	1		0935	116	396.	.0	1564.2	*	1		1755	216	3814.	3516.7	1573.7
1		0120	17	0.	.0	1564.2	*	1		0940	117	0.	.0	1564.2	*	1		1800	217	3815.	3519.3	1573.7
1		0125	18	0.	.0	1564.2	*	1		0945	118	396.	.0	1564.2	*	1		1805	218	3816.	3520.9	1573.7
1		0130	19	0.	.0	1564.2	*	1		0950	119	0.	.0	1564.2	*	1		1810	219	3817.	3521.6	1573.7
1		0135	20	0.	.0	1564.2	*	1		0955	120	396.	.0	1564.2	*	1		1815	220	3817.	3521.5	1573.7
1		0140	21	0.	.0	1564.2	*	1		1000	121	0.	.0	1564.2	*	1		1820	221	3816.	3520.7	1573.7
1		0145	22	0.	.0	1564.2	*	1		1005	122	396.	.0	1564.2	*	1		1825	222	3815.	3519.2	1573.7
1		0150	23	0.	.0	1564.2	*	1		1010	123	0.	.0	1564.2	*	1		1830	223	3814.	3517.1	1573.7
1		0155	24	0.	.0	1564.2	*	1		1015	124	396.	.0	1564.2	*	1		1835	224	3812.	3514.3	1573.7
1		0200	25	0.	.0	1564.2	*	1		1020	125	0.	.0	1564.2	*	1		1840	225	3810.	3511.0	1573.7
1		0205	26	0.	.0	1564.2	*	1		1025	126	396.	.0	1564.2	*	1		1845	226	3808.	3507.2	1573.7
1		0210	27	0.	.0	1564.2	*	1		1030	127	0.	.0	1564.2	*	1		1850	227	3805.	3502.9	1573.7
1		0215	28	0.	.0	1564.2	*	1		1035	128	396.	.0	1564.2	*	1		1855	228	3802.	3498.1	1573.7
1		0220	29	0.	.0	1564.2	*	1		1040	129	396.	.0	1564.2	*	1		1900	229	3799.	3493.0	1573.7
1		0225	30	0.	.0	1564.2	*	1		1045	130	396.	.0	1564.2	*	1		1905	230	3796.	3487.3	1573.7
1		0230	31	0.	.0	1564.2	*	1		1050	131	396.	.0	1564.2	*	1		1910	231	3792.	3481.4	1573.7
1		0235	32	0.	.0	1564.2	*	1		1055	132	396.	.0	1564.2	*	1		1915	232	3788.	3475.2	1573.7
1		0240	33	0.	.0	1564.2	*	1		1100	133	396.	.0	1564.2	*	1		1920	233	3784.	3468.7	1573.7

1	0245	34	0.	.0	1564.2	*	1	1105	134	396.	.0	1564.2	*	1	1925	234	3780.	3461.8	1573.6
1	0250	35	0.	.0	1564.2	*	1	1110	135	396.	.0	1564.2	*	1	1930	235	3775.	3454.6	1573.6
1	0255	36	0.	.0	1564.2	*	1	1115	136	416.	.0	1564.3	*	1	1935	236	3771.	3447.3	1573.6
1	0300	37	0.	.0	1564.2	*	1	1120	137	436.	.2	1564.4	*	1	1940	237	3766.	3439.7	[illegible]3.6
1	0305	38	0.	.0	1564.2	*	1	1125	138	454.	.6	1564.5	*	1	1945	238	3761.	3431.9	[illegible]3.6
1	0310	39	0.	.0	1564.2	*	1	1130	139	471.	1.2	1564.5	*	1	1950	239	3756.	3423.9	1573.6
1	0315	40	0.	.0	1564.2	*	1	1135	140	488.	2.2	1564.6	*	1	1955	240	3751.	3415.7	1573.6
1	0320	41	0.	.0	1564.2	*	1	1140	141	505.	3.6	1564.7	*	1	2000	241	3746.	3407.3	1573.6
1	0325	42	0.	.0	1564.2	*	1	1145	142	522.	5.5	1564.7	*	1	2005	242	3741.	3398.8	1573.6
1	0330	43	0.	.0	1564.2	*	1	1150	143	540.	8.1	1564.8	*	1	2010	243	3735.	3390.1	1573.6
1	0335	44	0.	.0	1564.2	*	1	1155	144	560.	11.7	1564.9	*	1	2015	244	3730.	3381.2	1573.5
1	0340	45	0.	.0	1564.2	*	1	1200	145	582.	16.7	1565.0	*	1	2020	245	3724.	3372.1	1573.5
1	0345	46	0.	.0	1564.2	*	1	1205	146	607.	23.4	1565.1	*	1	2025	246	3718.	3362.9	1573.5
1	0350	47	0.	.0	1564.2	*	1	1210	147	637.	32.1	1565.2	*	1	2030	247	3712.	3353.5	1573.5
1	0355	48	0.	.0	1564.2	*	1	1215	148	672.	43.3	1565.3	*	1	2035	248	3706.	3344.0	1573.5
1	0400	49	0.	.0	1564.2	*	1	1220	149	712.	57.3	1565.5	*	1	2040	249	3700.	3334.2	1573.5
1	0405	50	0.	.0	1564.2	*	1	1225	150	756.	74.4	1565.7	*	1	2045	250	3694.	3324.4	1573.5
1	0410	51	0.	.0	1564.2	*	1	1230	151	804.	95.1	1565.8	*	1	2050	251	3688.	3314.4	1573.5
1	0415	52	0.	.0	1564.2	*	1	1235	152	855.	119.4	1566.0	*	1	2055	252	3681.	3304.3	1573.4
1	0420	53	0.	.0	1564.2	*	1	1240	153	909.	147.6	1566.2	*	1	2100	253	3675.	3294.0	1573.4
1	0425	54	0.	.0	1564.2	*	1	1245	154	965.	179.8	1566.4	*	1	2105	254	3668.	3283.5	1573.4
1	0430	55	0.	.0	1564.2	*	1	1250	155	1023.	215.9	1566.6	*	1	2110	255	3661.	3273.0	1573.4
1	0435	56	0.	.0	1564.2	*	1	1255	156	1082.	255.9	1566.8	*	1	2115	256	3655.	3262.4	1573.4
1	0440	57	0.	.0	1564.2	*	1	1300	157	1145.	299.6	1567.0	*	1	2120	257	3648.	3251.5	1573.4
1	0445	58	0.	.0	1564.2	*	1	1305	158	1210.	346.7	1567.2	*	1	2125	258	3641.	3240.6	1573.3
1	0450	59	0.	.0	1564.2	*	1	1310	159	1277.	397.0	1567.4	*	1	2130	259	3634.	3229.5	1573.3
1	0455	60	0.	.0	1564.2	*	1	1315	160	1345.	449.8	1567.6	*	1	2135	260	3627.	3218.4	1573.3
1	0500	61	0.	.0	1564.2	*	1	1320	161	1414.	504.7	1567.8	*	1	2140	261	3620.	3207.2	1573.3
1	0505	62	0.	.0	1564.2	*	1	1325	162	1482.	561.2	1568.0	*	1	2145	262	3612.	3195.8	1573.3
1	0510	63	0.	.0	1564.2	*	1	1330	163	1549.	619.1	1568.2	*	1	2150	263	3605.	3184.4	1573.3
1	0515	64	0.	.0	1564.2	*	1	1335	164	1616.	678.1	1568.4	*	1	2155	264	3598.	3172.9	1573.3
1	0520	65	0.	.0	1564.2	*	1	1340	165	1682.	738.3	1568.6	*	1	2200	265	3590.	3161.4	1573.2
1	0525	66	0.	.0	1564.2	*	1	1345	166	1748.	799.8	1568.8	*	1	2205	266	3583.	3149.8	1573.2
1	0530	67	0.	.0	1564.2	*	1	1350	167	1813.	862.7	1568.9	*	1	2210	267	3575.	3138.0	1573.2
1	0535	68	0.	.0	1564.2	*	1	1355	168	1878.	927.0	1569.1	*	1	2215	268	3568.	3126.2	1573.2
1	0540	69	0.	.0	1564.2	*	1	1400	169	1943.	992.7	1569.3	*	1	2220	269	3560.	3114.4	1573.2
1	0545	70	0.	.0	1564.2	*	1	1405	170	2007.	1060.0	1569.5	*	1	2225	270	3553.	3102.5	1573.2
1	0550	71	0.	.0	1564.2	*	1	1410	171	2072.	1128.5	1569.6	*	1	2230	271	3545.	3090.6	1573.1
1	0555	72	0.	.0	1564.2	*	1	1415	172	2136.	1198.3	1569.8	*	1	2235	272	3537.	3078.6	1573.1
1	0600	73	0.	.0	1564.2	*	1	1420	173	2200.	1269.4	1570.0	*	1	2240	273	3529.	3066.5	1573.1
1	0605	74	0.	.0	1564.2	*	1	1425	174	2264.	1341.8	1570.1	*	1	2245	274	3521.	3054.4	1573.1
1	0610	75	0.	.0	1564.2	*	1	1430	175	2328.	1415.5	1570.3	*	1	2250	275	3514.	3042.3	1573.1
1	0615	7	0.	.0	1564.2	*	1	1435	176	2391.	1490.7	1570.5	*	1	2255	276	3506.	3030.1	1573.1
1	0620	7	0.	.0	1564.2	*	1	1440	177	2455.	1567.3	1570.6	*	1	2300	277	3498.	3017.9	1573.(
1	0625	78	396.	.0	1564.2	*	1	1445	178	2519.	1645.5	1570.8	*	1	2305	278	3490.	3005.7	1573.(
1	0630	79	0.	.0	1564.2	*	1	1450	179	2582.	1725.2	1570.9	*	1	2310	279	3482.	2993.5	1573.0
1	0635	80	396.	.0	1564.2	*	1	1455	180	2646.	1806.4	1571.1	*	1	2315	280	3474.	2981.2	1573.(
1	0640	81	0.	.0	1564.2	*	1	1500	181	2710.	1888.9	1571.2	*	1	2320	281	3466.	2968.9	1573.(
1	0645	82	396.	.0	1564.2	*	1	1505	182	2773.	1972.7	1571.4	*	1	2325	282	3458.	2956.7	1572.9
1	0650	83	0.	.0	1564.2	*	1	1510	183	2836.	2057.5	1571.5	*	1	2330	283	3450.	2944.4	1572.[illegible]
1	0655	84	396.	.0	1564.2	*	1	1515	184	2899.	2142.9	1571.7	*	1	2335	284	3442.	2932.2	1572.[illegible]
1	0700	85	0.	.0	1564.2	*	1	1520	185	2960.	2228.4	1571.8	*	1	2340	285	3434.	2920.0	1572.9
1	0705	86	396.	.0	1564.2	*	1	1525	186	3021.	2313.6	1572.0	*	1	2345	286	3426.	2907.7	1572.9
1	0710	87	0.	.0	1564.2	*	1	1530	187	3080.	2398.0	1572.1	*	1	2350	287	3418.	2895.5	1572.[illegible]
1	0715	88	396.	.0	1564.2	*	1	1535	188	3138.	2481.1	1572.2	*	1	2355	288	3410.	2883.3	1572.
1	0720	89	0.	.0	1564.2	*	1	1540	189	3194.	2562.4	1572.4	*	2	0000	289	3402.	2871.1	1572.8
1	0725	90	396.	.0	1564.2	*	1	1545	190	3248.	2641.3	1572.5	*	2	0005	290	3394.	2859.0	1572.[illegible]
1	0730	91	0.	.0	1564.2	*	1	1550	191	3299.	2717.5	1572.6	*	2	0010	291	3385.	2846.8	1572.
1	0735	92	396.	.0	1564.2	*	1	1555	192	3348.	2790.5	1572.7	*	2	0015	292	3377.	2834.6	1572.8
1	0740	93	0.	.0	1564.2	*	1	1600	193	3394.	2860.0	1572.8	*	2	0020	293	3369.	2822.4	1572.8

1	0745	94	396.	.0	1564.2	*	1	1605	194	3438.	2925.8	1572.9	*	2	0025	294	3361.	2810.1	1572.7
1	0750	95	0.	.0	1564.2	*	1	1610	195	3478.	2987.6	1573.0	*	2	0030	295	3353.	2797.8	1572.7
1	0755	96	396.	.0	1564.2	*	1	1615	196	3516.	3045.4	1573.1	*	2	0035	296	3345.	2785.4	1572.7
1	0800	97	0.	.0	1564.2	*	1	1620	197	3550.	3099.0	1573.2	*	2	0040	297	3336.	2773.0	1572.7
1	0805	98	396.	.0	1564.2	*	1	1625	198	3582.	3148.4	1573.2	*	2	0045	298	3328.	2760.5	1572.7
1	0810	99	0.	.0	1564.2	*	1	1630	199	3611.	3193.8	1573.3	*	2	0050	299	3320.	2747.8	1572.6
1	0815	100	396.	.0	1564.2	*	1	1635	200	3637.	3235.3	1573.3	*	2	0055	300	3311.	2735.1	1572.6
						*							*						

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PEAK OUTFLOW IS 3817. AT TIME 18.17 HOURS

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
		(CFS)				
+ 3817.	18.17		3725.	1735.	1672.	1672.
		(INCHES)	.664	1.238	1.238	1.238
		(AC-FT)	1847.	3441.	3442.	3442.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
3522.	18.17	3374.	1390.	1339.	1339.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)				
1573.73	18.17	1573.53	1568.42	1568.27	1568.27

CUMULATIVE AREA = 52.12 SQ MI

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HYDROGRAPH AT RESV
TRANSPOSITION AREA 15.0 SQ MI

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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
							*								*							
1		0000	1	396.	.0	1564.2	*	1		0820	101	396.	.0	1564.2	*	1		1640	201	3465.	2967.7	1573.0
1		0005	2	0.	.0	1564.2	*	1		0825	102	0.	.0	1564.2	*	1		1645	202	3485.	2998.3	1573.0
1		0010	3	0.	.0	1564.2	*	1		0830	103	396.	.0	1564.2	*	1		1650	203	3503.	3025.9	1573.0
1		0015	4	0.	.0	1564.2	*	1		0835	104	0.	.0	1564.2	*	1		1655	204	3519.	3050.5	1573.1
1		0020	5	0.	.0	1564.2	*	1		0840	105	396.	.0	1564.2	*	1		1700	205	3533.	3072.6	1573.1
1		0025	6	0.	.0	1564.2	*	1		0845	106	0.	.0	1564.2	*	1		1705	206	3546.	3092.1	1573.1
1		0030	7	0.	.0	1564.2	*	1		0850	107	396.	.0	1564.2	*	1		1710	207	3557.	3109.2	1573.2
1		0035	8	0.	.0	1564.2	*	1		0855	108	0.	.0	1564.2	*	1		1715	208	3567.	3124.2	1573.2
1		0040	9	0.	.0	1564.2	*	1		0900	109	396.	.0	1564.2	*	1		1720	209	3575.	3137.3	1573.2
1		0045	10	0.	.0	1564.2	*	1		0905	110	0.	.0	1564.2	*	1		1725	210	3582.	3148.5	1573.2
1		0050	11	0.	.0	1564.2	*	1		0910	111	396.	.0	1564.2	*	1		1730	211	3588.	3158.1	1573.2
1		0055	12	0.	.0	1564.2	*	1		0915	112	0.	.0	1564.2	*	1		1735	212	3593.	3166.2	1573.2
1		0100	13	0.	.0	1564.2	*	1		0920	113	396.	.0	1564.2	*	1		1740	213	3598.	3172.8	1573.3
1		0105	14	0.	.0	1564.2	*	1		0925	114	0.	.0	1564.2	*	1		1745	214	3601.	3178.2	1573.3
1		0110	15	0.	.0	1564.2	*	1		0930	115	396.	.0	1564.2	*	1		1750	215	3604.	3182.2	1573.3
1		0115	16	0.	.0	1564.2	*	1		0935	116	0.	.0	1564.2	*	1		1755	216	3606.	3185.2	1573.3
1		0120	17	0.	.0	1564.2	*	1		0940	117	396.	.0	1564.2	*	1		1800	217	3607.	3187.2	1573.3

1	0125	18	0.	.0	1564.2	*	1	0945	118	0.	.0	1564.2	*	1	1805	218	3608.	3188.4	1573.3
1	0130	19	0.	.0	1564.2	*	1	0950	119	396.	.0	1564.2	*	1	1810	219	3608.	3188.7	1573.3
1	0135	20	0.	.0	1564.2	*	1	0955	120	0.	.0	1564.2	*	1	1815	220	3608.	3188.3	1573.3
1	0140	21	0.	.0	1564.2	*	1	1000	121	396.	.0	1564.2	*	1	1820	221	3607.	3187.2	1573.3
1	0145	22	0.	.0	1564.2	*	1	1005	122	0.	.0	1564.2	*	1	1825	222	3606.	3185.6	1573.3
1	0150	23	0.	.0	1564.2	*	1	1010	123	396.	.0	1564.2	*	1	1830	223	3604.	3183.3	1573.3
1	0155	24	0.	.0	1564.2	*	1	1015	124	0.	.0	1564.2	*	1	1835	224	3603.	3180.5	1573.3
1	0200	25	0.	.0	1564.2	*	1	1020	125	396.	.0	1564.2	*	1	1840	225	3600.	3177.1	1573.3
1	0205	26	0.	.0	1564.2	*	1	1025	126	0.	.0	1564.2	*	1	1845	226	3598.	3173.3	1573.3
1	0210	27	0.	.0	1564.2	*	1	1030	127	396.	.0	1564.2	*	1	1850	227	3595.	3169.0	1573.3
1	0215	28	0.	.0	1564.2	*	1	1035	128	0.	.0	1564.2	*	1	1855	228	3592.	3164.3	1573.2
1	0220	29	0.	.0	1564.2	*	1	1040	129	396.	.0	1564.2	*	1	1900	229	3589.	3159.2	1573.2
1	0225	30	0.	.0	1564.2	*	1	1045	130	0.	.0	1564.2	*	1	1905	230	3585.	3153.8	1573.2
1	0230	31	0.	.0	1564.2	*	1	1050	131	396.	.0	1564.2	*	1	1910	231	3582.	3148.0	1573.2
1	0235	32	0.	.0	1564.2	*	1	1055	132	396.	.0	1564.2	*	1	1915	232	3578.	3141.9	1573.2
1	0240	33	0.	.0	1564.2	*	1	1100	133	396.	.0	1564.2	*	1	1920	233	3574.	3135.5	1573.2
1	0245	34	0.	.0	1564.2	*	1	1105	134	396.	.0	1564.2	*	1	1925	234	3570.	3128.9	1573.2
1	0250	35	0.	.0	1564.2	*	1	1110	135	396.	.0	1564.2	*	1	1930	235	3565.	3122.1	1573.2
1	0255	36	0.	.0	1564.2	*	1	1115	136	396.	.0	1564.2	*	1	1935	236	3561.	3114.9	1573.2
1	0300	37	0.	.0	1564.2	*	1	1120	137	396.	.0	1564.2	*	1	1940	237	3556.	3107.7	1573.2
1	0305	38	0.	.0	1564.2	*	1	1125	138	396.	.0	1564.2	*	1	1945	238	3551.	3100.1	1573.2
1	0310	39	0.	.0	1564.2	*	1	1130	139	431.	.1	1564.4	*	1	1950	239	3546.	3092.4	1573.1
1	0315	40	0.	.0	1564.2	*	1	1135	140	448.	.4	1564.4	*	1	1955	240	3541.	3084.6	1573.1
1	0320	41	0.	.0	1564.2	*	1	1140	141	467.	1.0	1564.5	*	1	2000	241	3536.	3076.5	1573.1
1	0325	42	0.	.0	1564.2	*	1	1145	142	485.	2.0	1564.6	*	1	2005	242	3530.	3068.3	1573.1
1	0330	43	0.	.0	1564.2	*	1	1150	143	505.	3.6	1564.7	*	1	2010	243	3525.	3060.0	1573.1
1	0335	44	0.	.0	1564.2	*	1	1155	144	527.	6.1	1564.8	*	1	2015	244	3520.	3051.5	1573.1
1	0340	45	0.	.0	1564.2	*	1	1200	145	550.	9.8	1564.9	*	1	2020	245	3514.	3042.8	1573.1
1	0345	46	0.	.0	1564.2	*	1	1205	146	576.	15.1	1565.0	*	1	2025	246	3508.	3034.0	1573.1
1	0350	47	0.	.0	1564.2	*	1	1210	147	603.	22.4	1565.1	*	1	2030	247	3502.	3025.0	1573.0
1	0355	48	0.	.0	1564.2	*	1	1215	148	636.	31.8	1565.2	*	1	2035	248	3497.	3016.0	1573.0
1	0400	49	0.	.0	1564.2	*	1	1220	149	674.	43.8	1565.3	*	1	2040	249	3491.	3006.7	1573.0
1	0405	50	0.	.0	1564.2	*	1	1225	150	716.	58.7	1565.5	*	1	2045	250	3484.	2997.4	1573.0
1	0410	51	0.	.0	1564.2	*	1	1230	151	762.	76.7	1565.7	*	1	2050	251	3478.	2987.9	1573.0
1	0415	52	0.	.0	1564.2	*	1	1235	152	811.	98.1	1565.9	*	1	2055	252	3472.	2978.3	1573.0
1	0420	53	0.	.0	1564.2	*	1	1240	153	863.	123.1	1566.0	*	1	2100	253	3466.	2968.5	1573.0
1	0425	54	0.	.0	1564.2	*	1	1245	154	917.	151.7	1566.2	*	1	2105	254	3459.	2958.6	1573.0
1	0430	55	0.	.0	1564.2	*	1	1250	155	972.	183.9	1566.4	*	1	2110	255	3453.	2948.7	1572.9
1	0435	56	0.	.0	1564.2	*	1	1255	156	1028.	219.7	1566.6	*	1	2115	256	3446.	2938.5	1572.9
1	0440	57	0.	.0	1564.2	*	1	1300	157	1087.	258.9	1566.8	*	1	2120	257	3439.	2928.3	1572.9
1	0445	58	0.	.0	1564.2	*	1	1305	158	1147.	301.3	1567.0	*	1	2125	258	3432.	2917.9	1572.9
1	0450	59	0.	.0	1564.2	*	1	1310	159	1210.	346.5	1567.2	*	1	2130	259	3426.	2907.5	1572.9
1	0455	60	0.	.0	1564.2	*	1	1315	160	1274.	394.2	1567.4	*	1	2135	260	3419.	2896.9	1572.9
1	0500	61	0.	.0	1564.2	*	1	1320	161	1338.	443.8	1567.6	*	1	2140	261	3412.	2886.3	1572.8
1	0505	62	0.	.0	1564.2	*	1	1325	162	1402.	495.0	1567.8	*	1	2145	262	3405.	2875.6	1572.8
1	0510	63	0.	.0	1564.2	*	1	1330	163	1465.	547.4	1568.0	*	1	2150	263	3397.	2864.7	1572.8
1	0515	64	0.	.0	1564.2	*	1	1335	164	1528.	601.0	1568.1	*	1	2155	264	3390.	2853.9	1572.8
1	0520	65	0.	.0	1564.2	*	1	1340	165	1591.	655.7	1568.3	*	1	2200	265	3383.	2842.9	1572.8
1	0525	66	0.	.0	1564.2	*	1	1345	166	1653.	711.5	1568.5	*	1	2205	266	3376.	2831.9	1572.8
1	0530	67	0.	.0	1564.2	*	1	1350	167	1715.	768.7	1568.7	*	1	2210	267	3368.	2820.8	1572.8
1	0535	68	0.	.0	1564.2	*	1	1355	168	1776.	827.2	1568.8	*	1	2215	268	3361.	2809.7	1572.
1	0540	69	0.	.0	1564.2	*	1	1400	169	1838.	887.1	1569.0	*	1	2220	269	3353.	2798.5	1572.7
1	0545	70	0.	.0	1564.2	*	1	1405	170	1899.	948.4	1569.2	*	1	2225	270	3346.	2787.3	1572.7
1	0550	71	0.	.0	1564.2	*	1	1410	171	1961.	1011.0	1569.3	*	1	2230	271	3338.	2776.0	1572.
1	0555	72	0.	.0	1564.2	*	1	1415	172	2022.	1074.8	1569.5	*	1	2235	272	3331.	2764.7	1572.
1	0600	73	0.	.0	1564.2	*	1	1420	173	2082.	1139.8	1569.7	*	1	2240	273	3323.	2753.4	1572.6
1	0605	74	0.	.0	1564.2	*	1	1425	174	2143.	1206.1	1569.8	*	1	2245	274	3316.	2742.0	1572.
1	0610	75	0.	.0	1564.2	*	1	1430	175	2204.	1273.7	1570.0	*	1	2250	275	3308.	2730.5	1572.
1	0615	76	0.	.0	1564.2	*	1	1435	176	2265.	1342.5	1570.1	*	1	2255	276	3300.	2719.1	1572.6
1	0620	77	0.	.0	1564.2	*	1	1440	177	2325.	1412.7	1570.3	*	1	2300	277	3293.	2707.6	1572.

1	0625	78	0.	.0	1564.2	*	1	1445	178	2386.	1484.3	1570.4	*	1	2305	278	3285.	2696.1	1572.6
1	0630	79	0.	.0	1564.2	*	1	1450	179	2447.	1557.3	1570.6	*	1	2310	279	3277.	2684.5	1572.5
1	0635	80	0.	.0	1564.2	*	1	1455	180	2507.	1631.7	1570.7	*	1	2315	280	3269.	2673.0	1572.5
1	0640	81	396.	.0	1564.2	*	1	1500	181	2568.	1707.5	1570.9	*	1	2320	281	3261.	2661.4	1572.5
1	0645	82	0.	.0	1564.2	*	1	1505	182	2629.	1784.3	1571.0	*	1	2325	282	3254.	2649.9	1572.5
1	0650	83	396.	.0	1564.2	*	1	1510	183	2689.	1862.1	1571.2	*	1	2330	283	3246.	2638.4	1572.5
1	0655	84	0.	.0	1564.2	*	1	1515	184	2749.	1940.4	1571.3	*	1	2335	284	3238.	2626.9	1572.5
1	0700	85	396.	.0	1564.2	*	1	1520	185	2807.	2018.8	1571.5	*	1	2340	285	3230.	2615.3	1572.4
1	0705	86	0.	.0	1564.2	*	1	1525	186	2865.	2097.0	1571.6	*	1	2345	286	3222.	2603.8	1572.4
1	0710	87	396.	.0	1564.2	*	1	1530	187	2921.	2174.2	1571.7	*	1	2350	287	3214.	2592.3	1572.4
1	0715	88	0.	.0	1564.2	*	1	1535	188	2976.	2250.2	1571.9	*	1	2355	288	3207.	2580.9	1572.4
1	0720	89	396.	.0	1564.2	*	1	1540	189	3028.	2324.3	1572.0	*	2	0000	289	3199.	2569.5	1572.4
1	0725	90	0.	.0	1564.2	*	1	1545	190	3079.	2396.2	1572.1	*	2	0005	290	3191.	2558.1	1572.4
1	0730	91	396.	.0	1564.2	*	1	1550	191	3127.	2465.5	1572.2	*	2	0010	291	3183.	2546.6	1572.3
1	0735	92	0.	.0	1564.2	*	1	1555	192	3173.	2531.8	1572.3	*	2	0015	292	3175.	2535.2	1572.3
1	0740	93	396.	.0	1564.2	*	1	1600	193	3216.	2594.9	1572.4	*	2	0020	293	3167.	2523.7	1572.3
1	0745	94	0.	.0	1564.2	*	1	1605	194	3257.	2654.5	1572.5	*	2	0025	294	3159.	2512.2	1572.3
1	0750	95	396.	.0	1564.2	*	1	1610	195	3294.	2710.4	1572.6	*	2	0030	295	3151.	2500.6	1572.3
1	0755	96	0.	.0	1564.2	*	1	1615	196	3329.	2762.5	1572.7	*	2	0035	296	3143.	2488.9	1572.2
1	0800	97	396.	.0	1564.2	*	1	1620	197	3362.	2810.9	1572.7	*	2	0040	297	3135.	2477.3	1572.2
1	0805	98	0.	.0	1564.2	*	1	1625	198	3391.	2855.5	1572.8	*	2	0045	298	3127.	2465.5	1572.2
1	0810	99	396.	.0	1564.2	*	1	1630	199	3418.	2896.4	1572.9	*	2	0050	299	3119.	2453.7	1572.2
1	0815	100	0.	.0	1564.2	*	1	1635	200	3443.	2933.7	1572.9	*	2	0055	300	3111.	2441.7	1572.2
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PEAK OUTFLOW IS 3608. AT TIME 18.17 HOURS

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
		(CFS)				
+ 3608.	18.17		3517.	1636.	1577.	1577.
		(INCHES)	.627	1.167	1.168	1.168
		(AC-FT)	1744.	3245.	3246.	3246.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
3189.	18.17	3049.	1253.	1207.	1207.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)				
1573.28	18.17	1573.08	1568.21	1568.06	1568.06

CUMULATIVE AREA = 52.12 SQ MI

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HYDROGRAPH AT RESV
TRANSPOSITION AREA 30.0 SQ MI

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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
1		0000	1	396.	.0	1564.2	*	1		0820	101	0.	.0	1564.2	*	1		1640	201	3352.	2796.2	1572.7

1	0005	2	0.	.0	1564.2	*	1	0825	102	396.	.0	1564.2	*	1	1645	202	3371.	2824.9	1572.8
1	0010	3	0.	.0	1564.2	*	1	0830	103	0.	.0	1564.2	*	1	1650	203	3388.	2850.7	1572.8
1	0015	4	0.	.0	1564.2	*	1	0835	104	396.	.0	1564.2	*	1	1655	204	3403.	2873.8	1572.8
1	0020	5	0.	.0	1564.2	*	1	0840	105	0.	.0	1564.2	*	1	1700	205	3417.	2894.3	1572.9
1	0025	6	0.	.0	1564.2	*	1	0845	106	396.	.0	1564.2	*	1	1705	206	3429.	2912.6	1572.9
1	0030	7	0.	.0	1564.2	*	1	0850	107	0.	.0	1564.2	*	1	1710	207	3439.	2928.6	1572.9
1	0035	8	0.	.0	1564.2	*	1	0855	108	396.	.0	1564.2	*	1	1715	208	3449.	2942.6	1572.9
1	0040	9	0.	.0	1564.2	*	1	0900	109	0.	.0	1564.2	*	1	1720	209	3457.	2954.7	1572.9
1	0045	10	0.	.0	1564.2	*	1	0905	110	396.	.0	1564.2	*	1	1725	210	3463.	2965.2	1573.0
1	0050	11	0.	.0	1564.2	*	1	0910	111	0.	.0	1564.2	*	1	1730	211	3469.	2974.1	1573.0
1	0055	12	0.	.0	1564.2	*	1	0915	112	396.	.0	1564.2	*	1	1735	212	3474.	2981.5	1573.0
1	0100	13	0.	.0	1564.2	*	1	0920	113	0.	.0	1564.2	*	1	1740	213	3478.	2987.4	1573.0
1	0105	14	0.	.0	1564.2	*	1	0925	114	396.	.0	1564.2	*	1	1745	214	3481.	2992.2	1573.0
1	0110	15	0.	.0	1564.2	*	1	0930	115	0.	.0	1564.2	*	1	1750	215	3483.	2995.8	1573.0
1	0115	16	0.	.0	1564.2	*	1	0935	116	396.	.0	1564.2	*	1	1755	216	3485.	2998.5	1573.0
1	0120	17	0.	.0	1564.2	*	1	0940	117	0.	.0	1564.2	*	1	1800	217	3486.	3000.2	1573.0
1	0125	18	0.	.0	1564.2	*	1	0945	118	396.	.0	1564.2	*	1	1805	218	3487.	3001.0	1573.0
1	0130	19	0.	.0	1564.2	*	1	0950	119	0.	.0	1564.2	*	1	1810	219	3487.	3001.1	1573.0
1	0135	20	0.	.0	1564.2	*	1	0955	120	396.	.0	1564.2	*	1	1815	220	3486.	3000.5	1573.0
1	0140	21	0.	.0	1564.2	*	1	1000	121	0.	.0	1564.2	*	1	1820	221	3486.	2999.3	1573.0
1	0145	22	0.	.0	1564.2	*	1	1005	122	396.	.0	1564.2	*	1	1825	222	3485.	2997.5	1573.0
1	0150	23	0.	.0	1564.2	*	1	1010	123	0.	.0	1564.2	*	1	1830	223	3483.	2995.2	1573.0
1	0155	24	0.	.0	1564.2	*	1	1015	124	396.	.0	1564.2	*	1	1835	224	3481.	2992.3	1573.0
1	0200	25	0.	.0	1564.2	*	1	1020	125	0.	.0	1564.2	*	1	1840	225	3479.	2988.9	1573.0
1	0205	26	0.	.0	1564.2	*	1	1025	126	396.	.0	1564.2	*	1	1845	226	3476.	2985.0	1573.0
1	0210	27	0.	.0	1564.2	*	1	1030	127	0.	.0	1564.2	*	1	1850	227	3474.	2980.6	1573.0
1	0215	28	0.	.0	1564.2	*	1	1035	128	396.	.0	1564.2	*	1	1855	228	3470.	2976.0	1573.0
1	0220	29	0.	.0	1564.2	*	1	1040	129	0.	.0	1564.2	*	1	1900	229	3467.	2971.0	1573.0
1	0225	30	0.	.0	1564.2	*	1	1045	130	396.	.0	1564.2	*	1	1905	230	3464.	2965.6	1573.0
1	0230	31	0.	.0	1564.2	*	1	1050	131	0.	.0	1564.2	*	1	1910	231	3460.	2960.0	1573.0
1	0235	32	0.	.0	1564.2	*	1	1055	132	396.	.0	1564.2	*	1	1915	232	3456.	2954.0	1572.9
1	0240	33	0.	.0	1564.2	*	1	1100	133	396.	.0	1564.2	*	1	1920	233	3452.	2947.7	1572.9
1	0245	34	0.	.0	1564.2	*	1	1105	134	396.	.0	1564.2	*	1	1925	234	3448.	2941.2	1572.9
1	0250	35	0.	.0	1564.2	*	1	1110	135	396.	.0	1564.2	*	1	1930	235	3443.	2934.5	1572.9
1	0255	36	0.	.0	1564.2	*	1	1115	136	396.	.0	1564.2	*	1	1935	236	3439.	2927.6	1572.9
1	0300	37	0.	.0	1564.2	*	1	1120	137	396.	.0	1564.2	*	1	1940	237	3434.	2920.5	1572.9
1	0305	38	0.	.0	1564.2	*	1	1125	138	396.	.0	1564.2	*	1	1945	238	3429.	2913.2	1572.9
1	0310	39	0.	.0	1564.2	*	1	1130	139	396.	.0	1564.2	*	1	1950	239	3424.	2905.7	1572.9
1	0315	40	0.	.0	1564.2	*	1	1135	140	424.	.1	1564.3	*	1	1955	240	3419.	2898.1	1572.9
1	0320	41	0.	.0	1564.2	*	1	1140	141	444.	.3	1564.4	*	1	2000	241	3414.	2890.2	1572.9
1	0325	42	0.	.0	1564.2	*	1	1145	142	464.	.9	1564.5	*	1	2005	242	3409.	2882.2	1572.8
1	0330	43	0.	.0	1564.2	*	1	1150	143	485.	2.0	1564.6	*	1	2010	243	3404.	2874.1	1572.8
1	0335	44	0.	.0	1564.2	*	1	1155	144	507.	3.9	1564.7	*	1	2015	244	3398.	2865.8	1572.8
1	0340	45	0.	.0	1564.2	*	1	1200	145	532.	6.8	1564.8	*	1	2020	245	3393.	2857.4	1572.8
1	0345	46	0.	.0	1564.2	*	1	1205	146	558.	11.4	1564.9	*	1	2025	246	3387.	2848.9	1572.8
1	0350	47	0.	.0	1564.2	*	1	1210	147	586.	17.7	1565.0	*	1	2030	247	3381.	2840.2	1572.8
1	0355	48	0.	.0	1564.2	*	1	1215	148	617.	26.1	1565.1	*	1	2035	248	3375.	2831.3	1572.8
1	0400	49	0.	.0	1564.2	*	1	1220	149	653.	37.0	1565.3	*	1	2040	249	3369.	2822.4	1572.
1	0405	50	0.	.0	1564.2	*	1	1225	150	693.	50.5	1565.4	*	1	2045	250	3363.	2813.3	1572.7
1	0410	51	0.	.0	1564.2	*	1	1230	151	738.	67.1	1565.6	*	1	2050	251	3357.	2804.1	1572.7
1	0415	52	0.	.0	1564.2	*	1	1235	152	786.	86.9	1565.8	*	1	2055	252	3351.	2794.8	1572.
1	0420	53	0.	.0	1564.2	*	1	1240	153	836.	110.0	1565.9	*	1	2100	253	3345.	2785.4	1572.
1	0425	54	0.	.0	1564.2	*	1	1245	154	889.	136.6	1566.1	*	1	2105	254	3338.	2775.8	1572.7
1	0430	55	0.	.0	1564.2	*	1	1250	155	943.	166.7	1566.3	*	1	2110	255	3332.	2766.2	1572.7
1	0435	56	0.	.0	1564.2	*	1	1255	156	998.	200.0	1566.5	*	1	2115	256	3325.	2756.4	1572.
1	0440	57	0.	.0	1564.2	*	1	1300	157	1054.	236.6	1566.7	*	1	2120	257	3319.	2746.4	1572.6
1	0445	58	0.	.0	1564.2	*	1	1305	158	1112.	276.3	1566.9	*	1	2125	258	3312.	2736.4	1572.6
1	0450	59	0.	.0	1564.2	*	1	1310	159	1172.	318.8	1567.1	*	1	2130	259	3305.	2726.3	1572.
1	0455	60	0.	.0	1564.2	*	1	1315	160	1233.	363.5	1567.3	*	1	2135	260	3298.	2716.1	1572.
1	0500	61	0.	.0	1564.2	*	1	1320	161	1294.	410.1	1567.4	*	1	2140	261	3291.	2705.8	1572.6

1	0505	62	0.	.0	1564.2	*	1	1325	162	1356.	458.3	1567.6	*	1	2145	262	3284.	2695.5	1572.6
1	0510	63	0.	.0	1564.2	*	1	1330	163	1417.	507.7	1567.8	*	1	2150	263	3277.	2685.0	1572.5
1	0515	64	0.	.0	1564.2	*	1	1335	164	1478.	558.1	1568.0	*	1	2155	264	3270.	2674.5	1572.5
1	0520	65	0.	.0	1564.2	*	1	1340	165	1538.	609.7	1568.2	*	1	2200	265	3263.	2663.9	1572.5
1	0525	66	0.	.0	1564.2	*	1	1345	166	1598.	662.4	1568.3	*	1	2205	266	3256.	2653.3	1572.5
1	0530	67	0.	.0	1564.2	*	1	1350	167	1658.	716.3	1568.5	*	1	2210	267	3249.	2642.6	1572.5
1	0535	68	0.	.0	1564.2	*	1	1355	168	1718.	771.6	1568.7	*	1	2215	268	3241.	2631.8	1572.5
1	0540	69	0.	.0	1564.2	*	1	1400	169	1777.	828.3	1568.8	*	1	2220	269	3234.	2621.0	1572.4
1	0545	70	0.	.0	1564.2	*	1	1405	170	1837.	886.2	1569.0	*	1	2225	270	3226.	2610.1	1572.4
1	0550	71	0.	.0	1564.2	*	1	1410	171	1896.	945.4	1569.2	*	1	2230	271	3219.	2599.2	1572.4
1	0555	72	0.	.0	1564.2	*	1	1415	172	1955.	1005.8	1569.3	*	1	2235	272	3212.	2588.3	1572.4
1	0600	73	0.	.0	1564.2	*	1	1420	173	2015.	1067.4	1569.5	*	1	2240	273	3204.	2577.3	1572.4
1	0605	74	0.	.0	1564.2	*	1	1425	174	2074.	1130.2	1569.6	*	1	2245	274	3197.	2566.3	1572.4
1	0610	75	0.	.0	1564.2	*	1	1430	175	2132.	1194.2	1569.8	*	1	2250	275	3189.	2555.3	1572.3
1	0615	76	0.	.0	1564.2	*	1	1435	176	2191.	1259.5	1569.9	*	1	2255	276	3181.	2544.3	1572.3
1	0620	77	0.	.0	1564.2	*	1	1440	177	2250.	1326.0	1570.1	*	1	2300	277	3174.	2533.1	1572.3
1	0625	78	0.	.0	1564.2	*	1	1445	178	2309.	1394.0	1570.2	*	1	2305	278	3166.	2522.1	1572.3
1	0630	79	0.	.0	1564.2	*	1	1450	179	2368.	1463.2	1570.4	*	1	2310	279	3159.	2510.9	1572.3
1	0635	80	0.	.0	1564.2	*	1	1455	180	2427.	1533.9	1570.5	*	1	2315	280	3151.	2499.8	1572.3
1	0640	81	0.	.0	1564.2	*	1	1500	181	2486.	1605.8	1570.7	*	1	2320	281	3143.	2488.7	1572.2
1	0645	82	396.	.0	1564.2	*	1	1505	182	2545.	1678.7	1570.8	*	1	2325	282	3135.	2477.6	1572.2
1	0650	83	0.	.0	1564.2	*	1	1510	183	2604.	1752.5	1571.0	*	1	2330	283	3128.	2466.4	1572.2
1	0655	84	396.	.0	1564.2	*	1	1515	184	2662.	1826.9	1571.1	*	1	2335	284	3120.	2455.3	1572.2
1	0700	85	0.	.0	1564.2	*	1	1520	185	2719.	1901.3	1571.3	*	1	2340	285	3112.	2444.3	1572.2
1	0705	86	396.	.0	1564.2	*	1	1525	186	2775.	1975.4	1571.4	*	1	2345	286	3105.	2433.2	1572.2
1	0710	87	0.	.0	1564.2	*	1	1530	187	2830.	2048.7	1571.5	*	1	2350	287	3097.	2422.2	1572.1
1	0715	88	396.	.0	1564.2	*	1	1535	188	2882.	2120.7	1571.6	*	1	2355	288	3089.	2411.2	1572.1
1	0720	89	0.	.0	1564.2	*	1	1540	189	2933.	2191.0	1571.8	*	2	0000	289	3082.	2400.2	1572.1
1	0725	90	396.	.0	1564.2	*	1	1545	190	2982.	2259.0	1571.9	*	2	0005	290	3074.	2389.1	1572.1
1	0730	91	0.	.0	1564.2	*	1	1550	191	3028.	2324.5	1572.0	*	2	0010	291	3066.	2378.1	1572.1
1	0735	92	396.	.0	1564.2	*	1	1555	192	3072.	2387.0	1572.1	*	2	0015	292	3058.	2367.1	1572.0
1	0740	93	0.	.0	1564.2	*	1	1600	193	3114.	2446.4	1572.2	*	2	0020	293	3051.	2356.0	1572.0
1	0745	94	396.	.0	1564.2	*	1	1605	194	3153.	2502.4	1572.3	*	2	0025	294	3043.	2345.0	1572.0
1	0750	95	0.	.0	1564.2	*	1	1610	195	3189.	2555.0	1572.3	*	2	0030	295	3035.	2333.8	1572.0
1	0755	96	396.	.0	1564.2	*	1	1615	196	3222.	2604.0	1572.4	*	2	0035	296	3027.	2322.7	1572.0
1	0800	97	0.	.0	1564.2	*	1	1620	197	3253.	2649.3	1572.5	*	2	0040	297	3019.	2311.4	1572.0
1	0805	98	396.	.0	1564.2	*	1	1625	198	3281.	2691.1	1572.6	*	2	0045	298	3011.	2300.2	1571.9
1	0810	99	0.	.0	1564.2	*	1	1630	199	3307.	2729.5	1572.6	*	2	0050	299	3003.	2288.8	1571.9
1	0815	100	396.	.0	1564.2	*	1	1635	200	3331.	2764.5	1572.7	*	2	0055	300	2995.	2277.3	1571.9
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PEAK OUTFLOW IS 3487. AT TIME 18.17 HOURS

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
		(CFS)				
+ 3487.	18.17		3398.	1580.	1523.	1523.
		(INCHES)	.606	1.128	1.128	1.128
		(AC-FT)	1685.	3134.	3136.	3136.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
3001.	18.17	2866.	1176.	1133.	1133.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	24.92-HR

+ (FEET)	(HR)				
1573.01	18.17	1572.81	1568.08	1567.94	1567.94

CUMULATIVE AREA = 52.12 SQ MI

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HYDROGRAPH AT RESV
TRANSPOSITION AREA 53.0 SQ MI

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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
1		0000	1	396.	.0	1564.2	1		0820	101	0.	.0	1564.2	1		1640	201	3229.	2613.5	1572.4
1		0005	2	0.	.0	1564.2	1		0825	102	396.	.0	1564.2	1		1645	202	3247.	2640.1	1572.5
1		0010	3	0.	.0	1564.2	1		0830	103	0.	.0	1564.2	1		1650	203	3263.	2664.0	1572.5
1		0015	4	0.	.0	1564.2	1		0835	104	396.	.0	1564.2	1		1655	204	3278.	2685.3	1572.5
1		0020	5	0.	.0	1564.2	1		0840	105	0.	.0	1564.2	1		1700	205	3290.	2704.4	1572.6
1		0025	6	0.	.0	1564.2	1		0845	106	396.	.0	1564.2	1		1705	206	3302.	2721.2	1572.6
1		0030	7	0.	.0	1564.2	1		0850	107	0.	.0	1564.2	1		1710	207	3312.	2736.0	1572.6
1		0035	8	0.	.0	1564.2	1		0855	108	396.	.0	1564.2	1		1715	208	3320.	2748.8	1572.6
1		0040	9	0.	.0	1564.2	1		0900	109	0.	.0	1564.2	1		1720	209	3328.	2760.0	1572.7
1		0045	10	0.	.0	1564.2	1		0905	110	396.	.0	1564.2	1		1725	210	3334.	2769.5	1572.7
1		0050	11	0.	.0	1564.2	1		0910	111	0.	.0	1564.2	1		1730	211	3339.	2777.6	1572.7
1		0055	12	0.	.0	1564.2	1		0915	112	396.	.0	1564.2	1		1735	212	3344.	2784.3	1572.7
1		0100	13	0.	.0	1564.2	1		0920	113	0.	.0	1564.2	1		1740	213	3348.	2789.7	1572.7
1		0105	14	0.	.0	1564.2	1		0925	114	396.	.0	1564.2	1		1745	214	3350.	2793.9	1572.7
1		0110	15	0.	.0	1564.2	1		0930	115	0.	.0	1564.2	1		1750	215	3352.	2797.1	1572.7
1		0115	16	0.	.0	1564.2	1		0935	116	396.	.0	1564.2	1		1755	216	3354.	2799.3	1572.7
1		0120	17	0.	.0	1564.2	1		0940	117	0.	.0	1564.2	1		1800	217	3355.	2800.7	1572.7
1		0125	18	0.	.0	1564.2	1		0945	118	396.	.0	1564.2	1		1805	218	3355.	2801.2	1572.7
1		0130	19	0.	.0	1564.2	1		0950	119	0.	.0	1564.2	1		1810	219	3355.	2801.2	1572.7
1		0135	20	0.	.0	1564.2	1		0955	120	396.	.0	1564.2	1		1815	220	3355.	2800.4	1572.7
1		0140	21	0.	.0	1564.2	1		1000	121	0.	.0	1564.2	1		1820	221	3354.	2799.0	1572.7
1		0145	22	0.	.0	1564.2	1		1005	122	396.	.0	1564.2	1		1825	222	3352.	2797.1	1572.7
1		0150	23	0.	.0	1564.2	1		1010	123	0.	.0	1564.2	1		1830	223	3351.	2794.7	1572.7
1		0155	24	0.	.0	1564.2	1		1015	124	396.	.0	1564.2	1		1835	224	3349.	2791.6	1572.7
1		0200	25	0.	.0	1564.2	1		1020	125	0.	.0	1564.2	1		1840	225	3347.	2788.3	1572.7
1		0205	[illegible]	0.	.0	1564.2	1		1025	126	396.	.0	1564.2	1		1845	226	3344.	2784.4	1572.7
1		0210		0.	.0	1564.2	1		1030	127	0.	.0	1564.2	1		1850	227	3341.	2780.2	1572.7
1		0215	28	0.	.0	1564.2	1		1035	128	396.	.0	1564.2	1		1855	228	3338.	2775.5	1572.7
1		0220	29	0.	.0	1564.2	1		1040	129	0.	.0	1564.2	1		1900	229	3335.	2770.5	1572.7
1		0225	30	0.	.0	1564.2	1		1045	130	396.	.0	1564.2	1		1905	230	3331.	2765.2	1572.7
1		0230	31	0.	.0	1564.2	1		1050	131	0.	.0	1564.2	1		1910	231	3327.	2759.6	1572.7
1		0235	32	0.	.0	1564.2	1		1055	132	396.	.0	1564.2	1		1915	232	3324.	2753.8	1572.
1		0240	33	0.	.0	1564.2	1		1100	133	0.	.0	1564.2	1		1920	233	3319.	2747.7	1572.6
1		0245	34	0.	.0	1564.2	1		1105	134	396.	.0	1564.2	1		1925	234	3315.	2741.3	1572.6
1		0250	35	0.	.0	1564.2	1		1110	135	396.	.0	1564.2	1		1930	235	3311.	2734.8	1572.
1		0255	36	0.	.0	1564.2	1		1115	136	396.	.0	1564.2	1		1935	236	3306.	2728.1	1572.
1		0300	37	0.	.0	1564.2	1		1120	137	396.	.0	1564.2	1		1940	237	3302.	2721.2	1572.6
1		0305	38	0.	.0	1564.2	1		1125	138	396.	.0	1564.2	1		1945	238	3297.	2714.1	1572.
1		0310	39	0.	.0	1564.2	1		1130	139	396.	.0	1564.2	1		1950	239	3292.	2706.8	1572.
1		0315	40	0.	.0	1564.2	1		1135	140	396.	.0	1564.2	1		1955	240	3287.	2699.4	1572.6
1		0320	41	0.	.0	1564.2	1		1140	141	414.	.0	1564.3	1		2000	241	3282.	2691.8	1572.6
1		0325	42	0.	.0	1564.2	1		1145	142	441.	.3	1564.4	1		2005	242	3277.	2684.1	1572.
1		0330	43	0.	.0	1564.2	1		1150	143	464.	.9	1564.5	1		2010	243	3271.	2676.2	1572.
1		0335	44	0.	.0	1564.2	1		1155	144	487.	2.2	1564.6	1		2015	244	3266.	2668.2	1572.5
1		0340	45	0.	.0	1564.2	1		1200	145	513.	4.4	1564.7	1		2020	245	3260.	2660.0	1572.

1	0345	46	0.	.0	1564.2	*	1	1205	146	540.	8.1	1564.8	*	1	2025	246	3255.	2651.7	1572.5
1	0350	47	0.	.0	1564.2	*	1	1210	147	568.	13.4	1564.9	*	1	2030	247	3249.	2643.4	1572.5
1	0355	48	0.	.0	1564.2	*	1	1215	148	597.	20.8	1565.1	*	1	2035	248	3243.	2634.8	1572.5
1	0400	49	0.	.0	1564.2	*	1	1220	149	631.	30.3	1565.2	*	1	2040	249	3237.	2626.2	1572.5
1	0405	50	0.	.0	1564.2	*	1	1225	150	670.	42.5	1565.3	*	1	2045	250	3231.	2617.5	1572.4
1	0410	51	0.	.0	1564.2	*	1	1230	151	712.	57.5	1565.5	*	1	2050	251	3225.	2608.6	1572.4
1	0415	52	0.	.0	1564.2	*	1	1235	152	759.	75.5	1565.7	*	1	2055	252	3219.	2599.6	1572.4
1	0420	53	0.	.0	1564.2	*	1	1240	153	808.	96.7	1565.8	*	1	2100	253	3213.	2590.5	1572.4
1	0425	54	0.	.0	1564.2	*	1	1245	154	859.	121.1	1566.0	*	1	2105	254	3207.	2581.3	1572.4
1	0430	55	0.	.0	1564.2	*	1	1250	155	911.	148.8	1566.2	*	1	2110	255	3200.	2572.0	1572.4
1	0435	56	0.	.0	1564.2	*	1	1255	156	965.	179.7	1566.4	*	1	2115	256	3194.	2562.5	1572.4
1	0440	57	0.	.0	1564.2	*	1	1300	157	1019.	213.6	1566.6	*	1	2120	257	3187.	2553.0	1572.3
1	0445	58	0.	.0	1564.2	*	1	1305	158	1074.	250.4	1566.8	*	1	2125	258	3181.	2543.4	1572.3
1	0450	59	0.	.0	1564.2	*	1	1310	159	1131.	289.8	1566.9	*	1	2130	259	3174.	2533.7	1572.3
1	0455	60	0.	.0	1564.2	*	1	1315	160	1189.	331.5	1567.1	*	1	2135	260	3167.	2523.9	1572.3
1	0500	61	0.	.0	1564.2	*	1	1320	161	1248.	374.9	1567.3	*	1	2140	261	3161.	2514.0	1572.3
1	0505	62	0.	.0	1564.2	*	1	1325	162	1307.	419.8	1567.5	*	1	2145	262	3154.	2504.0	1572.3
1	0510	63	0.	.0	1564.2	*	1	1330	163	1366.	465.9	1567.7	*	1	2150	263	3147.	2494.0	1572.3
1	0515	64	0.	.0	1564.2	*	1	1335	164	1424.	513.0	1567.8	*	1	2155	264	3140.	2483.9	1572.2
1	0520	65	0.	.0	1564.2	*	1	1340	165	1482.	561.2	1568.0	*	1	2200	265	3133.	2473.7	1572.2
1	0525	66	0.	.0	1564.2	*	1	1345	166	1539.	610.5	1568.2	*	1	2205	266	3126.	2463.4	1572.2
1	0530	67	0.	.0	1564.2	*	1	1350	167	1597.	661.0	1568.3	*	1	2210	267	3119.	2453.1	1572.2
1	0535	68	0.	.0	1564.2	*	1	1355	168	1654.	712.8	1568.5	*	1	2215	268	3111.	2442.8	1572.2
1	0540	69	0.	.0	1564.2	*	1	1400	169	1712.	765.9	1568.7	*	1	2220	269	3104.	2432.5	1572.2
1	0545	70	0.	.0	1564.2	*	1	1405	170	1769.	820.3	1568.8	*	1	2225	270	3097.	2422.1	1572.1
1	0550	71	0.	.0	1564.2	*	1	1410	171	1826.	875.8	1569.0	*	1	2230	271	3090.	2411.6	1572.1
1	0555	72	0.	.0	1564.2	*	1	1415	172	1884.	932.6	1569.1	*	1	2235	272	3082.	2401.1	1572.1
1	0600	73	0.	.0	1564.2	*	1	1420	173	1941.	990.4	1569.3	*	1	2240	273	3075.	2390.6	1572.1
1	0605	74	0.	.0	1564.2	*	1	1425	174	1997.	1049.5	1569.4	*	1	2245	274	3068.	2380.0	1572.1
1	0610	75	0.	.0	1564.2	*	1	1430	175	2054.	1109.6	1569.6	*	1	2250	275	3060.	2369.4	1572.1
1	0615	76	0.	.0	1564.2	*	1	1435	176	2111.	1171.1	1569.7	*	1	2255	276	3053.	2358.8	1572.0
1	0620	77	0.	.0	1564.2	*	1	1440	177	2168.	1233.7	1569.9	*	1	2300	277	3045.	2348.2	1572.0
1	0625	78	0.	.0	1564.2	*	1	1445	178	2225.	1297.7	1570.0	*	1	2305	278	3038.	2337.5	1572.0
1	0630	79	0.	.0	1564.2	*	1	1450	179	2282.	1362.9	1570.2	*	1	2310	279	3030.	2326.9	1572.0
1	0635	80	0.	.0	1564.2	*	1	1455	180	2339.	1429.4	1570.3	*	1	2315	280	3023.	2316.2	1572.0
1	0640	81	0.	.0	1564.2	*	1	1500	181	2397.	1497.2	1570.5	*	1	2320	281	3015.	2305.5	1571.9
1	0645	82	0.	.0	1564.2	*	1	1505	182	2454.	1565.9	1570.6	*	1	2325	282	3008.	2294.9	1571.9
1	0650	83	0.	.0	1564.2	*	1	1510	183	2510.	1635.5	1570.7	*	1	2330	283	3000.	2284.2	1571.9
1	0655	84	396.	.0	1564.2	*	1	1515	184	2567.	1705.6	1570.9	*	1	2335	284	2992.	2273.6	1571.9
1	0700	85	0.	.0	1564.2	*	1	1520	185	2622.	1775.9	1571.0	*	1	2340	285	2985.	2263.0	1571.9
1	0705	86	396.	.0	1564.2	*	1	1525	186	2676.	1845.8	1571.2	*	1	2345	286	2977.	2252.3	1571.9
1	0710	87	0.	.0	1564.2	*	1	1530	187	2729.	1914.9	1571.3	*	1	2350	287	2970.	2241.7	1571.8
1	0715	88	396.	.0	1564.2	*	1	1535	188	2780.	1982.7	1571.4	*	1	2355	288	2962.	2231.1	1571.8
1	0720	89	0.	.0	1564.2	*	1	1540	189	2830.	2048.8	1571.5	*	2	0000	289	2955.	2220.5	1571.8
1	0725	90	396.	.0	1564.2	*	1	1545	190	2877.	2112.7	1571.6	*	2	0005	290	2947.	2210.0	1571.8
1	0730	91	0.	.0	1564.2	*	1	1550	191	2921.	2174.2	1571.7	*	2	0010	291	2939.	2199.5	1571.8
1	0735	92	396.	.0	1564.2	*	1	1555	192	2963.	2232.8	1571.8	*	2	0015	292	2932.	2188.9	1571.8
1	0740	93	0.	.0	1564.2	*	1	1600	193	3003.	2288.3	1571.9	*	2	0020	293	2924.	2178.3	1571.7
1	0745	94	396.	.0	1564.2	*	1	1605	194	3040.	2340.6	1572.0	*	2	0025	294	2917.	2167.7	1571.7
1	0750	95	0.	.0	1564.2	*	1	1610	195	3074.	2389.6	1572.1	*	2	0030	295	2909.	2157.1	1571.7
1	0755	96	396.	.0	1564.2	*	1	1615	196	3106.	2435.1	1572.2	*	2	0035	296	2901.	2146.4	1571.7
1	0800	97	0.	.0	1564.2	*	1	1620	197	3135.	2477.3	1572.2	*	2	0040	297	2893.	2135.6	1571.7
1	0805	98	396.	.0	1564.2	*	1	1625	198	3162.	2516.1	1572.3	*	2	0045	298	2885.	2124.8	1571.6
1	0810	99	0.	.0	1564.2	*	1	1630	199	3187.	2551.6	1572.3	*	2	0050	299	2877.	2113.9	1571.6
1	0815	100	396.	.0	1564.2	*	1	1635	200	3209.	2584.0	1572.4	*	2	0055	300	2869.	2102.9	1571.6
						*							*						

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PEAK OUTFLOW IS 3355. AT TIME 18.08 HOURS

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
		(CFS)				
+ 3355.	18.08		3267.	1519.	1463.	1463.
		(INCHES)	.583	1.084	1.084	1.084
		(AC-FT)	1620.	3012.	3013.	3013.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
2801.	18.08	2671.	1094.	1054.	1054.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)				
1572.72	18.08	1572.52	1567.94	1567.80	1567.80

CUMULATIVE AREA = 52.12 SQ MI

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INTERPOLATED HYDROGRAPH AT RESV

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0000	1	396.	1		0615	76	0.	1		1230	151	713.	1		1845	226	3348.
1		0005	2	0.	1		0620	77	0.	1		1235	152	759.	1		1850	227	3345.
1		0010	3	0.	1		0625	78	0.	1		1240	153	808.	1		1855	228	3342.
1		0015	4	0.	1		0630	79	0.	1		1245	154	860.	1		1900	229	3339.
1		0020	5	0.	1		0635	80	0.	1		1250	155	912.	1		1905	230	3335.
1		0025	6	0.	1		0640	81	0.	1		1255	156	966.	1		1910	231	3331.
1		0030	7	0.	1		0645	82	12.	1		1300	157	1020.	1		1915	232	3327.
1		0035	8	0.	1		0650	83	0.	1		1305	158	1075.	1		1920	233	3323.
1		0040	9	0.	1		0655	84	396.	1		1310	159	1132.	1		1925	234	3319.
1		0045	10	0.	1		0700	85	0.	1		1315	160	1191.	1		1930	235	3315.
1		0050	11	0.	1		0705	86	396.	1		1320	161	1249.	1		1935	236	3310.
1		0055	12	0.	1		0710	87	0.	1		1325	162	1308.	1		1940	237	3306.
1		0100	13	0.	1		0715	88	396.	1		1330	163	1367.	1		1945	238	3301.
1		0105	14	0.	1		0720	89	0.	1		1335	164	1425.	1		1950	239	3296.
1		0110	15	0.	1		0725	90	396.	1		1340	165	1483.	1		1955	240	3291.
1		0115	16	0.	1		0730	91	0.	1		1345	166	1541.	1		2000	241	3286.
1		0120	17	0.	1		0735	92	396.	1		1350	167	1598.	1		2005	242	3281.
1		0125	18	0.	1		0740	93	0.	1		1355	168	1656.	1		2010	243	3275.
1		0130	19	0.	1		0745	94	396.	1		1400	169	1714.	1		2015	244	3270.
1		0135	20	0.	1		0750	95	0.	1		1405	170	1771.	1		2020	245	3264.
1		0140	21	0.	1		0755	96	396.	1		1410	171	1828.	1		2025	246	3259.
1		0145	22	0.	1		0800	97	0.	1		1415	172	1886.	1		2030	247	3253.
1		0150	23	0.	1		0805	98	396.	1		1420	173	1943.	1		2035	248	3247.
1		0155	24	0.	1		0810	99	0.	1		1425	174	2000.	1		2040	249	3241.
1		0200	25	0.	1		0815	100	396.	1		1430	175	2057.	1		2045	250	3235.
1		0205	26	0.	1		0820	101	0.	1		1435	176	2114.	1		2050	251	3229.
1		0210	27	0.	1		0825	102	396.	1		1440	177	2171.	1		2055	252	3223.
1		0215	28	0.	1		0830	103	0.	1		1445	178	2228.	1		2100	253	3217.
1		0220	29	0.	1		0835	104	396.	1		1450	179	2285.	1		2105	254	3211.
1		0225	30	0.	1		0840	105	0.	1		1455	180	2342.	1		2110	255	3204.

1	0230	31	0.	*	1	0845	106	396.	*	1	1500	181	2399.	*	1	2115	256	3198.
1	0235	32	0.	*	1	0850	107	0.	*	1	1505	182	2456.	*	1	2120	257	3191.
1	0240	33	0.	*	1	0855	108	396.	*	1	1510	183	2513.	*	1	2125	258	3185.
1	0245	34	0.	*	1	0900	109	0.	*	1	1515	184	2569.	*	1	2130	259	3178.
1	0250	35	0.	*	1	0905	110	396.	*	1	1520	185	2625.	*	1	2135	260	3171.
1	0255	36	0.	*	1	0910	111	0.	*	1	1525	186	2679.	*	1	2140	261	3164.
1	0300	37	0.	*	1	0915	112	396.	*	1	1530	187	2732.	*	1	2145	262	3158.
1	0305	38	0.	*	1	0920	113	0.	*	1	1535	188	2783.	*	1	2150	263	3151.
1	0310	39	0.	*	1	0925	114	396.	*	1	1540	189	2833.	*	1	2155	264	3144.
1	0315	40	0.	*	1	0930	115	0.	*	1	1545	190	2880.	*	1	2200	265	3137.
1	0320	41	0.	*	1	0935	116	396.	*	1	1550	191	2924.	*	1	2205	266	3129.
1	0325	42	0.	*	1	0940	117	0.	*	1	1555	192	2967.	*	1	2210	267	3122.
1	0330	43	0.	*	1	0945	118	396.	*	1	1600	193	3006.	*	1	2215	268	3115.
1	0335	44	0.	*	1	0950	119	0.	*	1	1605	194	3043.	*	1	2220	269	3108.
1	0340	45	0.	*	1	0955	120	396.	*	1	1610	195	3078.	*	1	2225	270	3101.
1	0345	46	0.	*	1	1000	121	0.	*	1	1615	196	3109.	*	1	2230	271	3093.
1	0350	47	0.	*	1	1005	122	396.	*	1	1620	197	3139.	*	1	2235	272	3086.
1	0355	48	0.	*	1	1010	123	0.	*	1	1625	198	3166.	*	1	2240	273	3079.
1	0400	49	0.	*	1	1015	124	396.	*	1	1630	199	3190.	*	1	2245	274	3071.
1	0405	50	0.	*	1	1020	125	0.	*	1	1635	200	3212.	*	1	2250	275	3064.
1	0410	51	0.	*	1	1025	126	396.	*	1	1640	201	3232.	*	1	2255	276	3056.
1	0415	52	0.	*	1	1030	127	0.	*	1	1645	202	3251.	*	1	2300	277	3049.
1	0420	53	0.	*	1	1035	128	396.	*	1	1650	203	3267.	*	1	2305	278	3041.
1	0425	54	0.	*	1	1040	129	0.	*	1	1655	204	3281.	*	1	2310	279	3034.
1	0430	55	0.	*	1	1045	130	396.	*	1	1700	205	3294.	*	1	2315	280	3026.
1	0435	56	0.	*	1	1050	131	0.	*	1	1705	206	3305.	*	1	2320	281	3019.
1	0440	57	0.	*	1	1055	132	396.	*	1	1710	207	3315.	*	1	2325	282	3011.
1	0445	58	0.	*	1	1100	133	12.	*	1	1715	208	3324.	*	1	2330	283	3004.
1	0450	59	0.	*	1	1105	134	396.	*	1	1720	209	3331.	*	1	2335	284	2996.
1	0455	60	0.	*	1	1110	135	396.	*	1	1725	210	3338.	*	1	2340	285	2989.
1	0500	61	0.	*	1	1115	136	396.	*	1	1730	211	3343.	*	1	2345	286	2981.
1	0505	62	0.	*	1	1120	137	396.	*	1	1735	212	3348.	*	1	2350	287	2973.
1	0510	63	0.	*	1	1125	138	396.	*	1	1740	213	3351.	*	1	2355	288	2966.
1	0515	64	0.	*	1	1130	139	396.	*	1	1745	214	3354.	*	2	0000	289	2958.
1	0520	65	0.	*	1	1135	140	397.	*	1	1750	215	3356.	*	2	0005	290	2951.
1	0525	66	0.	*	1	1140	141	415.	*	1	1755	216	3358.	*	2	0010	291	2943.
1	0530	67	0.	*	1	1145	142	442.	*	1	1800	217	3359.	*	2	0015	292	2936.
1	0535	68	0.	*	1	1150	143	464.	*	1	1805	218	3359.	*	2	0020	293	2928.
1	0540	69	0.	*	1	1155	144	488.	*	1	1810	219	3359.	*	2	0025	294	2920.
1	0545	70	0.	*	1	1200	145	514.	*	1	1815	220	3359.	*	2	0030	295	2913.
1	0550	71	0.	*	1	1205	146	541.	*	1	1820	221	3358.	*	2	0035	296	2905.
1	0555	72	0.	*	1	1210	147	569.	*	1	1825	222	3356.	*	2	0040	297	2897.
1	0600	73	0.	*	1	1215	148	598.	*	1	1830	223	3355.	*	2	0045	298	2889.
1	0605	74	0.	*	1	1220	149	632.	*	1	1835	224	3353.	*	2	0050	299	2881.
1	0610	75	0.	*	1	1225	150	670.	*	1	1840	225	3350.	*	2	0055	300	2873.
				*					*					*				

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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
		(CFS)				
+ 3359.	18.08		3271.	1520.	1465.	1465.
		(INCHES)	.584	1.085	1.085	1.085
		(AC-FT)	1622.	3016.	3017.	3017.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
2801.	18.08	2671.	1094.	1054.	1054.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)				
1572.72	18.08	1572.52	1567.94	1567.80	1567.80

CUMULATIVE AREA = 52.12 SQ MI

1 STATION RESV

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                     (0) OUTFLOW
            0.      400.      800.     1200.     1600.     2000.     2400.     2800.     3200.     3600.        0.        0.        0.
DAHRMN PER
 10000   1.---------0---------.---------.---------.---------.---------.---------.---------.---------.---------.---------.---------.
 10005  20          .         .         .         .         .         .         .         .         .         .         .         .
 10010  30          .         .         .         .         .         .         .         .         .         .         .         .
 10015  40          .         .         .         .         .         .         .         .         .         .         .         .
 10020  50          .         .         .         .         .         .         .         .         .         .         .         .
 10025  60          .         .         .         .         .         .         .         .         .         .         .         .
 10030  70          .         .         .         .         .         .         .         .         .         .         .         .
 10035  80          .         .         .         .         .         .         .         .         .         .         .         .
 10040  90          .         .         .         .         .         .         .         .         .         .         .         .
 10045 100          .         .         .         .         .         .         .         .         .         .         .         .
 10050 110 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10055 120          .         .         .         .         .         .         .         .         .         .         .         .
 10100 130          .         .         .         .         .         .         .         .         .         .         .         .
 10105 140          .         .         .         .         .         .         .         .         .         .         .         .
 10110 150          .         .         .         .         .         .         .         .         .         .         .         .
 10115 160          .         .         .         .         .         .         .         .         .         .         .         .
 10120 170          .         .         .         .         .         .         .         .         .         .         .         .
 10125 180          .         .         .         .         .         .         .         .         .         .         .         .
 10130 190          .         .         .         .         .         .         .         .         .         .         .         .
 10135 200          .         .         .         .         .         .         .         .         .         .         .         .
 10140 210 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10145 220          .         .         .         .         .         .         .         .         .         .         .         .
 10150 230          .         .         .         .         .         .         .         .         .         .         .         .
 10155 240          .         .         .         .         .         .         .         .         .         .         .         .
 10200 250          .         .         .         .         .         .         .         .         .         .         .         .
 10205 260          .         .         .         .         .         .         .         .         .         .         .         .
 10210 270          .         .         .         .         .         .         .         .         .         .         .         .
 10215 280          .         .         .         .         .         .         .         .         .         .         .         .
 10220 290          .         .         .         .         .         .         .         .         .         .         .         .
 10225 300          .         .         .         .         .         .         .         .         .         .         .         .
 10230 310 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10235 320          .         .         .         .         .         .         .         .         .         .         .         .
 10240 330          .         .         .         .         .         .         .         .         .         .         .         .
 10245 340          .         .         .         .         .         .         .         .         .         .         .         .
 10250 350          .         .         .         .         .         .         .         .         .         .         .         .
 10255 360          .         .         .         .         .         .         .         .         .         .         .         .
 10300 370          .         .         .         .         .         .         .         .         .         .         .         .
 10305 380          .         .         .         .         .         .         .         .         .         .         .         .
 10310 390          .         .         .         .         .         .         .         .         .         .         .         .
 10315 400          .         .         .         .         .         .         .         .         .         .         .         .
 10320 410 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10325 420          .         .         .         .         .         .         .         .         .         .         .         .
 10330 430          .         .         .         .         .         .         .         .         .         .         .         .
 10335 440          .         .         .         .         .         .         .         .         .         .         .         .
 10340 450          .         .         .         .         .         .         .         .         .         .         .         .
 10345 460          .         .         .         .         .         .         .         .         .         .         .         .
 10350 470          .         .         .         .         .         .         .         .         .         .         .         .
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10355	480	.	.	.	.	.	.	.	.	.	.	.
10400	490	.	.	.	.	.	.	.	.	.	.	.
10405	500	.	.	.	.	.	.	.	.	.	.	.
10410	510	.	.	.	.	.	.	.	.	.	.	.
10415	520	.	.	.	.	.	.	.	.	.	.	.
10420	530	.	.	.	.	.	.	.	.	.	.	.
10425	540	.	.	.	.	.	.	.	.	.	.	.
10430	550	.	.	.	.	.	.	.	.	.	.	.
10435	560	.	.	.	.	.	.	.	.	.	.	.
10440	570	.	.	.	.	.	.	.	.	.	.	.
10445	580	.	.	.	.	.	.	.	.	.	.	.
10450	590	.	.	.	.	.	.	.	.	.	.	.
10455	600	.	.	.	.	.	.	.	.	.	.	.
10500	610	.	.	.	.	.	.	.	.	.	.	.
10505	620	.	.	.	.	.	.	.	.	.	.	.
10510	630	.	.	.	.	.	.	.	.	.	.	.
10515	640	.	.	.	.	.	.	.	.	.	.	.
10520	650	.	.	.	.	.	.	.	.	.	.	.
10525	660	.	.	.	.	.	.	.	.	.	.	.
10530	670	.	.	.	.	.	.	.	.	.	.	.
10535	680	.	.	.	.	.	.	.	.	.	.	.
10540	690	.	.	.	.	.	.	.	.	.	.	.
10545	700	.	.	.	.	.	.	.	.	.	.	.
10550	710	.	.	.	.	.	.	.	.	.	.	.
10555	720	.	.	.	.	.	.	.	.	.	.	.
10600	730	.	.	.	.	.	.	.	.	.	.	.
10605	740	.	.	.	.	.	.	.	.	.	.	.
10610	750	.	.	.	.	.	.	.	.	.	.	.
10615	760	.	.	.	.	.	.	.	.	.	.	.
10620	770	.	.	.	.	.	.	.	.	.	.	.
10625	780	.	.	.	.	.	.	.	.	.	.	.
10630	790	.	.	.	.	.	.	.	.	.	.	.
10635	800	.	.	.	.	.	.	.	.	.	.	.
10640	810	.	.	.	.	.	.	.	.	.	.	.
10645	820	.	.	.	.	.	.	.	.	.	.	.
10650	830	.	.	.	.	.	.	.	.	.	.	.
10655	84.	0	.	.	.	.	.	.	.	.	.	.
10700	850	.	.	.	.	.	.	.	.	.	.	.
10705	86.	0	.	.	.	.	.	.	.	.	.	.
10710	870	.	.	.	.	.	.	.	.	.	.	.
10715	88.	0	.	.	.	.	.	.	.	.	.	.
10720	890	.	.	.	.	.	.	.	.	.	.	.
10725	90.	0	.	.	.	.	.	.	.	.	.	.
10730	910	.	.	.	.	.	.	.	.	.	.	.
10735	92.	0	.	.	.	.	.	.	.	.	.	.
10740	930	.	.	.	.	.	.	.	.	.	.	.
10745	94.	0	.	.	.	.	.	.	.	.	.	.
10750	950	.	.	.	.	.	.	.	.	.	.	.
10755	96.	0	.	.	.	.	.	.	.	.	.	.
10800	970	.	.	.	.	.	.	.	.	.	.	.
10805	98.	0	.	.	.	.	.	.	.	.	.	.
10810	990	.	.	.	.	.	.	.	.	.	.	.
10815	100.	0	.	.	.	.	.	.	.	.	.	.
10820	1010	.	.	.	.	.	.	.	.	.	.	.
10825	102.	0	.	.	.	.	.	.	.	.	.	.
10830	1030	.	.	.	.	.	.	.	.	.	.	.
10835	104.	0	.	.	.	.	.	.	.	.	.	.
10840	1050	.	.	.	.	.	.	.	.	.	.	.
10845	106.	0	.	.	.	.	.	.	.	.	.	.
10850	1070	.	.	.	.	.	.	.	.	.	.	.

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10855 108.      0         .         .         .         .         .         .         .         .         .         .         .
10900 1090      .         .         .         .         .         .         .         .         .         .         .         .
10905 110.      0         .         .         .         .         .         .         .         .         .         .         .
10910 1110 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10915 112.      0         .         .         .         .         .         .         .         .         .         .         .
10920 1130      .         .         .         .         .         .         .         .         .         .         .         .
10925 114.      0         .         .         .         .         .         .         .         .         .         .         .
10930 1150      .         .         .         .         .         .         .         .         .         .         .         .
10935 116.      0         .         .         .         .         .         .         .         .         .         .         .
10940 1170      .         .         .         .         .         .         .         .         .         .         .         .
10945 118.      0         .         .         .         .         .         .         .         .         .         .         .
10950 1190      .         .         .         .         .         .         .         .         .         .         .         .
10955 120.      0         .         .         .         .         .         .         .         .         .         .         .
11000 1210 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
11005 122.      0         .         .         .         .         .         .         .         .         .         .         .
11010 1230      .         .         .         .         .         .         .         .         .         .         .         .
11015 124.      0         .         .         .         .         .         .         .         .         .         .         .
11020 1250      .         .         .         .         .         .         .         .         .         .         .         .
11025 126.      0         .         .         .         .         .         .         .         .         .         .         .
11030 1270      .         .         .         .         .         .         .         .         .         .         .         .
11035 128.      0         .         .         .         .         .         .         .         .         .         .         .
11040 1290      .         .         .         .         .         .         .         .         .         .         .         .
11045 130.      0         .         .         .         .         .         .         .         .         .         .         .
11050 1310 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
11055 132.      0         .         .         .         .         .         .         .         .         .         .         .
11100 1330      .         .         .         .         .         .         .         .         .         .         .         .
11105 134.      0         .         .         .         .         .         .         .         .         .         .         .
11110 135.      0         .         .         .         .         .         .         .         .         .         .         .
11115 136.      0         .         .         .         .         .         .         .         .         .         .         .
11120 137.      0         .         .         .         .         .         .         .         .         .         .         .
11125 138.      0         .         .         .         .         .         .         .         .         .         .         .
11130 139.      0         .         .         .         .         .         .         .         .         .         .         .
11135 140.      0         .         .         .         .         .         .         .         .         .         .         .
11140 141. . . . . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
11145 142.      .0        .         .         .         .         .         .         .         .         .         .         .
11150 143.      . 0       .         .         .         .         .         .         .         .         .         .         .
11155 144.      . 0       .         .         .         .         .         .         .         .         .         .         .
11200 145.      .  0      .         .         .         .         .         .         .         .         .         .         .
11205 146.      .   0     .         .         .         .         .         .         .         .         .         .         .
11210 147.      .   0     .         .         .         .         .         .         .         .         .         .         .
11215 148.      .    0    .         .         .         .         .         .         .         .         .         .         .
11220 149.      .     0   .         .         .         .         .         .         .         .         .         .         .
11225 150.      .     0   .         .         .         .         .         .         .         .         .         .         .
11230 151. . . . . . . . . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
11235 152.      .         0.        .         .         .         .         .         .         .         .         .         .
11240 153.      .         0         .         .         .         .         .         .         .         .         .         .
11245 154.      .         .0        .         .         .         .         .         .         .         .         .         .
11250 155.      .         . 0       .         .         .         .         .         .         .         .         .         .
11255 156.      .         .  0      .         .         .         .         .         .         .         .         .         .
11300 157.      .         .   0     .         .         .         .         .         .         .         .         .         .
11305 158.      .         .    0    .         .         .         .         .         .         .         .         .         .
11310 159.      .         .     0   .         .         .         .         .         .         .         .         .         .
11315 160.      .         .      0  .         .         .         .         .         .         .         .         .         .
11320 161. . . . . . . . . . . . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
11325 162.      .         .        . 0       .         .         .         .         .         .         .         .         .
11330 163.      .         .        .  0      .         .         .         .         .         .         .         .         .
11335 164.      .         .        .   0     .         .         .         .         .         .         .         .         .
11340 165.      .         .        .    0    .         .         .         .         .         .         .         .         .
11345 166.      .         .        .     0   .         .         .         .         .         .         .         .         .
11350 167.      .         .        .      0  .         .         .         .         .         .         .         .         .
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11355 168.          .         .         .         .0        .         .         .         .         .         .         .         .
11400 169.          .         .         .         .  0      .         .         .         .         .         .         .         .
11405 170.          .         .         .         .   0     .         .         .         .         .         .         .         .
11410 171.  . . . . . . . . . . . . . . . . . . . . . . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
11415 172.          .         .         .         .      0  .         .         .         .         .         .         .         .
11420 173.          .         .         .         .        0.         .         .         .         .         .         .         .
11425 174.          .         .         .         .         0         .         .         .         .         .         .         .
11430 175.          .         .         .         .         .0        .         .         .         .         .         .         .
11435 176.          .         .         .         .         .  0      .         .         .         .         .         .         .
11440 177.          .         .         .         .         .   0     .         .         .         .         .         .         .
11445 178.          .         .         .         .         .     0   .         .         .         .         .         .         .
11450 179.          .         .         .         .         .      0  .         .         .         .         .         .         .
11455 180.          .         .         .         .         .        0.         .         .         .         .         .         .
11500 181.  . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
11505 182.          .         .         .         .         .         .0        .         .         .         .         .         .
11510 183.          .         .         .         .         .         .  0      .         .         .         .         .         .
11515 184.          .         .         .         .         .         .   0     .         .         .         .         .         .
11520 185.          .         .         .         .         .         .     0   .         .         .         .         .         .
11525 186.          .         .         .         .         .         .      0  .         .         .         .         .         .
11530 187.          .         .         .         .         .         .       0 .         .         .         .         .         .
11535 188.          .         .         .         .         .         .         0         .         .         .         .         .
11540 189.          .         .         .         .         .         .         .0        .         .         .         .         .
11545 190.          .         .         .         .         .         .         . 0       .         .         .         .         .
11550 191.  . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .0. . . . . . . . . . . . . . . . . . . . . . .
11555 192.          .         .         .         .         .         .         .   0     .         .         .         .         .
11600 193.          .         .         .         .         .         .         .    0    .         .         .         .         .
11605 194.          .         .         .         .         .         .         .     0   .         .         .         .         .
11610 195.          .         .         .         .         .         .         .      0  .         .         .         .         .
11615 196.          .         .         .         .         .         .         .       0 .         .         .         .         .
11620 197.          .         .         .         .         .         .         .       0 .         .         .         .         .
11625 198.          .         .         .         .         .         .         .        0.         .         .         .         .
11630 199.          .         .         .         .         .         .         .         0         .         .         .         .
11635 200.          .         .         .         .         .         .         .         0         .         .         .         .
11640 201.  . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .0. . . . . . . . . . . . . . . . . . .
11645 202.          .         .         .         .         .         .         .         .0        .         .         .         .
11650 203.          .         .         .         .         .         .         .         . 0       .         .         .         .
11655 204.          .         .         .         .         .         .         .         . 0       .         .         .         .
11700 205.          .         .         .         .         .         .         .         . 0       .         .         .         .
11705 206.          .         .         .         .         .         .         .         .  0      .         .         .         .
11710 207.          .         .         .         .         .         .         .         .  0      .         .         .         .
11715 208.          .         .         .         .         .         .         .         .  0      .         .         .         .
11720 209.          .         .         .         .         .         .         .         .  0      .         .         .         .
11725 210.          .         .         .         .         .         .         .         .  0      .         .         .         .
11730 211.  . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 0 . . . . . . . . . . . . . . . . . .
11735 212.          .         .         .         .         .         .         .         .   0     .         .         .         .
11740 213.          .         .         .         .         .         .         .         .   0     .         .         .         .
11745 214.          .         .         .         .         .         .         .         .   0     .         .         .         .
11750 215.          .         .         .         .         .         .         .         .   0     .         .         .         .
11755 216.          .         .         .         .         .         .         .         .   0     .         .         .         .
11800 217.          .         .         .         .         .         .         .         .   0     .         .         .         .
11805 218.          .         .         .         .         .         .         .         .   0     .         .         .         .
11810 219.          .         .         .         .         .         .         .         .   0     .         .         .         .
11815 220.          .         .         .         .         .         .         .         .   0     .         .         .         .
11820 221.  . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 0 . . . . . . . . . . . . . . . . . .
11825 222.          .         .         .         .         .         .         .         .   0     .         .         .         .
11830 223.          .         .         .         .         .         .         .         .   0     .         .         .         .
11835 224.          .         .         .         .         .         .         .         .   0     .         .         .         .
11840 225.          .         .         .         .         .         .         .         .   0     .         .         .         .
11845 226.          .         .         .         .         .         .         .         .   0     .         .         .         .
11850 227.          .         .         .         .         .         .         .         .   0     .         .         .         .
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11855 228.                                                  0
11900 229.                                                 0
11905 230.                                                 0
11910 231.                                                0
11915 232.                                                 0
11920 233.                                                 0
11925 234.                                                 0
11930 235.                                                 0
11935 236.                                                 0
11940 237.                                                 0
11945 238.                                                 0
11950 239.                                                0
11955 240.                                                0
12000 241.                                                0
12005 242.                                                0
12010 243.                                                0
12015 244.                                                0
12020 245.                                                0
12025 246.                                               .0
12030 247.                                               .0
12035 248.                                               .0
12040 249.                                               .0
12045 250.                                               .0
12050 251.                                               .0
12055 252.                                               .0
12100 253.                                               0
12105 254.                                               0
12110 255.                                               0
12115 256.                                               0
12120 257.                                               0
12125 258.                                               0
12130 259.                                              0.
12135 260.                                              0.
12140 261.                                              0.
12145 262.                                              0.
12150 263.                                              0.
12155 264.                                              0.
12200 265.                                             0 .
12205 266.                                             0 .
12210 267.                                             0 .
12215 268.                                             0 .
12220 269.                                             0 .
12225 270.                                             0 .
12230 271.                                            .0.
12235 272.                                             0 .
12240 273.                                             0 .
12245 274.                                             0 .
12250 275.                                             0 .
12255 276.                                            0 .
12300 277.                                            0 .
12305 278.                                            0 .
12310 279.                                            0 .
12315 280.                                            0 .
12320 281.                                           .0.
12325 282.                                           0 .
12330 283.                                           0 .
12335 284.                                           0 .
12340 285.                                           0 .
12345 286.                                           0 .
12350 287.                                          0 .
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12355 288.         .         .         .         .         .         .         . 0       .         .         .         .         .
20000 289.         .         .         .         .         .         .         . 0       .         .         .         .         .
20005 290.         .         .         .         .         .         .         . 0       .         .         .         .         .
20010 291. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 0 . . . . . . . . . . . . . . . . . . . . . . . .
20015 292.         .         .         .         .         .         .         .0        .         .         .         .         .
20020 293.         .         .         .         .         .         .         .0        .         .         .         .         .
20025 294.         .         .         .         .         .         .         .0        .         .         .         .         .
20030 295.         .         .         .         .         .         .         .0        .         .         .         .         .
20035 296.         .         .         .         .         .         .         .0        .         .         .         .         .
20040 297.         .         .         .         .         .         .         .0        .         .         .         .         .
20045 298.         .         .         .         .         .         .         .0        .         .         .         .         .
20050 299.         .         .         .         .         .         .         .0        .         .         .         .         .
20055 300.---------.---------.---------.---------.---------.---------.---------.-0-------.---------.---------.---------.---------.
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RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS. AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT	SUBR1	1006.	12.67	287.	89.	85.	1.56		
+	ROUTED TO	RR2a	976.	12.75	287.	87.	84.	1.56		
+									1813.19	12.75
+	ROUTED TO	RR2-1	887.	13.83	286.	85.	82.	1.56		
+	ROUTED TO	RR2-2	822.	14.92	285.	83.	80.	1.56		
+	ROUTED TO	RR2-3	771.	16.00	284.	82.	79.	1.56		
+	HYDROGRAPH AT	SUBR2	2325.	14.00	1290.	408.	393.	8.43		
+	2 COMBINED AT	HCR2	2292.	14.00	1506.	479.	461.	9.99		
+	HYDROGRAPH AT	SUBR3	766.	12.58	211.	65.	63.	1.10		
+	ROUTED TO	RR4a	728.	12.75	211.	64.	62.	1.10		
+									1830.49	12.75
+	ROUTED TO	RR4-1	669.	13.58	210.	64.	61.	1.10		
+	ROUTED TO	RR4-2	625.	14.50	210.	62.	60.	1.10		
+	HYDROGRAPH AT	SUBR4	1238.	12.92	450.	139.	134.	2.67		

	2 COMBINED AT								
+		HCR4	1267.	13.00	647.	200.	193.	3.77	
	HYDROGRAPH AT								
+		SUBR5	3436.	12.25	651.	204.	196.	2.71	
	ROUTED TO								
+		RR6	3037.	12.75	651.	204.	196.	2.71	
	HYDROGRAPH AT								
+		SUBR6	3551.	12.58	970.	303.	292.	4.19	
	2 COMBINED AT								
+		HCR6	6225.	12.75	1583.	495.	477.	6.90	
	ROUTED TO								
+		RR7	5720.	13.42	1582.	492.	474.	6.90	
	HYDROGRAPH AT								
+		SUBR7	3064.	12.25	603.	188.	181.	2.67	
	2 COMBINED AT								
+		HCR7	6094.	13.42	2114.	660.	636.	9.57	
	ROUTED TO								
+		RR8-1	5745.	14.08	2113.	653.	629.	9.57	
	ROUTED TO								
+		RR8-2	5476.	14.75	2111.	645.	621.	9.57	
	HYDROGRAPH AT								
+		SUBR8	1120.	12.75	353.	109.	105.	2.00	
	2 COMBINED AT								
+		HCR8	5612.	14.75	2387.	737.	710.	11.57	
	ROUTED TO								
+		RR9a	5548.	14.83	2386.	734.	707.	11.57	
+									1835.26 14.83
	ROUTED TO								
+		RR9	5428.	15.25	2384.	728.	702.	11.57	
	HYDROGRAPH AT								
+		SUBR9	243.	12.17	39.	12.	11.	.26	
	2 COMBINED AT								
+		HCR9	5432.	15.25	2397.	738.	711.	11.83	
	HYDROGRAPH AT								
+		SUBR10	2115.	12.83	703.	218.	210.	3.35	
	HYDROGRAPH AT								
+		SUBR11	2764.	12.67	819.	254.	245.	3.90	
	2 COMBINED AT								
+		HCR11	4691.	12.75	1478.	459.	442.	7.25	
	ROUTED TO								

+		RR12	4493.	13.33	1477.	456.	439.	7.25	
	HYDROGRAPH AT								
+		SUBR12	2862.	12.67	842.	260.	251.	4.46	
	2 COMBINED AT								
+		HCR12	6007.	13.17	2213.	684.	659.	11.71	
	ROUTED TO								
+		RR13a	5979.	13.17	2213.	679.	654.	11.71	
+									1824.02 13.17
	ROUTED TO								
+		RR13	5872.	13.58	2211.	675.	650.	11.71	
	HYDROGRAPH AT								
+		SUBR13	763.	12.75	242.	75.	72.	1.27	
	2 COMBINED AT								
+		HCR13a	6179.	13.58	2412.	738.	711.	12.98	
	2 COMBINED AT								
+		HCR13b	7965.	13.83	4573.	1406.	1354.	24.81	
	ROUTED TO								
+		RR14	7766.	14.92	4562.	1376.	1326.	24.81	
	HYDROGRAPH AT								
+		SUBR14	1532.	12.67	459.	141.	136.	2.82	
	2 COMBINED AT								
+		HCR14a	7919.	14.92	4774.	1488.	1433.	27.63	
	2 COMBINED AT								
+		HCR14b	8550.	14.83	5261.	1645.	1584.	31.40	
	ROUTED TO								
+		RR15-1	8438.	15.50	5249.	1625.	1565.	31.40	
	ROUTED TO								
+		RR15-2	8330.	16.17	5240.	1603.	1544.	31.40	
	HYDROGRAPH AT								
+		SUBR15	2256.	13.50	1057.	329.	317.	6.30	
	2 COMBINED AT								
+		HCR15a	8706.	16.08	5834.	1859.	1790.	37.70	
	2 COMBINED AT								
+		HCR15b	10030.	16.00	6948.	2232.	2149.	47.69	
	DIVERSION TO								
+		DVR16	105.	12.17	105.	59.	56.	47.69	
	HYDROGRAPH AT								
+		HDR16	9925.	16.00	6843.	2173.	2093.	47.69	
	ROUTED TO								
+		RESR	2210.	19.83	2182.	1021.	985.	47.69	
+									1595.39 19.83

	HYDROGRAPH AT								
+		SUBV1	2886.	12.42	661.	205.	198.	3.03	
	HYDROGRAPH AT								
+		SUBV2	3306.	12.33	705.	218.	210.	3.34	
	ROUTED TO								
+		RV3	3094.	12.75	704.	218.	210.	3.34	
	HYDROGRAPH AT								
+		SUBV3	469.	12.17	78.	24.	23.	.40	
	3 COMBINED AT								
+		HCV3	5405.	12.58	1405.	436.	420.	6.77	
	ROUTED TO								
+		RV4	5148.	13.00	1404.	435.	419.	6.77	
	HYDROGRAPH AT								
+		SUBV4	1687.	12.42	384.	123.	119.	1.85	
	2 COMBINED AT								
+		HCV4	5775.	13.00	1745.	545.	525.	8.62	
	ROUTED TO								
+		RV5	5552.	13.67	1744.	540.	520.	8.62	
	HYDROGRAPH AT								
+		SUBV5	1580.	12.33	329.	102.	98.	1.66	
	2 COMBINED AT								
+		HCV5	5743.	13.67	2020.	629.	606.	10.28	
	ROUTED TO								
+		RV6a	5672.	13.75	2020.	625.	602.	10.28	
+									1744.38 13.75
	ROUTED TO								
+		RV6-1	5433.	14.58	2017.	616.	593.	10.28	
	ROUTED TO								
+		RV6-2	5239.	15.33	2014.	606.	583.	10.28	
	HYDROGRAPH AT								
+		SUBV6	1122.	13.00	421.	132.	127.	3.59	
	2 COMBINED AT								
+		HCV6	5354.	15.33	2291.	711.	685.	13.87	
	HYDROGRAPH AT								
+		SUBV7	1339.	12.67	382.	119.	115.	1.69	
	HYDROGRAPH AT								
+		SUBV8	1038.	12.17	183.	62.	60.	.73	
	2 COMBINED AT								
+		HCV8	1960.	12.33	560.	180.	174.	2.42	
	ROUTED TO								

+		RV9	1926.	12.58	560.	180.	173.	2.42	
	HYDROGRAPH AT								
+		SUBV9	991.	12.33	196.	61.	58.	.95	
	2 COMBINED AT								
+		HCV9	2659.	12.50	752.	239.	231.	3.37	
	ROUTED TO								
+		RV10a	732.	13.83	367.	119.	115.	3.37	
+									1773.69 14.33
	ROUTED TO								
+		RV10-1	716.	14.75	364.	116.	112.	3.37	
	ROUTED TO								
+		RV10-2	701.	15.67	362.	112.	108.	3.37	
	ROUTED TO								
+		RV10-3	686.	16.58	360.	109.	105.	3.37	
	HYDROGRAPH AT								
+		SUBV10	2174.	13.50	1040.	324.	312.	5.48	
	2 COMBINED AT								
+		HCV10	2096.	13.50	1213.	412.	397.	8.85	
	HYDROGRAPH AT								
+		SUBV11	292.	12.83	97.	30.	29.	.44	
	ROUTED TO								
+		RV12a	251.	13.17	97.	30.	29.	.44	
+									1778.30 13.08
	ROUTED TO								
+		RV12-1	242.	14.33	97.	30.	29.	.44	
	ROUTED TO								
+		RV12-2	231.	15.50	97.	29.	28.	.44	
	HYDROGRAPH AT								
+		SUBV12	1444.	13.33	642.	199.	192.	3.32	
	2 COMBINED AT								
+		HCV12	1458.	13.33	730.	228.	219.	3.76	
	HYDROGRAPH AT								
+		SUBV13	1464.	12.92	511.	159.	153.	2.35	
	ROUTED TO								
+		RV14a	1330.	13.17	511.	158.	152.	2.35	
+									1791.39 13.08
	ROUTED TO								
+		RV14-1	1294.	14.17	510.	155.	149.	2.35	
	ROUTED TO								
+		RV14-2	1254.	15.08	509.	152.	147.	2.35	
	ROUTED TO								

+		RV14-3	1216.	16.08	509.	149.	144.	2.35	
	HYDROGRAPH AT								
+		SUBV14	1500.	13.75	775.	243.	234.	4.09	
	2 COMBINED AT								
+		HCV14	1730.	15.92	1212.	384.	370.	6.44	
	HYDROGRAPH AT								
+		SUBV15	1420.	12.50	360.	112.	108.	1.64	
	ROUTED TO								
+		RV16a	1180.	12.75	359.	111.	107.	1.64	
+									1790.34 12.75
	ROUTED TO								
+		RV16	1141.	13.25	359.	110.	106.	1.64	
	HYDROGRAPH AT								
+		SUBV16	1046.	12.17	168.	52.	50.	.76	
	2 COMBINED AT								
+		HCV16	1260.	13.33	521.	161.	155.	2.40	
	HYDROGRAPH AT								
+		SUBV17	3472.	12.58	940.	294.	283.	4.06	
	ROUTED TO								
+		RV18	3051.	13.75	939.	290.	279.	4.06	
	HYDROGRAPH AT								
+		SUBV18	3273.	12.83	1093.	340.	327.	5.06	
	2 COMBINED AT								
+		HCV18	4589.	13.58	1945.	604.	582.	9.12	
	ROUTED TO								
+		RV19	4551.	13.92	1945.	601.	579.	9.12	
	HYDROGRAPH AT								
+		SUBV19	2374.	12.50	585.	181.	175.	2.77	
	2 COMBINED AT								
+		HCV19	4915.	13.92	2446.	759.	731.	11.89	
	ROUTED TO								
+		RV20a	4898.	13.92	2446.	754.	726.	11.89	
+									1799.84 13.92
	ROUTED TO								
+		RV20	4827.	14.58	2443.	745.	718.	11.89	
	HYDROGRAPH AT								
+		SUBV20	457.	12.33	93.	29.	28.	.48	
	2 COMBINED AT								
+		HCV20a	4850.	14.58	2503.	769.	741.	12.37	
	2 COMBINED AT								
+		HCV20b	5148.	14.50	2937.	908.	875.	14.77	

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      ROUTED TO
+                    RV21      5114.   15.50      2926.      888.      855.     14.77

      HYDROGRAPH AT
+                   SUBV21     1435.   13.83       772.      243.      234.      4.43

      2 COMBINED AT
+                   HCV21a     5831.   14.92      3544.     1091.     1051.     19.20

      5 COMBINED AT
+                   HCV21b    12738.   15.33      7894.     2494.     2402.     52.12

      HYDROGRAPH AT
+                   HCV22a      105.   12.17       105.       59.       56.     47.69

      2 COMBINED AT
+                   HCV22b    12843.   15.33      7999.     2552.     2458.     52.12

      ROUTED TO
+                     RESV     3359.   18.08      3271.     1520.     1465.     52.12
+                                                                                        1572.72      18.08
1                          SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION     RESR


PLAN  1 ...............                  INITIAL VALUE     SPILLWAY CREST     TOP OF DAM
                          ELEVATION        1585.00           1597.60          1602.30
                          STORAGE              0.              3944.            7575.
                          OUTFLOW            583.              2622.           21945.

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

              1.00     1596.85       .00       3469.      2475.       .00        20.08        .00


PLAN  2 ...............                  INITIAL VALUE     SPILLWAY CREST     TOP OF DAM
                          ELEVATION        1585.00           1597.60          1602.30
                          STORAGE              0.              3944.            7575.
                          OUTFLOW            583.              2622.           21945.

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

              1.00     1596.64       .00       3341.      2435.       .00        20.08        .00


PLAN  3 ...............                  INITIAL VALUE     SPILLWAY CREST     TOP OF DAM
                          ELEVATION        1585.00           1597.60          1602.30
                          STORAGE              0.              3944.            7575.
                          OUTFLOW            583.              2622.           21945.

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

1.0	1596.08	.00	3011.	2328.	.00	20.00	.00

PLAN 4 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1585.00	1597.60	1602.30
STORAGE	0.	3944.	7575.
OUTFLOW	583.	2622.	21945.

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	1595.75	.00	2825.	2266.	.00	19.92	.00

PLAN 5 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1585.00	1597.60	1602.30
STORAGE	0.	3944.	7575.
OUTFLOW	583.	2622.	21945.

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	1595.39	.00	2627.	2198.	.00	19.83	.00

1 SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION RESV

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1564.20	1574.80	1579.50
STORAGE	0.	4388.	9364.
OUTFLOW	396.	4330.	25157.

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	1573.90	.00	3650.	3895.	.00	18.17	.00

PLAN 2 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1564.20	1574.80	1579.50
STORAGE	0.	4388.	9364.
OUTFLOW	396.	4330.	25157.

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	1573.73	.00	3522.	3817.	.00	18.17	.00

PLAN 3 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1564.20	1574.80	1579.50
STORAGE	0.	4388.	9364.

OUTFLOW	396.	4330.	25157.

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	1573.28	.00	3189.	3608.	.00	18.17	.00

PLAN 4 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1564.20	1574.80	1579.50
STORAGE	0.	4388.	9364.
OUTFLOW	396.	4330.	25157.

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	1573.01	.00	3001.	3487.	.00	18.17	.00

PLAN 5 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1564.20	1574.80	1579.50
STORAGE	0.	4388.	9364.
OUTFLOW	396.	4330.	25157.

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	1572.72	.00	2801.	3355.	.00	18.08	.00

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

DM2 - Vineyard & Rittenhouse
50-year

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

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THIS HEC-1 VERSION CONTAINS ALL OPTIONS EXCEPT ECONOMICS, AND THE NUMBER OF PLANS ARE REDUCED TO 3

1 HEC-1 INPUT PAGE 1

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

              *DIAGRAM
   1          ID     VINEYARD AND RITTENHOUSE F.R.S. ANALYSIS
   2          ID     50-YEAR, 24-HOUR STORM: SCS EXCESS & HYDROGRAPH DEVELOPMENT.
   3          ID     MUSKINGUM ROUTING
   4          ID     TIME INCREMENT = 5 MINUTES
   5          ID     FILENAME = DM2IN, DM2OUT
   6          IT       5       0       0     300
   7          IO       5
   8          IN      15
   9          JD    3.76    0.25
  10          PC       0    .002    .005    .008    .011    .014    .017    .020    .023    .026
  11          PC    .029    .032    .035    .038    .041    .044    .048    .052    .056    .060
  12          PC    .064    .068    .072    .076    .080    .085    .090    .095    .100    .105
  13          PC    .110    .115    .120    .126    .133    .140    .147    .155    .163    .172
  14          PC    .181    .191    .203    .218    .236    .257    .283    .387    .663    .707
  15          PC    .735    .758    .766    .791    .804    .815    .825    .834    .842    .849
  16          PC    .856    .863    .869    .875    .881    .887    .893    .898    .903    .908
  17          PC    .913    .918    .922    .926    .930    .934    .938    .942    .946    .950
  18          PC    .953    .956    .959    .962    .965    .968    .971    .974    .977    .980
  19          PC    .983    .986    .992    .995    .998   1.000
  20          JD    3.68     5.0
  21          JD    3.49    15.0
  22          JD    3.38    30.0
  23          JD    3.27    53.0

  24          KK   SUBR1
  25          KM     HYDROGRAPH FOR SUBBASIN R1
  26          BA    1.56
  27          LS       0     80.
  28          UD     .72

  29          KK    RR2a
  30          KM    ROUTE HYDROGRAPH FROM SUBBASIN R1 TO R2 ACROSS HWY 60
  31          RS       1    STOR       0
  32          SA       0       1      26     115     224     326
  33          SE    1800  1810.6    1820    1830    1840    1850
  34          SQ       0     290     692    1204    2198    6601   17223   34714
  35          SE  1810.6    1812    1813    1814  1815.9  1818.5  1819.5  1820.5

  36          KK   RR2-1
  37          KM     ROUTE HYDROGRAPH FROM SUBBASIN R1 THRU REACH R2-1
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 38          RM       9    1.06      .3

 39          KK   RR2-2
 40          KM     ROUTE HYDROGRAPH FROM SUBBASIN R1 THRU REACH R2-2
 41          RM       9    1.06      .3

 42          KK   RR2-3
 43          KM     ROUTE HYDROGRAPH FROM SUBBASIN R1 THRU REACH R2-3
 44          RM       9    1.06      .3
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 45          KK   SUBR2
 46          KM     HYDROGRAPH FOR SUBBASIN R2
 47          BA    8.43
 48          LS       0     78.
 49          UD    1.90

 50          KK   HCR2
 51          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R1 & R2
 52          HC       2

 53          KK   SUBR3
 54          KM     HYDROGRAPH FOR SUBBASIN R3
 55          BA    1.10
 56          LS       0     81.
 57          UD     .69

 58          KK    RR4a
 59          KM    ROUTE HYDROGRAPH FROM SUBBASIN R3 TO R4 ACROSS HWY 60
 60          RS       1    STOR       0
 61          SA       0       1      26     115     205
 62          SE  1823.4  1827.8    1840    1850    1860
 63          SQ       0     412    1127    1832    9597   23670   46850
 64          SE  1827.8    1830    1832  1833.6    1837    1838    1839

 65          KK   RR4-1
 66          KM     ROUTE HYDROGRAPH FROM SUBBASIN R3 THRU REACH R4-1
 67          RM       7     .85      .3

 68          KK   RR4-2
 69          KM     ROUTE HYDROGRAPH FROM SUBBASIN R3 THRU REACH R4-2
 70          RM       7     .85      .3

 71          KK   SUBR4
 72          KM     HYDROGRAPH FOR SUBBASIN R4
 73          BA    2.67
 74          LS       0     78.
 75          UD    1.01

 76          KK    HCR4
 77          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R3 & R4
 78          HC       2

 79          KK   SUBR5
 80          KM     HYDROGRAPH FOR SUBBASIN R5
 81          BA    2.71
 82          LS       0     88.
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 83          UD     .39

 84          KK     RR6
 85          KM     ROUTE HYDROGRAPH FROM SUBBASIN R5
 86          RM       5     .51      .3
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 87          KK   SUBR6
 88          KM     HYDROGRAPH FOR SUBBASIN R6
 89          BA    4.19
 90          LS       0     87.
 91          UD     .70

 92          KK    HCR6
 93          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R5 & R6
 94          HC       2

 95          KK     RR7
 96          KM     ROUTE HYDROGRAPH FROM SUBBASINS R5 & R6
 97          RM       6     .68      .3

 98          KK   SUBR7
 99          KM     HYDROGRAPH FOR SUBBASIN R7
100          BA    2.67
101          LS       0     86.
102          UD     .41

103          KK    HCR7
104          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R5 THRU R7
105          HC       2

106          KK   RR8-1
107          KM     ROUTE HYDROGRAPH FROM SUBBASINS R5 THRU R7 THRU REACH R8-1
108          RM       6     .70      .3

109          KK   RR8-2
110          KM     ROUTE HYDROGRAPH FROM SUBBASINS R5 THRU R7 THRU REACH R8-2
111          RM       6     .70      .3

112          KK   SUBR8
113          KM     HYDROGRAPH FOR SUBBASIN R8
114          BA    2.00
115          LS       0     79.
116          UD     .83

117          KK    HCR8
118          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R5 THRU R8
119          HC       2

120          KK    RR9a
121          KM    ROUTE HYDROGRAPH FROM SUBBASINS R5 THRU R8 TO R9 ACROSS HWY 60
122          RS       1    STOR       0
123          SA       0       1      26      77     141
124          SE  1813.9  1829.5    1840    1850    1860
125          SQ       0     563    2236    4601    5986   27109
126          SE  1829.5    1831    1833    1835    1836    1840
```

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

 127          KK     RR9
 128          KM     ROUTE HYDROGRAPH FROM SUBBASINS R5 THRU R8
 129          RM       4     .44      .3

 130          KK   SUBR9
 131          KM     HYDROGRAPH FOR SUBBASIN R9
 132          BA    0.26
 133          LS       0     74.
 134          UD     .27

 135          KK    HCR9
 136          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R5 THRU R9
 137          HC       2

 138          KK  SUBR10
 139          KM     HYDROGRAPH FOR SUBBASIN R10
 140          BA    3.35
 141          LS       0     84.
 142          UD     .92

 143          KK  SUBR11
 144          KM     HYDROGRAPH FOR SUBBASIN R11
 145          BA    3.90
 146          LS       0     84.
 147          UD     .78

 148          KK   HCR11
 149          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R10 & R11
 150          HC       2

 151          KK    RR12
 152          KM     ROUTE HYDROGRAPH FROM SUBBASINS R10 & R11
 153          RM       5     .55      .3

 154          KK  SUBR12
 155          KM     HYDROGRAPH FOR SUBBASIN R12
 156          BA    4.46
 157          LS       0     81.
 158          UD     .76

 159          KK   HCR12
 160          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R10 THRU R12
 161          HC       2

 162          KK   RR13a
 163          KM    ROUTE HYDROGRAPH FROM SUBBASINS R10 THRU R12 TO R13 ACROSS HWY 60
 164          RS       1    STOR       0
 165          SA       0       1      83     186     358
 166          SE  1793.6  1819.4    1840    1850    1860
 167          SQ       0    2071    5240    9357   14240   18616   62142
 168          SE  1819.4    1822    1824    1826    1828  1829.6  1834.5
```


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

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169          KK    RR13
170          KM     ROUTE HYDROGRAPH FROM SUBBASINS R10 THRU R13
171          RM       4     .41      .3

172          KK  SUBR13
173          KM     HYDROGRAPH FOR SUBBASIN R13
174          BA    1.27
175          LS       0     81.
176          UD     .85

177          KK  HCR13a
178          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R10 THRU R13
179          HC       2

180          KK  HCR13b
181          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R5 THRU R13
182          HC       2

183          KK    RR14
184          KM     ROUTE HYDROGRAPH FROM SUBBASINS R5 THRU R13
185          RM       9    1.10      .3

186          KK  SUBR14
187          KM     HYDROGRAPH FOR SUBBASIN R14
188          BA    2.82
189          LS       0     77.
190          UD     .76

191          KK  HCR14a
192          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R5 THRU R14
193          HC       2

194          KK  HCR14b
195          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R3 THRU R14
196          HC       2

197          KK  RR15-1
198          KM     ROUTE HYDROGRAPH FROM SUBBASINS R3 THRU R14 THRU REACH R15-1
199          RM       5     .63      .3

200          KK  RR15-2
201          KM     ROUTE HYDROGRAPH FROM SUBBASINS R3 THRU R14 THRU REACH R15-2
202          RM       5     .63      .3

203          KK  SUBR15
204          KM     HYDROGRAPH FOR SUBBASIN R15
205          BA    6.30
206          LS       0     79.
207          UD    1.47
```



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

208          KK  HCR15a
209          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R3 THRU R15
210          HC       2

211          KK  HCR15b
212          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R1 THRU R15
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213          HC       2

214          KK   HDR16
215          KM     DIVERT FLOW FROM RITTENHOUSE (TO VINEYARD FRS)
216          DT   DVR16
217          DI       0     100     500    1000  100000
218          DQ       0      50      95      95      95

219          KK    RESR
220          KM     RESERVOIR ROUTING THRU RITTENHOUSE F.R.S.
221          KO       1       2
222          RS       1    STOR       0
223          SA       0     118     200     400     600     800
224          SE    1585  1587.5  1589.1  1592.9  1596.5  1600.5
225          SL  1577.7    5.94     .62     1.5
226          SS  1597.6     600       3     1.5
227          ST  1602.3   19000     3.3     1.5

228          KK   SUBV1
229          KM     HYDROGRAPH FOR SUBBASIN V1
230          BA    3.03
231          LS       0     85.
232          UD     .53

233          KK   SUBV2
234          KM     HYDROGRAPH FOR SUBBASIN V2
235          BA    3.34
236          LS       0     84.
237          UD     .47

238          KK     RV3
239          KM     ROUTE HYDROGRAPH FROM SUBBASIN V2
240          RM       4     .38      .3

241          KK   SUBV3
242          KM     HYDROGRAPH FOR SUBBASIN V3
243          BA    0.40
244          LS       0     81.
245          UD     .30

246          KK    HCV3
247          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V1 THRU V3
248          HC       3
```



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

249          KK     RV4
250          KM     ROUTE HYDROGRAPH FROM SUBBASINS V1 THRU V3
251          RM       4     .43      .3

252          KK   SUBV4
253          KM     HYDROGRAPH FOR SUBBASIN V4
254          BA    1.85
255          LS       0     81.      15
256          UD     .52

257          KK    HCV4
258          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V1 THRU V4
```

```
259          HC       2

260          KK     RV5
261          KM     ROUTE HYDROGRAPH FROM SUBBASINS V1 THRU V4
262          RM       8     .66      .3

263          KK   SUBV5
264          KM     HYDROGRAPH FOR SUBBASIN V5
265          BA    1.66
266          LS       0     82.
267          UD     .45

268          KK    HCV5
269          KM    COMBINE HYDROGRAPHS FOR SUBBASINS V1 THRU V5
270          HC       2

271          KK    RV6a
272          KM    ROUTE HYDROGRAPH FROM SUBBASINS V1 THRU V5 TO V6 ACROSS HWY 60
273          RS       1    STOR       0
274          SA       0       1      45     147     205
275          SE  1719.9  1739.7    1750    1760    1770
276          SQ       0     387    2348    6889   19775   36999
277          SE  1739.7  1740.7  1742.7  1745.6    1749    1750

278          KK   RV6-1
279          KM     ROUTE HYDROGRAPH FROM SUBBASINS V1 THRU V5 THRU REACH RV6-1
280          RM       9     .83      .3

281          KK   RV6-2
282          KM     ROUTE HYDROGRAPH FROM SUBBASINS V1 THRU V5 THRU REACH RV6-2
283          RM       9     .83      .3

284          KK   SUBV6
285          KM     HYDROGRAPH FOR SUBBASIN V6
286          BA    3.59
287          LS       0     70.
288          UD     .99
```



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


289          KK    HCV6
290          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V1 THRU V6
291          HC       2

292          KK   SUBV7
293          KM     HYDROGRAPH FOR SUBBASIN V7
294          BA    1.69
295          LS       0     86.
296          UD     .74

297          KK   SUBV8
298          KM     HYDROGRAPH FOR SUBBASIN V8
299          BA    0.73
300          LS       0     81.      50
301          UD     .33

302          KK    HCV8
303          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V7 & V8
```

```
304          HC       2

305          KK     RV9
306          KM     ROUTE HYDROGRAPH FROM SUBBASINS V7 & V8
307          RM       3     .23      .3

308          KK   SUBV9
309          KM     HYDROGRAPH FOR SUBBASIN V9
310          BA    0.95
311          LS       0     83.
312          UD     .41

313          KK    HCV9
314          KM    COMBINE HYDROGRAPHS FOR SUBBASINS V7 THRU V9
315          HC       2

316          KK   RV10a
317          KM    ROUTE HYDROGRAPH FROM SUBBASINS V7 THRU V9 TO V10 ACROSS HWY 60
318          RS       1    STOR       0
319          SA       0      19      77     179     294
320          SE    1745    1770    1780    1790    1800
321          SQ       0    1211    3230    6108    9716   14201   63126
322          SE    1773    1775    1777    1779    1781  1783.3  1788.5

323          KK  RV10-1
324          KM     ROUTE HYDROGRAPH FROM SUBBASINS V7 THRU V9 THRU REACH V10-1
325          RM       9     .86      .3

326          KK  RV10-2
327          KM     ROUTE HYDROGRAPH FROM SUBBASINS V7 THRU V9 THRU REACH V10-2
328          RM       9     .86      .3
```



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

329          KK  RV10-3
330          KM     ROUTE HYDROGRAPH FROM SUBBASINS V7 THRU V9 THRU REACH V10-3
331          RM       9     .86      .3

332          KK  SUBV10
333          KM     HYDROGRAPH FOR SUBBASIN V10
334          BA    5.48
335          LS       0     82.
336          UD    1.54

337          KK   HCV10
338          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V7 THRU V10
339          HC       2

340          KK  SUBV11
341          KM     HYDROGRAPH FOR SUBBASIN V11
342          BA    0.44
343          LS       0     85.
344          UD     .93

345          KK   RV12a
346          KM    ROUTE HYDROGRAPH FROM SUBBASIN V11 TO V12 ACROSS HWY 60
347          RS       1    STOR       0
348          SA       0      32      64      96
```

```
349          SE  1773.7    1790    1800    1810
350          SQ       0      24     237     363    5249   12106   38086
351          SE  1773.7  1774.7  1778.7  1780.7  1784.5  1785.5  1787.5

352          KK  RV12-1
353          KM     ROUTE HYDROGRAPH FROM SUBBASIN V11 THRU REACH V12-1
354          RM       9    1.15      .3

355          KK  RV12-2
356          KM     ROUTE HYDROGRAPH FROM SUBBASIN V11 THRU REACH V12-2
357          RM       9    1.15      .3

358          KK  SUBV12
359          KM     HYDROGRAPH FOR SUBBASIN V12
360          BA    3.32
361          LS       0     82.
362          UD    1.38

363          KK   HCV12
364          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V11 & V12
365          HC       2

366          KK  SUBV13
367          KM     HYDROGRAPH FOR SUBBASIN V13
368          BA    2.35
369          LS       0     85.
370          UD     .99
```



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

371          KK   RV14a
372          KM    ROUTE HYDROGRAPH FROM SUBBASIN V13 TO V14 ACROSS HWY 60
373          RS       1    STOR       0
374          SA       0       1      38      96     154
375          SE  1780.4  1786.9    1800    1810    1820
376          SQ       0     120     372    1191    1925   16426   62329
377          SE  1786.9    1788    1789  1791.5    1794    1796    1798

378          KK  RV14-1
379          KM     ROUTE HYDROGRAPH FROM SUBBASIN V13 THRU REACH V14-1
380          RM       9     .96      .3

381          KK  RV14-2
382          KM     ROUTE HYDROGRAPH FROM SUBBASIN V13 THRU REACH V14-2
383          RM       9     .96      .3

384          KK  RV14-3
385          KM     ROUTE HYDROGRAPH FROM SUBBASIN V13 THRU REACH V14-3
386          RM       9     .96      .3

387          KK  SUBV14
388          KM     HYDROGRAPH FOR SUBBASIN V14
389          BA    4.09
390          LS       0     82.
391          UD    1.73

392          KK   HCV14
393          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V13 & V14
```

```
394          HC       2

395          KK  SUBV15
396          KM     HYDROGRAPH FOR SUBBASIN V15
397          BA    1.64
398          LS       0     85.
399          UD     .62

400          KK   RV16a
401          KM    ROUTE HYDROGRAPH FROM SUBBASIN V15 TO V16 ACROSS HWY 60
402          RS       1    STOR       0
403          SA       0       1      58     141     160
404          SE  1779.4    1786    1800    1810    1820
405          SQ       0     192     572    1061    1866    9058   26139
406          SE    1786  1787.5    1789  1790.5  1792.6    1796    1797

407          KK    RV16
408          KM     ROUTE HYDROGRAPH FROM SUBBASIN V15
409          RM       4     .48      .3

410          KK  SUBV16
411          KM     HYDROGRAPH FOR SUBBASIN V16
412          BA    0.76
413          LS       0     85.
414          UD     .29
```



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


415          KK   HCV16
416          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V15 & V16
417          HC       2

418          KK  SUBV17
419          KM     HYDROGRAPH FOR SUBBASIN V17
420          BA    4.06
421          LS       0     87.
422          UD     .69

423          KK    RV18
424          KM     ROUTE HYDROGRAPH FROM SUBBASIN V17
425          RM       9    1.14      .3

426          KK  SUBV18
427          KM     HYDROGRAPH FOR SUBBASIN V18
428          BA    5.06
429          LS       0     85.
430          UD     .93

431          KK   HCV18
432          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V17 & V18
433          HC       2

434          KK    RV19
435          KM     ROUTE HYDROGRAPH FROM SUBBASINS V17 & V18
436          RM       6     .38      .3

437          KK  SUBV19
438          KM     HYDROGRAPH FOR SUBBASIN V19
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```
439          BA    2.77
440          LS       0     84.
441          UD     .59

442          KK   HCV19
443          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V17 THRU V19
444          HC       2

445          KK   RV20a
446          KM    ROUTE HYDROGRAPH FROM SUBBASINS V17 THRU V19 TO V20 ACROSS HWY 60
447          RS       1    STOR       0
448          SA       0       1      13      51     154     294
449          SE    1768  1796.4    1800    1810    1820    1830
450          SQ       0    1226    4652    9549   16620   41739
451          SE  1796.4    1798    1800    1802  1804.3  1808.5

452          KK    RV20
453          KM     ROUTE HYDROGRAPH FROM SUBBASINS V17 THRU V19
454          RM       6     .72      .3
```



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

455          KK  SUBV20
456          KM     HYDROGRAPH FOR SUBBASIN V20
457          BA    0.48
458          LS       0     81.
459          UD     .43

460          KK  HCV20a
461          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V17 THRU V20
462          HC       2

463          KK  HCV20b
464          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V15 THRU V20
465          HC       2

466          KK    RV21
467          KM     ROUTE HYDROGRAPH FROM SUBBASINS V15 THRU V20
468          RM       9    1.21      .3

469          KK  SUBV21
470          KM     HYDROGRAPH FOR SUBBASIN V21
471          BA    4.43
472          LS       0     80.
473          UD    1.83

474          KK  HCV21a
475          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V15 THRU V21
476          HC       2

477          KK  HCV21b
478          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V1 THRU V21
479          HC       5

480          KK  HCV22a
481          KM     DIVERSION FROM RITTENHOUSE FRS
482          DR   DVR16
```

```
483          KK  HCV22b
484          KM     COMBINING DIVERSION WITH UPSTREAM HYDROGRAPH
485          HC       2

486          KK    RESV
487          KM    RESERVOIR ROUTING THRU VINEYARD F.R.S.
488          KO       1       2
489          RS       1    STOR       0
490          SA       0      65     200     400     600     800    1000    1200
491          SE  1564.2    1565  1566.6  1569.5  1571.8  1574.2  1576.1  1579.2
492          SL  1561.5    15.9      .7     1.5
493          SS  1574.8     600       3     1.5
494          ST  1579.5   28829     3.3     1.5
495          ZZ
```

1

```
              SCHEMATIC DIAGRAM OF STREAM NETWORK
 INPUT
  LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

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

   24        SUBR1
                V
                V
   29         RR2a
                V
                V
   36        RR2-1
                V
                V
   39        RR2-2
                V
                V
   42        RR2-3
                .
                .
   45           .       SUBR2
                .          .
                .          .
   50         HCR2............
                .
                .
   53           .       SUBR3
                .          V
                .          V
   58           .        RR4a
                .          V
                .          V
   65           .       RR4-1
                .          V
                .          V
   68           .       RR4-2
                .          .
                .          .
   71           .          .       SUBR4
                .          .          .
                .          .          .
   76           .        HCR4............
                .          .
                .          .
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79          .           .       SUBR5
            .           .          V
            .           .          V
84          .           .        RR6
            .           .          .
            .           .          .
87          .           .          .       SUBR6
            .           .          .          .
            .           .          .          .
92          .           .       HCR6............
            .           .          V
            .           .          V
95          .           .        RR7
            .           .          .
            .           .          .
98          .           .          .       SUBR7
            .           .          .          .
            .           .          .          .
103         .           .       HCR7............
            .           .          V
            .           .          V
106         .           .      RR8-1
            .           .          V
            .           .          V
109         .           .      RR8-2
            .           .          .
            .           .          .
112         .           .          .       SUBR8
            .           .          .          .
            .           .          .          .
117         .           .       HCR8............
            .           .          V
            .           .          V
120         .           .       RR9a
            .           .          V
            .           .          V
127         .           .        RR9
            .           .          .
            .           .          .
130         .           .          .       SUBR9
            .           .          .          .
            .           .          .          .
135         .           .       HCR9............
            .           .          .
            .           .          .
138         .           .          .      SUBR10
            .           .          .          .
            .           .          .          .
143         .           .          .          .     SUBR11
            .           .          .          .          .
            .           .          .          .          .
148         .           .          .       HCR11............
            .           .          .          V
            .           .          .          V
151         .           .          .       RR12
            .           .          .          .
            .           .          .          .
154         .           .          .          .     SUBR12
            .           .          .          .          .
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159          .          .          .      HCR12............
             .          .          .          V
             .          .          .          V
162          .          .          .      RR13a
             .          .          .          V
             .          .          .          V
169          .          .          .       RR13
             .          .          .          .
             .          .          .          .
172          .          .          .          .      SUBR13
             .          .          .          .          .
             .          .          .          .          .
177          .          .          .     HCR13a............
             .          .          .          .
             .          .          .          .
180          .          .     HCR13b............
             .          .          V
             .          .          V
183          .          .       RR14
             .          .          .
             .          .          .
186          .          .          .     SUBR14
             .          .          .          .
             .          .          .          .
191          .          .     HCR14a............
             .          .          .
             .          .          .
194          .     HCR14b............
             .          V
             .          V
197          .     RR15-1
             .          V
             .          V
200          .     RR15-2
             .          .
             .          .
203          .          .     SUBR15
             .          .          .
             .          .          .
208          .     HCR15a............
             .          .
             .          .
211     HCR15b............
             .
             .
216          .-------> DVR16
214      HDR16
             V
             V
219      RESR
             .
             .
228          .      SUBV1
             .          .
             .          .
233          .          .      SUBV2
             .          .          V
             .          .          V
238          .          .       RV3
             .          .          .
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241          .          .          .
             .          .          .       SUBV3
             .          .          .          .
             .          .          .          .
246          .       HCV3.......................
             .          V
             .          V
249          .        RV4
             .          .
             .          .
252          .          .       SUBV4
             .          .          .
             .          .          .
257          .       HCV4............
             .          V
             .          V
260          .        RV5
             .          .
             .          .
263          .          .       SUBV5
             .          .          .
             .          .          .
268          .       HCV5............
             .          V
             .          V
271          .       RV6a
             .          V
             .          V
278          .      RV6-1
             .          V
             .          V
281          .      RV6-2
             .          .
             .          .
284          .          .       SUBV6
             .          .          .
             .          .          .
289          .       HCV6............
             .          .
             .          .
292          .          .       SUBV7
             .          .          .
             .          .          .
297          .          .          .       SUBV8
             .          .          .          .
             .          .          .          .
302          .          .        HCV8............
             .          .          V
             .          .          V
305          .          .         RV9
             .          .          .
             .          .          .
308          .          .          .       SUBV9
             .          .          .          .
             .          .          .          .
313          .          .        HCV9............
             .          .          V
             .          .          V
316          .          .       RV10a
             .          .          V
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                 .          .          V
323              .          .     RV10-1
                 .          .          V
                 .          .          V
326              .          .     RV10-2
                 .          .          V
                 .          .          V
329              .          .     RV10-3
                 .          .          .
                 .          .          .
332              .          .          .     SUBV10
                 .          .          .          .
                 .          .          .          .
337              .          .      HCV10............
                 .          .          .
                 .          .          .
340              .          .          .     SUBV11
                 .          .          .          V
                 .          .          .          V
345              .          .          .      RV12a
                 .          .          .          V
                 .          .          .          V
352              .          .          .     RV12-1
                 .          .          .          V
                 .          .          .          V
355              .          .          .     RV12-2
                 .          .          .          .
                 .          .          .          .
358              .          .          .          .     SUBV12
                 .          .          .          .          .
                 .          .          .          .          .
363              .          .          .      HCV12............
                 .          .          .          .
                 .          .          .          .
366              .          .          .          .     SUBV13
                 .          .          .          .          V
                 .          .          .          .          V
371              .          .          .          .      RV14a
                 .          .          .          .          V
                 .          .          .          .          V
378              .          .          .          .     RV14-1
                 .          .          .          .          V
                 .          .          .          .          V
381              .          .          .          .     RV14-2
                 .          .          .          .          V
                 .          .          .          .          V
384              .          .          .          .     RV14-3
                 .          .          .          .          .
                 .          .          .          .          .
387              .          .          .          .          .     SUBV14
                 .          .          .          .          .          .
                 .          .          .          .          .          .
392              .          .          .          .      HCV14............
                 .          .          .          .          .
                 .          .          .          .          .
395              .          .          .          .          .     SUBV15
                 .          .          .          .          .          V
                 .          .          .          .          .          V
400              .          .          .          .          .      RV16a
                 .          .          .          .          .          V
```

```
                                                  V
407                                             RV16
                                                   .
                                                   .
410                                                .      SUBV16
                                                   .          .
                                                   .          .
415                                             HCV16............
                                                   .
                                                   .
418                                                .      SUBV17
                                                   .          V
                                                   .          V
423                                                .        RV18
                                                   .          .
                                                   .          .
426                                                .          .      SUBV18
                                                   .          .          .
                                                   .          .          .
431                                                .      HCV18............
                                                   .          V
                                                   .          V
434                                                .        RV19
                                                   .          .
                                                   .          .
437                                                .          .      SUBV19
                                                   .          .          .
                                                   .          .          .
442                                                .      HCV19............
                                                   .          V
                                                   .          V
445                                                .      RV20a
                                                   .          V
                                                   .          V
452                                                .        RV20
                                                   .          .
                                                   .          .
455                                                .          .      SUBV20
                                                   .          .          .
                                                   .          .          .
460                                                .      HCV20a...........
                                                   .          .
                                                   .          .
463                                             HCV20b...........
                                                   V
                                                   V
466                                             RV21
                                                   .
                                                   .
469                                                .      SUBV21
                                                   .          .
                                                   .          .
474                                             HCV21a...........
                                                   .
                                                   .
477                 HCV21b.............................................
                       .
                       .
482                    .          .<-------   DVR16
480                    .      HCV22a
```

```
                .          .          .
                .          .          .
  483           .      HCV22b............
                .          V
                .          V
  486           .        RESV

(***) 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
                                                           ****

                        VINEYARD AND RITTENHOUSE F.R.S. ANALYSIS
                        50-YEAR. 24-HOUR STORM; SCS EXCESS & HYDROGRAPH DEVELOPMENT,
                        MUSKINGUM ROUTING
                        TIME INCREMENT = 5 MINUTES
                        FILENAME = DM2IN, DM2OUT

  7 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      1    0  STARTING DATE
                      ITIME       0000  STARTING TIME
                         NQ        300  NUMBER OF HYDROGRAPH ORDINATES
                     NDDATE      2    0  ENDING DATE
                     NDTIME       0055  ENDING TIME

                 COMPUTATION INTERVAL     .08 HOURS
                      TOTAL TIME BASE   24.92 HOURS

        ENGLISH UNITS

  9 JD          INDEX STORM NO. 1
                       STRM       3.76  PRECIPITATION DEPTH
                       TRDA        .25  TRANSPOSITION DRAINAGE AREA

 10 PI            PRECIPITATION PATTERN
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
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                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .01       .00       .01
                     .01       .01       .01       .01       .01       .01       .01       .01       .03       .03
                     .03       .09       .09       .09       .01       .01       .01       .01       .01       .01
```

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

```
20 JD        INDEX STORM NO. 2
                 STRM        3.68  PRECIPITATION DEPTH
                 TRDA        5.00  TRANSPOSITION DRAINAGE AREA

 0 PI          PRECIPITATION PATTERN
```

```
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .01     .00     .01
.01     .01     .01     .01     .01     .01     .01     .01     .03     .03
.03     .09     .09     .09     .01     .01     .01     .01     .01     .01
.01     .01     .01     .00     .00     .00     .01     .01     .01     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
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.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00
```

```
21 JD        INDEX STORM NO. 3
                 STRM        3.49  PRECIPITATION DEPTH
                 TRDA       15.00  TRANSPOSITION DRAINAGE AREA

 0 PI          PRECIPITATION PATTERN
```

```
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
.00     .00     .00     .00     .00     .00     .00     .00     .00     .00
```

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.01	.00	.01
.01	.01	.01	.01	.01	.01	.01	.01	.03	.03
.03	.09	.09	.09	.01	.01	.01	.01	.01	.01
.01	.01	.01	.00	.00	.00	.01	.01	.01	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00					

22 JD INDEX STORM NO. 4

STRM 3.38 PRECIPITATION DEPTH

TRDA 30.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.01	.00	.01
.01	.01	.01	.01	.01	.01	.01	.01	.03	.03
.03	.09	.09	.09	.01	.01	.01	.01	.01	.01
.01	.01	.01	.00	.00	.00	.01	.01	.01	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00					

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 23 JD          INDEX STORM NO. 5
                      STRM        3.27  PRECIPITATION DEPTH
                      TRDA       53.00  TRANSPOSITION DRAINAGE AREA

  0 PI            PRECIPITATION PATTERN
                      .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                      .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                      .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                      .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                      .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                      .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                      .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                      .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                      .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                      .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                      .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                      .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                      .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                      .00       .00       .00       .00       .00       .00       .00       .01       .00       .01
                      .01       .01       .01       .01       .01       .01       .01       .01       .03       .03
                      .03       .09       .09       .09       .01       .01       .01       .01       .01       .01
                      .01       .01       .01       .00       .00       .00       .01       .01       .01       .00
                      .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                      .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                      .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                      .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                      .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                      .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                      .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                      .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                      .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                      .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                      .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                      .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                      .00       .00       .00       .00       .00

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN     6601. TO    34714.
               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     9597. TO   301830.
               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 *** TIME INTERVAL IS GREATER THAN .29*LAG

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN        0. TO     2071.
               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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          *            *
 219 KK   *      RESR  *
          *            *
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221 KO        OUTPUT CONTROL VARIABLES
                    IPRNT          1  PRINT CONTROL
                    IPLOT          2  PLOT CONTROL
                    QSCAL         0.  HYDROGRAPH PLOT SCALE

            HYDROGRAPH ROUTING DATA

222 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

223 SA            AREA          .0     118.0     200.0     400.0     600.0     800.0

224 SE        ELEVATION     1585.00   1587.50   1589.10   1592.90   1596.50   1600.50

225 SL        LOW-LEVEL OUTLET
                    ELEVL     1577.70  ELEVATION AT CENTER OF OUTLET
                    CAREA        5.94  CROSS-SECTIONAL AREA
                     COQL         .62  COEFFICIENT
                     EXPL        1.50  EXPONENT OF HEAD

226 SS        SPILLWAY
                     CREL     1597.60  SPILLWAY CREST ELEVATION
                    SPWID      600.00  SPILLWAY WIDTH
                     COQW        3.00  WEIR COEFFICIENT
                     EXPW        1.50  EXPONENT OF HEAD

227 ST        TOP OF DAM
                    TOPEL     1602.30  ELEVATION AT TOP OF DAM
                   DAMWID    19000.00  DAM WIDTH
                     COQD        3.30  WEIR COEFFICIENT
                     EXPD        1.50  EXPONENT OF HEAD
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COMPUTED STORAGE-ELEVATION DATA

STORAGE	.00	98.33	349.86	1468.14	3256.01	6046.44
ELEVATION	1585.00	1587.50	1589.10	1592.90	1596.50	1600.50

COMPUTED OUTFLOW-ELEVATION DATA

(EXCLUDING FLOW OVER DAM)

OUTFLOW	.00	718.35	873.76	1050.11	1248.72	1470.92	1718.01	1991.35	2292.22	2622.00
ELEVATION	1585.00	1586.09	1587.27	1588.51	1589.84	1591.24	1592.71	1594.27	1595.89	1597.60
OUTFLOW	2656.75	2768.00	3004.52	3412.79	4040.19	4933.41	6139.43	7705.24	9677.88	12105.01
ELEVATION	1597.66	1597.76	1597.92	1598.13	1598.39	1598.70	1599.07	1599.50	1599.97	1600.50

COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

(INCLUDING FLOW OVER DAM)

STORAGE	.00	8.25	73.14	98.33	242.06	349.86	509.18	884.24	1394.13	1468.14
OUTFLOW	582.56	718.35	873.76	906.14	1050.11	1136.87	1248.72	1470.92	1718.01	1750.33
ELEVATION	1585.00	1586.09	1587.27	1587.50	1588.51	1589.10	1589.84	1591.24	1592.71	1592.90

STORAGE	2062.05	2903.69	3256.01	3944.47	3980.93	4048.97	4153.00	4294.06	4474.00	4694.84
OUTFLOW	1991.35	2292.22	2407.64	2622.00	2656.75	2768.00	3004.52	3412.79	4040.19	4933.41
ELEVATION	1594.27	1595.89	1596.50	1597.60	1597.66	1597.76	1597.92	1598.13	1598.39	1598.70

STORAGE	4959.15	5270.01	5631.03	6046.44
OUTFLOW	6139.43	7705.24	9677.88	12105.01
ELEVATION	1599.07	1599.50	1599.97	1600.50

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HYDROGRAPH AT RESR
TRANSPOSITION AREA .3 SQ MI

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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
1		0000	1	583.	.0	1585.0	*	1		0820	101	0.	.0	1585.0	*	1		1640	201	1943.	1938.1	1594.0
1		0005	2	0.	.0	1585.0	*	1		0825	102	583.	.0	1585.0	*	1		1645	202	1963.	1988.9	1594.1
1		0010	3	0.	.0	1585.0	*	1		0830	103	0.	.0	1585.0	*	1		1650	203	1982.	2038.2	1594.2
1		0015	4	0.	.0	1585.0	*	1		0835	104	583.	.0	1585.0	*	1		1655	204	2001.	2086.3	1594.3
1		0020	5	0.	.0	1585.0	*	1		0840	105	0.	.0	1585.0	*	1		1700	205	2018.	2133.2	1594.4
1		0025	6	0.	.0	1585.0	*	1		0845	106	583.	.0	1585.0	*	1		1705	206	2036.	2179.2	1594.5
1		0030	7	0.	.0	1585.0	*	1		0850	107	0.	.0	1585.0	*	1		1710	207	2053.	2224.3	1594.6
1		0035	8	0.	.0	1585.0	*	1		0855	108	583.	.0	1585.0	*	1		1715	208	2069.	2268.6	1594.7
1		0040	9	0.	.0	1585.0	*	1		0900	109	0.	.0	1585.0	*	1		1720	209	2085.	2312.1	1594.8
1		0045	10	0.	.0	1585.0	*	1		0905	110	583.	.0	1585.0	*	1		1725	210	2101.	2354.7	1594.9
1		0050	11	0.	.0	1585.0	*	1		0910	111	0.	.0	1585.0	*	1		1730	211	2116.	2396.4	1594.9
1		0055	12	0.	.0	1585.0	*	1		0915	112	583.	.0	1585.0	*	1		1735	212	2130.	2437.0	1595.0
1		0100	13	0.	.0	1585.0	*	1		0920	113	0.	.0	1585.0	*	1		1740	213	2144.	2476.2	1595.1
1		0105	14	0.	.0	1585.0	*	1		0925	114	583.	.0	1585.0	*	1		1745	214	2158.	2514.0	1595.2
1		0110	15	0.	.0	1585.0	*	1		0930	115	0.	.0	1585.0	*	1		1750	215	2171.	2550.1	1595.2
1		0115	16	0.	.0	1585.0	*	1		0935	116	583.	.0	1585.0	*	1		1755	216	2183.	2584.3	1595.3
1		0120	17	0.	.0	1585.0	*	1		0940	117	0.	.0	1585.0	*	1		1800	217	2194.	2616.4	1595.4
1		0125	18	0.	.0	1585.0	*	1		0945	118	583.	.0	1585.0	*	1		1805	218	2204.	2646.4	1595.4
1		0130	19	0.	.0	1585.0	*	1		0950	119	0.	.0	1585.0	*	1		1810	219	2214.	2674.1	1595.5
1		0135	20	0.	.0	1585.0	*	1		0955	120	583.	.0	1585.0	*	1		1815	220	2223.	2699.5	1595.5
1		0140	21	0.	.0	1585.0	*	1		1000	121	0.	.0	1585.0	*	1		1820	221	2231.	2722.6	1595.6
1		0145	22	0.	.0	1585.0	*	1		1005	122	583.	.0	1585.0	*	1		1825	222	2238.	2743.5	1595.6
1		0150	23	0.	.0	1585.0	*	1		1010	123	0.	.0	1585.0	*	1		1830	223	2244.	2762.2	1595.6
1		0155	24	0.	.0	1585.0	*	1		1015	124	583.	.0	1585.0	*	1		1835	224	2250.	2778.9	1595.7
1		0200	25	0.	.0	1585.0	*	1		1020	125	0.	.0	1585.0	*	1		1840	225	2255.	2793.7	1595.7
1		0205	26	0.	.0	1585.0	*	1		1025	126	583.	.0	1585.0	*	1		1845	226	2259.	2806.8	1595.7
1		0210	27	0.	.0	1585.0	*	1		1030	127	0.	.0	1585.0	*	1		1850	227	2263.	2818.2	1595.7
1		0215	28	0.	.0	1585.0	*	1		1035	128	583.	.0	1585.0	*	1		1855	228	2267.	2828.1	1595.8
1		0220	29	0.	.0	1585.0	*	1		1040	129	0.	.0	1585.0	*	1		1900	229	2270.	2836.8	1595.8
1		0225	30	0.	.0	1585.0	*	1		1045	130	583.	.0	1585.0	*	1		1905	230	2272.	2844.2	1595.8
1		0230	31	0.	.0	1585.0	*	1		1050	131	0.	.0	1585.0	*	1		1910	231	2274.	2850.5	1595.8
1		0235	32	0.	.0	1585.0	*	1		1055	132	583.	.0	1585.0	*	1		1915	232	2276.	2855.9	1595.8
1		0240	33	0.	.0	1585.0	*	1		1100	133	0.	.0	1585.0	*	1		1920	233	2278.	2860.4	1595.8
1		0245	34	0.	.0	1585.0	*	1		1105	134	583.	.0	1585.0	*	1		1925	234	2279.	2864.0	1595.8
1		0250	35	0.	.0	1585.0	*	1		1110	135	0.	.0	1585.0	*	1		1930	235	2280.	2866.9	1595.8
1		0255	36	0.	.0	1585.0	*	1		1115	136	583.	.0	1585.0	*	1		1935	236	2281.	2869.3	1595.8
1		0300	37	0.	.0	1585.0	*	1		1120	137	0.	.0	1585.0	*	1		1940	237	2281.	2871.0	1595.8
1		0305	38	0.	.0	1585.0	*	1		1125	138	583.	.0	1585.0	*	1		1945	238	2282.	2872.2	1595.8
1		0310	39	0.	.0	1585.0	*	1		1130	139	0.	.0	1585.0	*	1		1950	239	2282.	2873.0	1595.8
1		0315	40	0.	.0	1585.0	*	1		1135	140	583.	.0	1585.0	*	1		1955	240	2282.	2873.2	1595.8
1		0320	41	0.	.0	1585.0	*	1		1140	141	0.	.0	1585.0	*	1		2000	241	2282.	2873.2	1595.8
1		0325	42	0.	.0	1585.0	*	1		1145	142	583.	.0	1585.0	*	1		2005	242	2282.	2872.7	1595.8

1	0330	43	0.	.0	1585.0	*	1	1150	143	0.	.0	1585.0	*	1	2010	243	2282.	2871.9	1595.8
1	0335	44	0.	.0	1585.0	*	1	1155	144	583.	.0	1585.0	*	1	2015	244	2281.	2870.8	1595.8
1	0340	45	0.	.0	1585.0	*	1	1200	145	0.	.0	1585.0	*	1	2020	245	2281.	2869.4	1595.8
1	0345	46	0.	.0	1585.0	*	1	1205	146	627.	.3	1585.4	*	1	2025	246	2280.	2867.8	1595.8
1	0350	47	0.	.0	1585.0	*	1	1210	147	583.	.0	1585.0	*	1	2030	247	2280.	2865.8	1595.8
1	0355	48	0.	.0	1585.0	*	1	1215	148	624.	.3	1585.3	*	1	2035	248	2279.	2863.7	1595.8
1	0400	49	0.	.0	1585.0	*	1	1220	149	658.	1.5	1585.6	*	1	2040	249	2278.	2861.3	1595.8
1	0405	50	0.	.0	1585.0	*	1	1225	150	687.	3.9	1585.9	*	1	2045	250	2277.	2858.7	1595.8
1	0410	51	0.	.0	1585.0	*	1	1230	151	715.	7.7	1586.1	*	1	2050	251	2276.	2855.9	1595.8
1	0415	52	0.	.0	1585.0	*	1	1235	152	742.	13.1	1586.3	*	1	2055	252	2275.	2852.9	1595.8
1	0420	53	0.	.0	1585.0	*	1	1240	153	768.	20.3	1586.5	*	1	2100	253	2274.	2849.8	1595.8
1	0425	54	0.	.0	1585.0	*	1	1245	154	794.	29.4	1586.7	*	1	2105	254	2273.	2846.4	1595.8
1	0430	55	0.	.0	1585.0	*	1	1250	155	819.	40.5	1586.9	*	1	2110	255	2272.	2842.9	1595.8
1	0435	56	0.	.0	1585.0	*	1	1255	156	844.	53.7	1587.0	*	1	2115	256	2271.	2839.2	1595.8
1	0440	57	0.	.0	1585.0	*	1	1300	157	868.	69.2	1587.2	*	1	2120	257	2269.	2835.3	1595.8
1	0445	58	0.	.0	1585.0	*	1	1305	158	892.	86.8	1587.4	*	1	2125	258	2268.	2831.3	1595.8
1	0450	59	0.	.0	1585.0	*	1	1310	159	916.	106.5	1587.6	*	1	2130	259	2266.	2827.2	1595.8
1	0455	60	0.	.0	1585.0	*	1	1315	160	940.	128.5	1587.7	*	1	2135	260	2265.	2822.9	1595.7
1	0500	61	0.	.0	1585.0	*	1	1320	161	966.	152.7	1587.9	*	1	2140	261	2263.	2818.4	1595.7
1	0505	62	0.	.0	1585.0	*	1	1325	162	992.	179.0	1588.1	*	1	2145	262	2262.	2813.8	1595.7
1	0510	63	0.	.0	1585.0	*	1	1330	163	1019.	207.5	1588.3	*	1	2150	263	2260.	2809.1	1595.7
1	0515	64	0.	.0	1585.0	*	1	1335	164	1047.	237.9	1588.5	*	1	2155	264	2259.	2804.2	1595.7
1	0520	65	0.	.0	1585.0	*	1	1340	165	1074.	270.1	1588.7	*	1	2200	265	2257.	2799.2	1595.7
1	0525	66	0.	.0	1585.0	*	1	1345	166	1101.	303.7	1588.9	*	1	2205	266	2255.	2794.1	1595.7
1	0530	67	0.	.0	1585.0	*	1	1350	167	1128.	338.4	1589.0	*	1	2210	267	2253.	2788.8	1595.7
1	0535	68	0.	.0	1585.0	*	1	1355	168	1155.	373.9	1589.2	*	1	2215	268	2252.	2783.5	1595.7
1	0540	69	0.	.0	1585.0	*	1	1400	169	1181.	409.9	1589.4	*	1	2220	269	2250.	2778.1	1595.7
1	0545	70	0.	.0	1585.0	*	1	1405	170	1206.	446.1	1589.6	*	1	2225	270	2248.	2772.6	1595.7
1	0550	71	0.	.0	1585.0	*	1	1410	171	1231.	482.2	1589.7	*	1	2230	271	2246.	2766.9	1595.6
1	0555	72	0.	.0	1585.0	*	1	1415	172	1255.	518.0	1589.9	*	1	2235	272	2244.	2761.2	1595.6
1	0600	73	0.	.0	1585.0	*	1	1420	173	1278.	553.4	1590.0	*	1	2240	273	2242.	2755.4	1595.6
1	0605	74	0.	.0	1585.0	*	1	1425	174	1300.	588.6	1590.2	*	1	2245	274	2240.	2749.5	1595.6
1	0610	75	0.	.0	1585.0	*	1	1430	175	1322.	623.6	1590.3	*	1	2250	275	2238.	2743.6	1595.6
1	0615	76	0.	.0	1585.0	*	1	1435	176	1343.	658.7	1590.4	*	1	2255	276	2236.	2737.6	1595.6
1	0620	77	0.	.0	1585.0	*	1	1440	177	1364.	694.2	1590.6	*	1	2300	277	2234.	2731.5	1595.6
1	0625	78	0.	.0	1585.0	*	1	1445	178	1385.	730.3	1590.7	*	1	2305	278	2232.	2725.4	1595.6
1	0630	79	0.	.0	1585.0	*	1	1450	179	1406.	767.4	1590.8	*	1	2310	279	2230.	2719.2	1595.6
1	0635	80	0.	.0	1585.0	*	1	1455	180	1428.	805.8	1591.0	*	1	2315	280	2227.	2712.9	1595.5
1	0640	81	0.	.0	1585.0	*	1	1500	181	1450.	845.8	1591.1	*	1	2320	281	2225.	2706.6	1595.5
1	0645	82	0.	.0	1585.0	*	1	1505	182	1473.	887.8	1591.2	*	1	2325	282	2223.	2700.1	1595.5
1	0650	83	0.	.0	1585.0	*	1	1510	183	1496.	932.0	1591.4	*	1	2330	283	2221.	2693.7	1595.5
1	0655	84	0.	.0	1585.0	*	1	1515	184	1520.	978.5	1591.5	*	1	2335	284	2219.	2687.3	1595.5
1	0700	85	0.	.0	1585.0	*	1	1520	185	1545.	1027.4	1591.7	*	1	2340	285	2216.	2680.7	1595.5
1	0705	86	0.	.0	1585.0	*	1	1525	186	1571.	1078.6	1591.8	*	1	2345	286	2214.	2674.1	1595.5
1	0710	87	0.	.0	1585.0	*	1	1530	187	1597.	1132.0	1592.0	*	1	2350	287	2212.	2667.5	1595.5
1	0715	88	0.	.0	1585.0	*	1	1535	188	1623.	1187.4	1592.2	*	1	2355	288	2209.	2660.8	1595.5
1	0720	89	0.	.0	1585.0	*	1	1540	189	1650.	1244.5	1592.3	*	2	0000	289	2207.	2654.1	1595.5
1	0725	90	0.	.0	1585.0	*	1	1545	190	1677.	1303.0	1592.5	*	2	0005	290	2205.	2647.3	1595.4
1	0730	91	0.	.0	1585.0	*	1	1550	191	1704.	1362.5	1592.6	*	2	0010	291	2202.	2640.5	1595.4
1	0735	92	0.	.0	1585.0	*	1	1555	192	1731.	1422.7	1592.8	*	2	0015	292	2200.	2633.6	1595.4
1	0740	93	0.	.0	1585.0	*	1	1600	193	1757.	1483.2	1592.9	*	2	0020	293	2197.	2626.7	1595.4
1	0745	94	0.	.0	1585.0	*	1	1605	194	1783.	1543.5	1593.1	*	2	0025	294	2195.	2619.8	1595.4
1	0750	95	0.	.0	1585.0	*	1	1610	195	1808.	1603.4	1593.2	*	2	0030	295	2193.	2612.7	1595.4
1	0755	96	0.	.0	1585.0	*	1	1615	196	1832.	1662.4	1593.4	*	2	0035	296	2190.	2605.7	1595.4
1	0800	97	0.	.0	1585.0	*	1	1620	197	1856.	1720.4	1593.5	*	2	0040	297	2188.	2598.5	1595.3
1	0805	98	0.	.0	1585.0	*	1	1625	198	1879.	1777.1	1593.6	*	2	0045	298	2185.	2591.3	1595.3
1	0810	99	0.	.0	1585.0	*	1	1630	199	1902.	1832.3	1593.8	*	2	0050	299	2183.	2584.0	1595.3
1	0815	100	583.	.0	1585.0	*	1	1635	200	1923.	1886.0	1593.9	*	2	0055	300	2180.	2576.7	1595.3
						*							*						

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PEAK OUTFLOW IS 2282. AT TIME 19.92 HOURS

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
		(CFS)				
+ 2282.	19.92		2255.	1054.	1016.	1016.
		(INCHES)	.440	.822	.823	.823
		(AC-FT)	1118.	2091.	2093.	2093.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
2873.	19.92	2794.	1057.	1019.	1019.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)				
1595.84	19.92	1595.70	1589.54	1589.37	1589.37

CUMULATIVE AREA = 47.69 SQ MI

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HYDROGRAPH AT RESR
TRANSPOSITION AREA 5.0 SQ MI

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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
1		0000	1	583.	.0	1585.0	*	1		0820	101	583.	.0	1585.0	*	1		1640	201	1909.	1851.0	1593.8
1		0005	2	0.	.0	1585.0	*	1		0825	102	0.	.0	1585.0	*	1		1645	202	1928.	1899.9	1593.9
1		0010	3	0.	.0	1585.0	*	1		0830	103	583.	.0	1585.0	*	1		1650	203	1947.	1947.5	1594.0
1		0015	4	0.	.0	1585.0	*	1		0835	104	0.	.0	1585.0	*	1		1655	204	1965.	1993.8	1594.1
1		0020	5	0.	.0	1585.0	*	1		0840	105	583.	.0	1585.0	*	1		1700	205	1983.	2039.1	1594.2
1		0025	6	0.	.0	1585.0	*	1		0845	106	0.	.0	1585.0	*	1		1705	206	1999.	2083.4	1594.3
1		0030	7	0.	.0	1585.0	*	1		0850	107	583.	.0	1585.0	*	1		1710	207	2016.	2126.9	1594.4
1		0035	8	0.	.0	1585.0	*	1		0855	108	0.	.0	1585.0	*	1		1715	208	2032.	2169.6	1594.5
1		0040	9	0.	.0	1585.0	*	1		0900	109	583.	.0	1585.0	*	1		1720	209	2048.	2211.6	1594.6
1		0045	10	0.	.0	1585.0	*	1		0905	110	0.	.0	1585.0	*	1		1725	210	2063.	2252.8	1594.7
1		0050	11	0.	.0	1585.0	*	1		0910	111	583.	.0	1585.0	*	1		1730	211	2078.	2293.0	1594.7
1		0055	12	0.	.0	1585.0	*	1		0915	112	0.	.0	1585.0	*	1		1735	212	2092.	2332.1	1594.8
1		0100	13	0.	.0	1585.0	*	1		0920	113	583.	.0	1585.0	*	1		1740	213	2106.	2370.0	1594.9
1		0105	14	0.	.0	1585.0	*	1		0925	114	0.	.0	1585.0	*	1		1745	214	2119.	2406.5	1595.0
1		0110	15	0.	.0	1585.0	*	1		0930	115	583.	.0	1585.0	*	1		1750	215	2132.	2441.3	1595.0
1		0115	16	0.	.0	1585.0	*	1		0935	116	0.	.0	1585.0	*	1		1755	216	2144.	2474.3	1595.1
1		0120	17	0.	.0	1585.0	*	1		0940	117	583.	.0	1585.0	*	1		1800	217	2155.	2505.2	1595.2
1		0125	18	0.	.0	1585.0	*	1		0945	118	0.	.0	1585.0	*	1		1805	218	2165.	2534.1	1595.2
1		0130	19	0.	.0	1585.0	*	1		0950	119	583.	.0	1585.0	*	1		1810	219	2174.	2560.8	1595.3
1		0135	20	0.	.0	1585.0	*	1		0955	120	0.	.0	1585.0	*	1		1815	220	2183.	2585.3	1595.3
1		0140	21	0.	.0	1585.0	*	1		1000	121	583.	.0	1585.0	*	1		1820	221	2191.	2607.5	1595.4
1		0145	22	0.	.0	1585.0	*	1		1005	122	0.	.0	1585.0	*	1		1825	222	2198.	2627.6	1595.4
1		0150	23	0.	.0	1585.0	*	1		1010	123	583.	.0	1585.0	*	1		1830	223	2204.	2645.5	1595.4
1		0155	24	0.	.0	1585.0	*	1		1015	124	0.	.0	1585.0	*	1		1835	224	2210.	2661.5	1595.5
1		0200	25	0.	.0	1585.0	*	1		1020	125	583.	.0	1585.0	*	1		1840	225	2215.	2675.7	1595.5
1		0205	26	0.	.0	1585.0	*	1		1025	126	0.	.0	1585.0	*	1		1845	226	2219.	2688.2	1595.5

1	0210	27	0.	.0	1585.0	*	1	1030	127	583.	.0	1585.0	*	1	1850	227	2223.	2699.1	1595.5
1	0215	28	0.	.0	1585.0	*	1	1035	128	0.	.0	1585.0	*	1	1855	228	2226.	2708.6	1595.5
1	0220	29	0.	.0	1585.0	*	1	1040	129	583.	.0	1585.0	*	1	1900	229	2229.	2716.7	1595.6
1	0225	30	0.	.0	1585.0	*	1	1045	130	0.	.0	1585.0	*	1	1905	230	2231.	2723.7	1595.6
1	0230	31	0.	.0	1585.0	*	1	1050	131	583.	.0	1585.0	*	1	1910	231	2233.	2729.7	1595.6
1	0235	32	0.	.0	1585.0	*	1	1055	132	0.	.0	1585.0	*	1	1915	232	2235.	2734.8	1595.6
1	0240	33	0.	.0	1585.0	*	1	1100	133	583.	.0	1585.0	*	1	1920	233	2236.	2739.0	1595.6
1	0245	34	0.	.0	1585.0	*	1	1105	134	0.	.0	1585.0	*	1	1925	234	2237.	2742.3	1595.6
1	0250	35	0.	.0	1585.0	*	1	1110	135	583.	.0	1585.0	*	1	1930	235	2238.	2745.0	1595.6
1	0255	36	0.	.0	1585.0	*	1	1115	136	0.	.0	1585.0	*	1	1935	236	2239.	2747.1	1595.6
1	0300	37	0.	.0	1585.0	*	1	1120	137	583.	.0	1585.0	*	1	1940	237	2240.	2748.6	1595.6
1	0305	38	0.	.0	1585.0	*	1	1125	138	0.	.0	1585.0	*	1	1945	238	2240.	2749.6	1595.6
1	0310	39	0.	.0	1585.0	*	1	1130	139	583.	.0	1585.0	*	1	1950	239	2240.	2750.1	1595.6
1	0315	40	0.	.0	1585.0	*	1	1135	140	0.	.0	1585.0	*	1	1955	240	2240.	2750.3	1595.6
1	0320	41	0.	.0	1585.0	*	1	1140	141	583.	.0	1585.0	*	1	2000	241	2240.	2750.0	1595.6
1	0325	42	0.	.0	1585.0	*	1	1145	142	0.	.0	1585.0	*	1	2005	242	2240.	2749.4	1595.6
1	0330	43	0.	.0	1585.0	*	1	1150	143	583.	.0	1585.0	*	1	2010	243	2240.	2748.5	1595.6
1	0335	44	0.	.0	1585.0	*	1	1155	144	0.	.0	1585.0	*	1	2015	244	2239.	2747.3	1595.6
1	0340	45	0.	.0	1585.0	*	1	1200	145	583.	.0	1585.0	*	1	2020	245	2239.	2745.7	1595.6
1	0345	46	0.	.0	1585.0	*	1	1205	146	583.	.0	1585.0	*	1	2025	246	2238.	2743.9	1595.6
1	0350	47	0.	.0	1585.0	*	1	1210	147	583.	.0	1585.0	*	1	2030	247	2237.	2741.9	1595.6
1	0355	48	0.	.0	1585.0	*	1	1215	148	602.	.0	1585.2	*	1	2035	248	2237.	2739.7	1595.6
1	0400	49	0.	.0	1585.0	*	1	1220	149	649.	1.0	1585.5	*	1	2040	249	2236.	2737.2	1595.6
1	0405	50	0.	.0	1585.0	*	1	1225	150	679.	3.1	1585.8	*	1	2045	250	2235.	2734.5	1595.6
1	0410	51	0.	.0	1585.0	*	1	1230	151	707.	6.4	1586.0	*	1	2050	251	2234.	2731.6	1595.6
1	0415	52	0.	.0	1585.0	*	1	1235	152	734.	11.3	1586.2	*	1	2055	252	2233.	2728.5	1595.6
1	0420	53	0.	.0	1585.0	*	1	1240	153	760.	17.9	1586.4	*	1	2100	253	2232.	2725.3	1595.6
1	0425	54	0.	.0	1585.0	*	1	1245	154	786.	26.3	1586.6	*	1	2105	254	2230.	2721.8	1595.6
1	0430	55	0.	.0	1585.0	*	1	1250	155	811.	36.6	1586.8	*	1	2110	255	2229.	2718.2	1595.6
1	0435	56	0.	.0	1585.0	*	1	1255	156	835.	49.0	1587.0	*	1	2115	256	2228.	2714.5	1595.6
1	0440	57	0.	.0	1585.0	*	1	1300	157	859.	63.4	1587.2	*	1	2120	257	2227.	2710.5	1595.5
1	0445	58	0.	.0	1585.0	*	1	1305	158	883.	79.8	1587.3	*	1	2125	258	2225.	2706.5	1595.5
1	0450	59	0.	.0	1585.0	*	1	1310	159	906.	98.3	1587.5	*	1	2130	259	2224.	2702.3	1595.5
1	0455	60	0.	.0	1585.0	*	1	1315	160	930.	118.9	1587.7	*	1	2135	260	2222.	2697.9	1595.5
1	0500	61	0.	.0	1585.0	*	1	1320	161	954.	141.7	1587.8	*	1	2140	261	2221.	2693.4	1595.5
1	0505	62	0.	.0	1585.0	*	1	1325	162	980.	166.6	1588.0	*	1	2145	262	2219.	2688.8	1595.5
1	0510	63	0.	.0	1585.0	*	1	1330	163	1006.	193.5	1588.2	*	1	2150	263	2217.	2684.0	1595.5
1	0515	64	0.	.0	1585.0	*	1	1335	164	1033.	222.3	1588.4	*	1	2155	264	2216.	2679.2	1595.5
1	0520	65	0.	.0	1585.0	*	1	1340	165	1059.	252.8	1588.6	*	1	2200	265	2214.	2674.1	1595.5
1	0525	66	0.	.0	1585.0	*	1	1345	166	1086.	284.6	1588.8	*	1	2205	266	2212.	2669.0	1595.5
1	0530	67	0.	.0	1585.0	*	1	1350	167	1112.	317.6	1588.9	*	1	2210	267	2210.	2663.8	1595.5
1	0535	68	0.	.0	1585.0	*	1	1355	168	1138.	351.4	1589.1	*	1	2215	268	2209.	2658.4	1595.4
1	0540	69	0.	.0	1585.0	*	1	1400	169	1163.	385.7	1589.3	*	1	2220	269	2207.	2653.0	1595.4
1	0545	70	0.	.0	1585.0	*	1	1405	170	1188.	420.1	1589.4	*	1	2225	270	2205.	2647.5	1595.4
1	0550	71	0.	.0	1585.0	*	1	1410	171	1212.	454.5	1589.6	*	1	2230	271	2203.	2641.9	1595.4
1	0555	72	0.	.0	1585.0	*	1	1415	172	1235.	488.6	1589.7	*	1	2235	272	2201.	2636.2	1595.4
1	0600	73	0.	.0	1585.0	*	1	1420	173	1257.	522.4	1589.9	*	1	2240	273	2199.	2630.4	1595.4
1	0605	74	0.	.0	1585.0	*	1	1425	174	1279.	555.9	1590.0	*	1	2245	274	2197.	2624.5	1595.4
1	0610	75	0.	.0	1585.0	*	1	1430	175	1300.	589.3	1590.2	*	1	2250	275	2195.	2618.6	1595.4
1	0615	76	0.	.0	1585.0	*	1	1435	176	1321.	622.7	1590.3	*	1	2255	276	2193.	2612.6	1595.4
1	0620	77	0.	.0	1585.0	*	1	1440	177	1342.	656.5	1590.4	*	1	2300	277	2190.	2606.6	1595.4
1	0625	78	0.	.0	1585.0	*	1	1445	178	1362.	690.9	1590.6	*	1	2305	278	2188.	2600.5	1595.3
1	0630	79	0.	.0	1585.0	*	1	1450	179	1383.	726.3	1590.7	*	1	2310	279	2186.	2594.3	1595.3
1	0635	80	0.	.0	1585.0	*	1	1455	180	1404.	763.0	1590.8	*	1	2315	280	2184.	2588.1	1595.3
1	0640	81	0.	.0	1585.0	*	1	1500	181	1426.	801.3	1591.0	*	1	2320	281	2182.	2581.8	1595.3
1	0645	82	0.	.0	1585.0	*	1	1505	182	1448.	841.4	1591.1	*	1	2325	282	2180.	2575.5	1595.3
1	0650	83	0.	.0	1585.0	*	1	1510	183	1471.	883.7	1591.2	*	1	2330	283	2177.	2569.1	1595.3
1	0655	84	0.	.0	1585.0	*	1	1515	184	1494.	928.2	1591.4	*	1	2335	284	2175.	2562.7	1595.3
1	0700	85	0.	.0	1585.0	*	1	1520	185	1519.	975.1	1591.5	*	1	2340	285	2173.	2556.2	1595.3
1	0705	86	0.	.0	1585.0	*	1	1525	186	1544.	1024.2	1591.7	*	1	2345	286	2170.	2549.6	1595.3

1	0710	87	0.	.0	1585.0	*	1	1530	187	1569.	1075.5	1591.8	*	1	2350	287	2168.	2543.0	1595.2
1	0715	88	0.	.0	1585.0	*	1	1535	188	1595.	1128.6	1592.0	*	1	2355	288	2166.	2536.4	1595.2
1	0720	89	0.	.0	1585.0	*	1	1540	189	1622.	1183.5	1592.1	*	2	0000	289	2163.	2529.7	1595.2
1	0725	90	0.	.0	1585.0	*	1	1545	190	1648.	1239.7	1592.3	*	2	0005	290	2161.	2523.0	1595.2
1	0730	91	0.	.0	1585.0	*	1	1550	191	1674.	1296.9	1592.5	*	2	0010	291	2159.	2516.2	1595.2
1	0735	92	0.	.0	1585.0	*	1	1555	192	1701.	1354.8	1592.6	*	2	0015	292	2156.	2509.4	1595.2
1	0740	93	0.	.0	1585.0	*	1	1600	193	1726.	1412.9	1592.8	*	2	0020	293	2154.	2502.5	1595.2
1	0745	94	0.	.0	1585.0	*	1	1605	194	1752.	1471.0	1592.9	*	2	0025	294	2151.	2495.6	1595.1
1	0750	95	0.	.0	1585.0	*	1	1610	195	1776.	1528.6	1593.0	*	2	0030	295	2149.	2488.6	1595.1
1	0755	96	0.	.0	1585.0	*	1	1615	196	1800.	1585.4	1593.2	*	2	0035	296	2146.	2481.6	1595.1
1	0800	97	0.	.0	1585.0	*	1	1620	197	1824.	1641.2	1593.3	*	2	0040	297	2144.	2474.5	1595.1
1	0805	98	0.	.0	1585.0	*	1	1625	198	1846.	1695.8	1593.5	*	2	0045	298	2141.	2467.4	1595.1
1	0810	99	0.	.0	1585.0	*	1	1630	199	1868.	1749.0	1593.6	*	2	0050	299	2139.	2460.2	1595.1
1	0815	100	0.	.0	1585.0	*	1	1635	200	1889.	1800.8	1593.7	*	2	0055	300	2136.	2452.9	1595.1
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PEAK OUTFLOW IS 2240. AT TIME 19.92 HOURS

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
		(CFS)				
+ 2240.	19.92		2213.	1036.	999.	999.
		(INCHES)	.431	.808	.809	.809
		(AC-FT)	1097.	2055.	2057.	2057.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
2750.	19.92	2671.	1010.	973.	973.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)				
1595.62	19.92	1595.47	1589.44	1589.28	1589.28

CUMULATIVE AREA = 47.69 SQ MI

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HYDROGRAPH AT RESR
TRANSPOSITION AREA 15.0 SQ MI

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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
							*								*							
1		0000	1	583.	.0	1585.0	*	1		0820	101	0.	.0	1585.0	*	1		1640	201	1826.	1647.7	1593.3
1		0005	2	0.	.0	1585.0	*	1		0825	102	0.	.0	1585.0	*	1		1645	202	1845.	1692.2	1593.4
1		0010	3	0.	.0	1585.0	*	1		0830	103	0.	.0	1585.0	*	1		1650	203	1862.	1735.5	1593.5
1		0015	4	0.	.0	1585.0	*	1		0835	104	583.	.0	1585.0	*	1		1655	204	1880.	1777.7	1593.6
1		0020	5	0.	.0	1585.0	*	1		0840	105	0.	.0	1585.0	*	1		1700	205	1896.	1819.0	1593.7
1		0025	6	0.	.0	1585.0	*	1		0845	106	583.	.0	1585.0	*	1		1705	206	1912.	1859.5	1593.8
1		0030	7	0.	.0	1585.0	*	1		0850	107	0.	.0	1585.0	*	1		1710	207	1928.	1899.3	1593.9
1		0035	8	0.	.0	1585.0	*	1		0855	108	583.	.0	1585.0	*	1		1715	208	1943.	1938.3	1594.0
1		0040	9	0.	.0	1585.0	*	1		0900	109	0.	.0	1585.0	*	1		1720	209	1958.	1976.7	1594.1
1		0045	10	0.	.0	1585.0	*	1		0905	110	583.	.0	1585.0	*	1		1725	210	1973.	2014.3	1594.2

1	0050	11	0.	.0	1585.0	*	1	0910	111	0.	.0	1585.0	*	1	1730	211	1987.	2051.1	1594.7
1	0055	12	0.	.0	1585.0	*	1	0915	112	583.	.0	1585.0	*	1	1735	212	2001.	2086.9	1594.3
1	0100	13	0.	.0	1585.0	*	1	0920	113	0.	.0	1585.0	*	1	1740	213	2014.	2121.6	1594.4
1	0105	14	0.	.0	1585.0	*	1	0925	114	583.	.0	1585.0	*	1	1745	214	2027.	2154.9	1594.5
1	0110	15	0.	.0	1585.0	*	1	0930	115	0.	.0	1585.0	*	1	1750	215	2039.	2186.7	1594.5
1	0115	16	0.	.0	1585.0	*	1	0935	116	583.	.0	1585.0	*	1	1755	216	2050.	2216.9	1594.6
1	0120	17	0.	.0	1585.0	*	1	0940	117	0.	.0	1585.0	*	1	1800	217	2060.	2245.1	1594.6
1	0125	18	0.	.0	1585.0	*	1	0945	118	583.	.0	1585.0	*	1	1805	218	2070.	2271.4	1594.7
1	0130	19	0.	.0	1585.0	*	1	0950	119	0.	.0	1585.0	*	1	1810	219	2079.	2295.7	1594.7
1	0135	20	0.	.0	1585.0	*	1	0955	120	583.	.0	1585.0	*	1	1815	220	2087.	2318.0	1594.8
1	0140	21	0.	.0	1585.0	*	1	1000	121	0.	.0	1585.0	*	1	1820	221	2095.	2338.2	1594.8
1	0145	22	0.	.0	1585.0	*	1	1005	122	583.	.0	1585.0	*	1	1825	222	2101.	2356.3	1594.9
1	0150	23	0.	.0	1585.0	*	1	1010	123	0.	.0	1585.0	*	1	1830	223	2107.	2372.6	1594.9
1	0155	24	0.	.0	1585.0	*	1	1015	124	583.	.0	1585.0	*	1	1835	224	2112.	2387.0	1594.9
1	0200	25	0.	.0	1585.0	*	1	1020	125	0.	.0	1585.0	*	1	1840	225	2117.	2399.8	1595.0
1	0205	26	0.	.0	1585.0	*	1	1025	126	583.	.0	1585.0	*	1	1845	226	2121.	2410.9	1595.0
1	0210	27	0.	.0	1585.0	*	1	1030	127	0.	.0	1585.0	*	1	1850	227	2124.	2420.6	1595.0
1	0215	28	0.	.0	1585.0	*	1	1035	128	583.	.0	1585.0	*	1	1855	228	2127.	2429.0	1595.0
1	0220	29	0.	.0	1585.0	*	1	1040	129	0.	.0	1585.0	*	1	1900	229	2130.	2436.2	1595.0
1	0225	30	0.	.0	1585.0	*	1	1045	130	583.	.0	1585.0	*	1	1905	230	2132.	2442.3	1595.0
1	0230	31	0.	.0	1585.0	*	1	1050	131	0.	.0	1585.0	*	1	1910	231	2134.	2447.4	1595.0
1	0235	32	0.	.0	1585.0	*	1	1055	132	583.	.0	1585.0	*	1	1915	232	2136.	2451.7	1595.1
1	0240	33	0.	.0	1585.0	*	1	1100	133	0.	.0	1585.0	*	1	1920	233	2137.	2455.1	1595.1
1	0245	34	0.	.0	1585.0	*	1	1105	134	583.	.0	1585.0	*	1	1925	234	2138.	2457.8	1595.1
1	0250	35	0.	.0	1585.0	*	1	1110	135	0.	.0	1585.0	*	1	1930	235	2139.	2459.9	1595.1
1	0255	36	0.	.0	1585.0	*	1	1115	136	583.	.0	1585.0	*	1	1935	236	2139.	2461.4	1595.1
1	0300	37	0.	.0	1585.0	*	1	1120	137	0.	.0	1585.0	*	1	1940	237	2139.	2462.4	1595.1
1	0305	38	0.	.0	1585.0	*	1	1125	138	583.	.0	1585.0	*	1	1945	238	2140.	2463.0	1595.1
1	0310	39	0.	.0	1585.0	*	1	1130	139	0.	.0	1585.0	*	1	1950	239	2140.	2463.1	1595.1
1	0315	40	0.	.0	1585.0	*	1	1135	140	583.	.0	1585.0	*	1	1955	240	2140.	2462.8	1595.1
1	0320	41	0.	.0	1585.0	*	1	1140	141	0.	.0	1585.0	*	1	2000	241	2139.	2462.2	1595.1
1	0325	42	0.	.0	1585.0	*	1	1145	142	583.	.0	1585.0	*	1	2005	242	2139.	2461.3	1595.1
1	0330	43	0.	.0	1585.0	*	1	1150	143	0.	.0	1585.0	*	1	2010	243	2139.	2460.0	1595.1
1	0335	44	0.	.0	1585.0	*	1	1155	144	583.	.0	1585.0	*	1	2015	244	2138.	2458.5	1595.1
1	0340	45	0.	.0	1585.0	*	1	1200	145	0.	.0	1585.0	*	1	2020	245	2137.	2456.7	1595.1
1	0345	46	0.	.0	1585.0	*	1	1205	146	583.	.0	1585.0	*	1	2025	246	2137.	2454.6	1595.1
1	0350	47	0.	.0	1585.0	*	1	1210	147	583.	.0	1585.0	*	1	2030	247	2136.	2452.3	1595.1
1	0355	48	0.	.0	1585.0	*	1	1215	148	583.	.0	1585.0	*	1	2035	248	2135.	2449.8	1595.1
1	0400	49	0.	.0	1585.0	*	1	1220	149	627.	.3	1585.4	*	1	2040	249	2134.	2447.1	1595.0
1	0405	50	0.	.0	1585.0	*	1	1225	150	659.	1.6	1585.6	*	1	2045	250	2133.	2444.2	1595.0
1	0410	51	0.	.0	1585.0	*	1	1230	151	688.	4.0	1585.9	*	1	2050	251	2132.	2441.2	1595.0
1	0415	52	0.	.0	1585.0	*	1	1235	152	715.	7.7	1586.1	*	1	2055	252	2131.	2437.9	1595.0
1	0420	53	0.	.0	1585.0	*	1	1240	153	741.	13.0	1586.3	*	1	2100	253	2129.	2434.5	1595.0
1	0425	54	0.	.0	1585.0	*	1	1245	154	767.	19.9	1586.5	*	1	2105	254	2128.	2430.9	1595.0
1	0430	55	0.	.0	1585.0	*	1	1250	155	791.	28.4	1586.7	*	1	2110	255	2127.	2427.1	1595.0
1	0435	56	0.	.0	1585.0	*	1	1255	156	815.	38.8	1586.8	*	1	2115	256	2125.	2423.3	1595.0
1	0440	57	0.	.0	1585.0	*	1	1300	157	839.	50.9	1587.0	*	1	2120	257	2124.	2419.3	1595.0
1	0445	58	0.	.0	1585.0	*	1	1305	158	862.	64.9	1587.2	*	1	2125	258	2122.	2415.1	1595.0
1	0450	59	0.	.0	1585.0	*	1	1310	159	884.	80.7	1587.3	*	1	2130	259	2121.	2410.8	1595.0
1	0455	60	0.	.0	1585.0	*	1	1315	160	906.	98.3	1587.5	*	1	2135	260	2119.	2406.4	1595.0
1	0500	61	0.	.0	1585.0	*	1	1320	161	928.	117.8	1587.7	*	1	2140	261	2118.	2401.8	1595.0
1	0505	62	0.	.0	1585.0	*	1	1325	162	952.	139.2	1587.8	*	1	2145	262	2116.	2397.2	1594.9
1	0510	63	0.	.0	1585.0	*	1	1330	163	976.	162.4	1588.0	*	1	2150	263	2114.	2392.4	1594.9
1	0515	64	0.	.0	1585.0	*	1	1335	164	1000.	187.4	1588.2	*	1	2155	264	2112.	2387.5	1594.9
1	0520	65	0.	.0	1585.0	*	1	1340	165	1025.	213.9	1588.3	*	1	2200	265	2111.	2382.5	1594.9
1	0525	66	0.	.0	1585.0	*	1	1345	166	1050.	241.7	1588.5	*	1	2205	266	2109.	2377.3	1594.9
1	0530	67	0.	.0	1585.0	*	1	1350	167	1074.	270.5	1588.7	*	1	2210	267	2107.	2372.1	1594.9
1	0535	68	0.	.0	1585.0	*	1	1355	168	1098.	300.1	1588.8	*	1	2215	268	2105.	2366.8	1594.9
1	0540	69	0.	.0	1585.0	*	1	1400	169	1122.	330.2	1589.0	*	1	2220	269	2103.	2361.3	1594.9
1	0545	70	0.	.0	1585.0	*	1	1405	170	1145.	360.6	1589.2	*	1	2225	270	2101.	2355.8	1594.9

1	0550	71	0.	.0	1585.0	*	1	1410	171	1167.	390.9	1589.3	*	1	2230	271	2099.	2350.2	1594.9
1	0555	72	0.	.0	1585.0	*	1	1415	172	1188.	421.0	1589.4	*	1	2235	272	2097.	2344.6	1594.8
1	0600	73	0.	.0	1585.0	*	1	1420	173	1209.	450.8	1589.6	*	1	2240	273	2095.	2338.9	1594.8
1	0605	74	0.	.0	1585.0	*	1	1425	174	1229.	480.4	1589.7	*	1	2245	274	2093.	2333.1	1594.8
1	0610	75	0.	.0	1585.0	*	1	1430	175	1249.	509.9	1589.8	*	1	2250	275	2091.	2327.2	1594.8
1	0615	76	0.	.0	1585.0	*	1	1435	176	1269.	539.5	1590.0	*	1	2255	276	2088.	2321.3	1594.8
1	0620	77	0.	.0	1585.0	*	1	1440	177	1288.	569.4	1590.1	*	1	2300	277	2086.	2315.3	1594.8
1	0625	78	0.	.0	1585.0	*	1	1445	178	1307.	599.9	1590.2	*	1	2305	278	2084.	2309.2	1594.8
1	0630	79	0.	.0	1585.0	*	1	1450	179	1326.	631.3	1590.3	*	1	2310	279	2082.	2303.2	1594.8
1	0635	80	0.	.0	1585.0	*	1	1455	180	1346.	663.9	1590.5	*	1	2315	280	2079.	2297.0	1594.8
1	0640	81	0.	.0	1585.0	*	1	1500	181	1366.	698.0	1590.6	*	1	2320	281	2077.	2290.8	1594.7
1	0645	82	0.	.0	1585.0	*	1	1505	182	1387.	733.9	1590.7	*	1	2325	282	2075.	2284.6	1594.7
1	0650	83	0.	.0	1585.0	*	1	1510	183	1409.	771.7	1590.9	*	1	2330	283	2073.	2278.3	1594.7
1	0655	84	0.	.0	1585.0	*	1	1515	184	1431.	811.6	1591.0	*	1	2335	284	2070.	2271.9	1594.7
1	0700	85	0.	.0	1585.0	*	1	1520	185	1454.	853.6	1591.1	*	1	2340	285	2068.	2265.5	1594.7
1	0705	86	0.	.0	1585.0	*	1	1525	186	1478.	897.8	1591.3	*	1	2345	286	2065.	2259.1	1594.7
1	0710	87	0.	.0	1585.0	*	1	1530	187	1503.	944.0	1591.4	*	1	2350	287	2063.	2252.6	1594.7
1	0715	88	0.	.0	1585.0	*	1	1535	188	1527.	991.9	1591.6	*	1	2355	288	2061.	2246.1	1594.6
1	0720	89	0.	.0	1585.0	*	1	1540	189	1552.	1041.5	1591.7	*	2	0000	289	2058.	2239.5	1594.6
1	0725	90	0.	.0	1585.0	*	1	1545	190	1578.	1092.3	1591.9	*	2	0005	290	2056.	2232.9	1594.6
1	0730	91	0.	.0	1585.0	*	1	1550	191	1603.	1144.1	1592.0	*	2	0010	291	2053.	2226.3	1594.6
1	0735	92	0.	.0	1585.0	*	1	1555	192	1628.	1196.5	1592.2	*	2	0015	292	2051.	2219.6	1594.6
1	0740	93	0.	.0	1585.0	*	1	1600	193	1652.	1249.3	1592.3	*	2	0020	293	2048.	2212.9	1594.6
1	0745	94	0.	.0	1585.0	*	1	1605	194	1677.	1301.9	1592.5	*	2	0025	294	2046.	2206.2	1594.6
1	0750	95	0.	.0	1585.0	*	1	1610	195	1700.	1354.2	1592.6	*	2	0030	295	2043.	2199.4	1594.6
1	0755	96	0.	.0	1585.0	*	1	1615	196	1723.	1405.9	1592.7	*	2	0035	296	2041.	2192.6	1594.5
1	0800	97	0.	.0	1585.0	*	1	1620	197	1745.	1456.6	1592.9	*	2	0040	297	2038.	2185.7	1594.5
1	0805	98	0.	.0	1585.0	*	1	1625	198	1767.	1506.3	1593.0	*	2	0045	298	2036.	2178.7	1594.5
1	0810	99	0.	.0	1585.0	*	1	1630	199	1787.	1554.7	1593.1	*	2	0050	299	2033.	2171.7	1594.5
1	0815	100	0.	.0	1585.0	*	1	1635	200	1807.	1601.8	1593.2	*	2	0055	300	2030.	2164.6	1594.5
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PEAK OUTFLOW IS 2140. AT TIME 19.83 HOURS

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
		(CFS)				
+ 2140.	19.83		2111.	988.	953.	953.
		(INCHES)	.412	.771	.772	.772
		(AC-FT)	1047.	1961.	1963.	1963.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
2463.	19.83	2384.	899.	866.	866.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)				
1595.08	19.83	1594.92	1589.20	1589.04	1589.04

CUMULATIVE AREA = 47.69 SQ MI

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HYDROGRAPH AT RESR

TRANSPOSITION AREA 30.0 SQ MI

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1		0000	1	583.	.0	1585.0	1		0820	101	0.	.0	1585.0	1		1640	201	1778.	1532.6	1593.1
1		0005	2	0.	.0	1585.0	1		0825	102	0.	.0	1585.0	1		1645	202	1796.	1574.7	1593.2
1		0010	3	0.	.0	1585.0	1		0830	103	0.	.0	1585.0	1		1650	203	1813.	1615.6	1593.3
1		0015	4	0.	.0	1585.0	1		0835	104	0.	.0	1585.0	1		1655	204	1830.	1655.4	1593.4
1		0020	5	0.	.0	1585.0	1		0840	105	0.	.0	1585.0	1		1700	205	1846.	1694.4	1593.4
1		0025	6	0.	.0	1585.0	1		0845	106	583.	.0	1585.0	1		1705	206	1861.	1732.7	1593.5
1		0030	7	0.	.0	1585.0	1		0850	107	0.	.0	1585.0	1		1710	207	1877.	1770.2	1593.6
1		0035	8	0.	.0	1585.0	1		0855	108	583.	.0	1585.0	1		1715	208	1891.	1807.2	1593.7
1		0040	9	0.	.0	1585.0	1		0900	109	0.	.0	1585.0	1		1720	209	1906.	1843.4	1593.8
1		0045	10	0.	.0	1585.0	1		0905	110	583.	.0	1585.0	1		1725	210	1920.	1879.0	1593.9
1		0050	11	0.	.0	1585.0	1		0910	111	0.	.0	1585.0	1		1730	211	1934.	1913.8	1593.9
1		0055	12	0.	.0	1585.0	1		0915	112	583.	.0	1585.0	1		1735	212	1947.	1947.7	1594.0
1		0100	13	0.	.0	1585.0	1		0920	113	0.	.0	1585.0	1		1740	213	1960.	1980.5	1594.1
1		0105	14	0.	.0	1585.0	1		0925	114	583.	.0	1585.0	1		1745	214	1972.	2012.0	1594.2
1		0110	15	0.	.0	1585.0	1		0930	115	0.	.0	1585.0	1		1750	215	1984.	2042.1	1594.2
1		0115	16	0.	.0	1585.0	1		0935	116	583.	.0	1585.0	1		1755	216	1995.	2070.6	1594.3
1		0120	17	0.	.0	1585.0	1		0940	117	0.	.0	1585.0	1		1800	217	2005.	2097.3	1594.3
1		0125	18	0.	.0	1585.0	1		0945	118	583.	.0	1585.0	1		1805	218	2014.	2122.2	1594.4
1		0130	19	0.	.0	1585.0	1		0950	119	0.	.0	1585.0	1		1810	219	2023.	2145.1	1594.4
1		0135	20	0.	.0	1585.0	1		0955	120	583.	.0	1585.0	1		1815	220	2031.	2166.1	1594.5
1		0140	21	0.	.0	1585.0	1		1000	121	0.	.0	1585.0	1		1820	221	2038.	2185.1	1594.5
1		0145	22	0.	.0	1585.0	1		1005	122	583.	.0	1585.0	1		1825	222	2044.	2202.2	1594.6
1		0150	23	0.	.0	1585.0	1		1010	123	0.	.0	1585.0	1		1830	223	2050.	2217.5	1594.6
1		0155	24	0.	.0	1585.0	1		1015	124	583.	.0	1585.0	1		1835	224	2055.	2231.0	1594.6
1		0200	25	0.	.0	1585.0	1		1020	125	0.	.0	1585.0	1		1840	225	2059.	2242.9	1594.6
1		0205	26	0.	.0	1585.0	1		1025	126	583.	.0	1585.0	1		1845	226	2063.	2253.3	1594.7
1		0210	27	0.	.0	1585.0	1		1030	127	0.	.0	1585.0	1		1850	227	2067.	2262.3	1594.7
1		0215	28	0.	.0	1585.0	1		1035	128	583.	.0	1585.0	1		1855	228	2070.	2270.1	1594.7
1		0220	29	0.	.0	1585.0	1		1040	129	0.	.0	1585.0	1		1900	229	2072.	2276.8	1594.7
1		0225	30	0.	.0	1585.0	1		1045	130	583.	.0	1585.0	1		1905	230	2074.	2282.3	1594.7
1		0230	31	0.	.0	1585.0	1		1050	131	0.	.0	1585.0	1		1910	231	2076.	2287.0	1594.7
1		0235	32	0.	.0	1585.0	1		1055	132	583.	.0	1585.0	1		1915	232	2077.	2290.8	1594.7
1		0240	33	0.	.0	1585.0	1		1100	133	0.	.0	1585.0	1		1920	233	2078.	2293.8	1594.7
1		0245	34	0.	.0	1585.0	1		1105	134	583.	.0	1585.0	1		1925	234	2079.	2296.2	1594.7
1		0250	35	0.	.0	1585.0	1		1110	135	0.	.0	1585.0	1		1930	235	2080.	2297.9	1594.7
1		0255	36	0.	.0	1585.0	1		1115	136	583.	.0	1585.0	1		1935	236	2080.	2299.1	1594.8
1		0300	37	0.	.0	1585.0	1		1120	137	0.	.0	1585.0	1		1940	237	2081.	2299.9	1594.8
1		0305	38	0.	.0	1585.0	1		1125	138	583.	.0	1585.0	1		1945	238	2081.	2300.2	1594.8
1		0310	39	0.	.0	1585.0	1		1130	139	0.	.0	1585.0	1		1950	239	2081.	2300.0	1594.8
1		0315	40	0.	.0	1585.0	1		1135	140	583.	.0	1585.0	1		1955	240	2080.	2299.6	1594.8
1		0320	41	0.	.0	1585.0	1		1140	141	0.	.0	1585.0	1		2000	241	2080.	2298.7	1594.8
1		0325	42	0.	.0	1585.0	1		1145	142	583.	.0	1585.0	1		2005	242	2080.	2297.6	1594.8
1		0330	43	0.	.0	1585.0	1		1150	143	0.	.0	1585.0	1		2010	243	2079.	2296.1	1594.7
1		0335	44	0.	.0	1585.0	1		1155	144	583.	.0	1585.0	1		2015	244	2078.	2294.4	1594.7
1		0340	45	0.	.0	1585.0	1		1200	145	0.	.0	1585.0	1		2020	245	2078.	2292.5	1594.7
1		0345	46	0.	.0	1585.0	1		1205	146	583.	.0	1585.0	1		2025	246	2077.	2290.3	1594.7
1		0350	47	0.	.0	1585.0	1		1210	147	583.	.0	1585.0	1		2030	247	2076.	2287.8	1594.7
1		0355	48	0.	.0	1585.0	1		1215	148	583.	.0	1585.0	1		2035	248	2075.	2285.2	1594.7
1		0400	49	0.	.0	1585.0	1		1220	149	586.	.0	1585.0	1		2040	249	2074.	2282.4	1594.7
1		0405	50	0.	.0	1585.0	1		1225	150	647.	.9	1585.5	1		2045	250	2073.	2279.4	1594.7
1		0410	51	0.	.0	1585.0	1		1230	151	677.	2.8	1585.8	1		2050	251	2072.	2276.2	1594.7
1		0415	52	0.	.0	1585.0	1		1235	152	704.	6.0	1586.0	1		2055	252	2071.	2272.8	1594.7
1		0420	53	0.	.0	1585.0	1		1240	153	730.	10.5	1586.2	1		2100	253	2069.	2269.3	1594.7
1		0425	54	0.	.0	1585.0	1		1245	154	755.	16.5	1586.4	1		2105	254	2068.	2265.6	1594.7

1	0430	55	0.	.0	1585.0	*	1	1250	155	780.	24.2	1586.6	*	1	2110	255	2066.	2261.8	1594.7
1	0435	56	0.	.0	1585.0	*	1	1255	156	803.	33.4	1586.7	*	1	2115	256	2065.	2257.9	1594.7
1	0440	57	0.	.0	1585.0	*	1	1300	157	827.	44.4	1586.9	*	1	2120	257	2064.	2253.8	1594.7
1	0445	58	0.	.0	1585.0	*	1	1305	158	849.	57.0	1587.1	*	1	2125	258	2062.	2249.6	1594.7
1	0450	59	0.	.0	1585.0	*	1	1310	159	871.	71.3	1587.2	*	1	2130	259	2060.	2245.3	1594.6
1	0455	60	0.	.0	1585.0	*	1	1315	160	893.	87.4	1587.4	*	1	2135	260	2059.	2240.9	1594.6
1	0500	61	0.	.0	1585.0	*	1	1320	161	914.	105.1	1587.6	*	1	2140	261	2057.	2236.3	1594.6
1	0505	62	0.	.0	1585.0	*	1	1325	162	936.	124.6	1587.7	*	1	2145	262	2055.	2231.6	1594.6
1	0510	63	0.	.0	1585.0	*	1	1330	163	959.	145.9	1587.9	*	1	2150	263	2054.	2226.8	1594.6
1	0515	64	0.	.0	1585.0	*	1	1335	164	982.	168.7	1588.0	*	1	2155	264	2052.	2221.9	1594.6
1	0520	65	0.	.0	1585.0	*	1	1340	165	1005.	192.9	1588.2	*	1	2200	265	2050.	2216.9	1594.6
1	0525	66	0.	.0	1585.0	*	1	1345	166	1029.	218.4	1588.4	*	1	2205	266	2048.	2211.8	1594.6
1	0530	67	0.	.0	1585.0	*	1	1350	167	1053.	244.8	1588.5	*	1	2210	267	2046.	2206.6	1594.6
1	0535	68	0.	.0	1585.0	*	1	1355	168	1076.	272.0	1588.7	*	1	2215	268	2044.	2201.3	1594.6
1	0540	69	0.	.0	1585.0	*	1	1400	169	1098.	299.7	1588.8	*	1	2220	269	2042.	2195.9	1594.5
1	0545	70	0.	.0	1585.0	*	1	1405	170	1120.	327.7	1589.0	*	1	2225	270	2040.	2190.4	1594.5
1	0550	71	0.	.0	1585.0	*	1	1410	171	1141.	355.6	1589.1	*	1	2230	271	2038.	2184.8	1594.5
1	0555	72	0.	.0	1585.0	*	1	1415	172	1162.	383.4	1589.3	*	1	2235	272	2036.	2179.2	1594.5
1	0600	73	0.	.0	1585.0	*	1	1420	173	1181.	411.0	1589.4	*	1	2240	273	2034.	2173.5	1594.5
1	0605	74	0.	.0	1585.0	*	1	1425	174	1201.	438.3	1589.5	*	1	2245	274	2031.	2167.8	1594.5
1	0610	75	0.	.0	1585.0	*	1	1430	175	1219.	465.6	1589.6	*	1	2250	275	2029.	2161.9	1594.5
1	0615	76	0.	.0	1585.0	*	1	1435	176	1238.	493.1	1589.8	*	1	2255	276	2027.	2156.0	1594.5
1	0620	77	0.	.0	1585.0	*	1	1440	177	1256.	520.8	1589.9	*	1	2300	277	2025.	2150.1	1594.5
1	0625	78	0.	.0	1585.0	*	1	1445	178	1275.	549.1	1590.0	*	1	2305	278	2023.	2144.1	1594.4
1	0630	79	0.	.0	1585.0	*	1	1450	179	1293.	578.2	1590.1	*	1	2310	279	2020.	2138.1	1594.4
1	0635	80	0.	.0	1585.0	*	1	1455	180	1312.	608.5	1590.2	*	1	2315	280	2018.	2132.0	1594.4
1	0640	81	0.	.0	1585.0	*	1	1500	181	1332.	640.2	1590.4	*	1	2320	281	2016.	2125.9	1594.4
1	0645	82	0.	.0	1585.0	*	1	1505	182	1352.	673.6	1590.5	*	1	2325	282	2013.	2119.7	1594.4
1	0650	83	0.	.0	1585.0	*	1	1510	183	1373.	708.8	1590.6	*	1	2330	283	2011.	2113.4	1594.4
1	0655	84	0.	.0	1585.0	*	1	1515	184	1394.	746.0	1590.8	*	1	2335	284	2009.	2107.1	1594.4
1	0700	85	0.	.0	1585.0	*	1	1520	185	1417.	785.3	1590.9	*	1	2340	285	2006.	2100.8	1594.3
1	0705	86	0.	.0	1585.0	*	1	1525	186	1440.	826.7	1591.0	*	1	2345	286	2004.	2094.4	1594.3
1	0710	87	0.	.0	1585.0	*	1	1530	187	1463.	869.9	1591.2	*	1	2350	287	2001.	2088.1	1594.3
1	0715	88	0.	.0	1585.0	*	1	1535	188	1487.	914.9	1591.3	*	1	2355	288	1999.	2081.6	1594.3
1	0720	89	0.	.0	1585.0	*	1	1540	189	1512.	961.4	1591.5	*	2	0000	289	1996.	2075.2	1594.3
1	0725	90	0.	.0	1585.0	*	1	1545	190	1536.	1009.2	1591.6	*	2	0005	290	1994.	2068.7	1594.3
1	0730	91	0.	.0	1585.0	*	1	1550	191	1561.	1057.9	1591.8	*	2	0010	291	1991.	2062.1	1594.3
1	0735	92	0.	.0	1585.0	*	1	1555	192	1585.	1107.3	1591.9	*	2	0015	292	1989.	2055.6	1594.3
1	0740	93	0.	.0	1585.0	*	1	1600	193	1609.	1156.9	1592.1	*	2	0020	293	1986.	2049.0	1594.2
1	0745	94	0.	.0	1585.0	*	1	1605	194	1633.	1206.5	1592.2	*	2	0025	294	1984.	2042.3	1594.2
1	0750	95	0.	.0	1585.0	*	1	1610	195	1656.	1255.8	1592.3	*	2	0030	295	1981.	2035.6	1594.2
1	0755	96	0.	.0	1585.0	*	1	1615	196	1678.	1304.5	1592.5	*	2	0035	296	1979.	2028.9	1594.2
1	0800	97	0.	.0	1585.0	*	1	1620	197	1699.	1352.4	1592.6	*	2	0040	297	1976.	2022.1	1594.2
1	0805	98	0.	.0	1585.0	*	1	1625	198	1720.	1399.3	1592.7	*	2	0045	298	1973.	2015.3	1594.2
1	0810	99	0.	.0	1585.0	*	1	1630	199	1740.	1444.9	1592.8	*	2	0050	299	1971.	2008.3	1594.2
1	0815	100	0.	.0	1585.0	*	1	1635	200	1759.	1489.4	1593.0	*	2	0055	300	1968.	2001.4	1594.1
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PEAK OUTFLOW IS 2081. AT TIME 19.75 HOURS

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
		(CFS)				
+ 2081.	19.75		2051.	961.	927.	927.
		(INCHES)	.400	.749	.750	.750
		(AC-FT)	1017.	1906.	1908.	1908.

PEAK STORAGE (AC-FT)	TIME (HR)	MAXIMUM AVERAGE STORAGE 6-HR	24-HR	72-HR	24.92-HR
2300.	19.75	2222.	836.	805.	805.

PEAK STAGE (FEET)	TIME (HR)	MAXIMUM AVERAGE STAGE 6-HR	24-HR	72-HR	24.92-HR
1594.76	19.75	1594.60	1589.05	1588.90	1588.90

CUMULATIVE AREA = 47.69 SQ MI

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HYDROGRAPH AT RESR
TRANSPOSITION AREA 53.0 SQ MI

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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
1		0000	1	583.	.0	1585.0	1		0820	101	0.	.0	1585.0	1		1640	201	1729.	1419.2	1592.8
1		0005	2	0.	.0	1585.0	1		0825	102	0.	.0	1585.0	1		1645	202	1746.	1458.8	1592.9
1		0010	3	0.	.0	1585.0	1		0830	103	0.	.0	1585.0	1		1650	203	1763.	1497.3	1593.0
1		0015	4	0.	.0	1585.0	1		0835	104	0.	.0	1585.0	1		1655	204	1779.	1534.8	1593.1
1		0020	5	0.	.0	1585.0	1		0840	105	0.	.0	1585.0	1		1700	205	1794.	1571.6	1593.2
1		0025	6	0.	.0	1585.0	1		0845	106	0.	.0	1585.0	1		1705	206	1810.	1607.6	1593.2
1		0030	7	0.	.0	1585.0	1		0850	107	0.	.0	1585.0	1		1710	207	1824.	1643.0	1593.3
1		0035	8	0.	.0	1585.0	1		0855	108	583.	.0	1585.0	1		1715	208	1839.	1677.8	1593.4
1		0040	9	0.	.0	1585.0	1		0900	109	0.	.0	1585.0	1		1720	209	1853.	1712.0	1593.5
1		0045	10	0.	.0	1585.0	1		0905	110	583.	.0	1585.0	1		1725	210	1867.	1745.6	1593.6
1		0050	11	0.	.0	1585.0	1		0910	111	0.	.0	1585.0	1		1730	211	1880.	1778.4	1593.6
1		0055	12	0.	.0	1585.0	1		0915	112	583.	.0	1585.0	1		1735	212	1893.	1810.4	1593.7
1		0100	13	0.	.0	1585.0	1		0920	113	0.	.0	1585.0	1		1740	213	1905.	1841.4	1593.8
1		0105	14	0.	.0	1585.0	1		0925	114	583.	.0	1585.0	1		1745	214	1917.	1871.1	1593.8
1		0110	15	0.	.0	1585.0	1		0930	115	0.	.0	1585.0	1		1750	215	1928.	1899.5	1593.9
1		0115	16	0.	.0	1585.0	1		0935	116	583.	.0	1585.0	1		1755	216	1939.	1926.3	1594.0
1		0120	17	0.	.0	1585.0	1		0940	117	0.	.0	1585.0	1		1800	217	1949.	1951.6	1594.0
1		0125	18	0.	.0	1585.0	1		0945	118	583.	.0	1585.0	1		1805	218	1958.	1975.0	1594.1
1		0130	19	0.	.0	1585.0	1		0950	119	0.	.0	1585.0	1		1810	219	1966.	1996.6	1594.1
1		0135	20	0.	.0	1585.0	1		0955	120	583.	.0	1585.0	1		1815	220	1974.	2016.4	1594.2
1		0140	21	0.	.0	1585.0	1		1000	121	0.	.0	1585.0	1		1820	221	1981.	2034.2	1594.2
1		0145	22	0.	.0	1585.0	1		1005	122	583.	.0	1585.0	1		1825	222	1987.	2050.2	1594.2
1		0150	23	0.	.0	1585.0	1		1010	123	0.	.0	1585.0	1		1830	223	1992.	2064.5	1594.3
1		0155	24	0.	.0	1585.0	1		1015	124	583.	.0	1585.0	1		1835	224	1997.	2077.1	1594.3
1		0200	25	0.	.0	1585.0	1		1020	125	0.	.0	1585.0	1		1840	225	2001.	2088.2	1594.3
1		0205	26	0.	.0	1585.0	1		1025	126	583.	.0	1585.0	1		1845	226	2005.	2097.9	1594.3
1		0210	27	0.	.0	1585.0	1		1030	127	0.	.0	1585.0	1		1850	227	2008.	2106.3	1594.4
1		0215	28	0.	.0	1585.0	1		1035	128	583.	.0	1585.0	1		1855	228	2011.	2113.4	1594.4
1		0220	29	0.	.0	1585.0	1		1040	129	0.	.0	1585.0	1		1900	229	2013.	2119.5	1594.4
1		0225	30	0.	.0	1585.0	1		1045	130	583.	.0	1585.0	1		1905	230	2015.	2124.6	1594.4
1		0230	31	0.	.0	1585.0	1		1050	131	0.	.0	1585.0	1		1910	231	2017.	2128.8	1594.4
1		0235	32	0.	.0	1585.0	1		1055	132	583.	.0	1585.0	1		1915	232	2018.	2132.1	1594.4
1		0240	33	0.	.0	1585.0	1		1100	133	0.	.0	1585.0	1		1920	233	2019.	2134.7	1594.4
1		0245	34	0.	.0	1585.0	1		1105	134	583.	.0	1585.0	1		1925	234	2020.	2136.7	1594.4
1		0250	35	0.	.0	1585.0	1		1110	135	0.	.0	1585.0	1		1930	235	2020.	2138.1	1594.4
1		0255	36	0.	.0	1585.0	1		1115	136	583.	.0	1585.0	1		1935	236	2021.	2139.1	1594.4
1		0300	37	0.	.0	1585.0	1		1120	137	0.	.0	1585.0	1		1940	237	2021.	2139.5	1594.4
1		0305	38	0.	.0	1585.0	1		1125	138	583.	.0	1585.0	1		1945	238	2021.	2139.6	1594.4

1	0310	39	0.	.0	1585.0	*	1	1130	139	0.	.0	1585.0	*	1	1950	239	2021.	2139.2	1594.4
1	0315	40	0.	.0	1585.0	*	1	1135	140	583.	.0	1585.0	*	1	1955	240	2020.	2138.5	1594.4
1	0320	41	0.	.0	1585.0	*	1	1140	141	0.	.0	1585.0	*	1	2000	241	2020.	2137.5	1594.4
1	0325	42	0.	.0	1585.0	*	1	1145	142	583.	.0	1585.0	*	1	2005	242	2020.	2136.1	1594.4
1	0330	43	0.	.0	1585.0	*	1	1150	143	0.	.0	1585.0	*	1	2010	243	2019.	2134.5	1594.4
1	0335	44	0.	.0	1585.0	*	1	1155	144	583.	.0	1585.0	*	1	2015	244	2018.	2132.6	1594.4
1	0340	45	0.	.0	1585.0	*	1	1200	145	0.	.0	1585.0	*	1	2020	245	2017.	2130.5	1594.4
1	0345	46	0.	.0	1585.0	*	1	1205	146	583.	.0	1585.0	*	1	2025	246	2017.	2128.2	1594.4
1	0350	47	0.	.0	1585.0	*	1	1210	147	0.	.0	1585.0	*	1	2030	247	2016.	2125.6	1594.4
1	0355	48	0.	.0	1585.0	*	1	1215	148	636.	.5	1585.4	*	1	2035	248	2015.	2122.9	1594.4
1	0400	49	0.	.0	1585.0	*	1	1220	149	583.	.0	1585.0	*	1	2040	249	2013.	2119.9	1594.4
1	0405	50	0.	.0	1585.0	*	1	1225	150	634.	.5	1585.4	*	1	2045	250	2012.	2116.8	1594.4
1	0410	51	0.	.0	1585.0	*	1	1230	151	664.	1.9	1585.7	*	1	2050	251	2011.	2113.5	1594.4
1	0415	52	0.	.0	1585.0	*	1	1235	152	692.	4.4	1585.9	*	1	2055	252	2010.	2110.1	1594.4
1	0420	53	0.	.0	1585.0	*	1	1240	153	718.	8.2	1586.1	*	1	2100	253	2008.	2106.5	1594.4
1	0425	54	0.	.0	1585.0	*	1	1245	154	743.	13.5	1586.3	*	1	2105	254	2007.	2102.8	1594.4
1	0430	55	0.	.0	1585.0	*	1	1250	155	768.	20.2	1586.5	*	1	2110	255	2005.	2099.0	1594.3
1	0435	56	0.	.0	1585.0	*	1	1255	156	791.	28.4	1586.7	*	1	2115	256	2004.	2095.0	1594.3
1	0440	57	0.	.0	1585.0	*	1	1300	157	814.	38.2	1586.8	*	1	2120	257	2002.	2090.8	1594.3
1	0445	58	0.	.0	1585.0	*	1	1305	158	836.	49.6	1587.0	*	1	2125	258	2001.	2086.6	1594.3
1	0450	59	0.	.0	1585.0	*	1	1310	159	858.	62.5	1587.2	*	1	2130	259	1999.	2082.2	1594.3
1	0455	60	0.	.0	1585.0	*	1	1315	160	879.	77.1	1587.3	*	1	2135	260	1997.	2077.7	1594.3
1	0500	61	0.	.0	1585.0	*	1	1320	161	900.	93.3	1587.5	*	1	2140	261	1996.	2073.1	1594.3
1	0505	62	0.	.0	1585.0	*	1	1325	162	921.	111.0	1587.6	*	1	2145	262	1994.	2068.4	1594.3
1	0510	63	0.	.0	1585.0	*	1	1330	163	942.	130.2	1587.8	*	1	2150	263	1992.	2063.5	1594.3
1	0515	64	0.	.0	1585.0	*	1	1335	164	964.	151.0	1587.9	*	1	2155	264	1990.	2058.6	1594.3
1	0520	65	0.	.0	1585.0	*	1	1340	165	986.	173.0	1588.1	*	1	2200	265	1988.	2053.5	1594.2
1	0525	66	0.	.0	1585.0	*	1	1345	166	1009.	196.2	1588.2	*	1	2205	266	1986.	2048.4	1594.2
1	0530	67	0.	.0	1585.0	*	1	1350	167	1031.	220.4	1588.4	*	1	2210	267	1984.	2043.2	1594.2
1	0535	68	0.	.0	1585.0	*	1	1355	168	1053.	245.2	1588.5	*	1	2215	268	1982.	2037.9	1594.2
1	0540	69	0.	.0	1585.0	*	1	1400	169	1074.	270.5	1588.7	*	1	2220	269	1980.	2032.5	1594.2
1	0545	70	0.	.0	1585.0	*	1	1405	170	1095.	296.0	1588.8	*	1	2225	270	1978.	2027.1	1594.2
1	0550	71	0.	.0	1585.0	*	1	1410	171	1115.	321.6	1589.0	*	1	2230	271	1976.	2021.5	1594.2
1	0555	72	0.	.0	1585.0	*	1	1415	172	1135.	347.1	1589.1	*	1	2235	272	1974.	2016.0	1594.2
1	0600	73	0.	.0	1585.0	*	1	1420	173	1154.	372.3	1589.2	*	1	2240	273	1971.	2010.3	1594.2
1	0605	74	0.	.0	1585.0	*	1	1425	174	1172.	397.5	1589.3	*	1	2245	274	1969.	2004.5	1594.1
1	0610	75	0.	.0	1585.0	*	1	1430	175	1190.	422.6	1589.5	*	1	2250	275	1967.	1998.8	1594.1
1	0615	76	0.	.0	1585.0	*	1	1435	176	1207.	447.8	1589.6	*	1	2255	276	1965.	1992.9	1594.1
1	0620	77	0.	.0	1585.0	*	1	1440	177	1225.	473.3	1589.7	*	1	2300	277	1962.	1987.1	1594.1
1	0625	78	0.	.0	1585.0	*	1	1445	178	1242.	499.4	1589.8	*	1	2305	278	1960.	1981.1	1594.1
1	0630	79	0.	.0	1585.0	*	1	1450	179	1260.	526.4	1589.9	*	1	2310	279	1958.	1975.2	1594.1
1	0635	80	0.	.0	1585.0	*	1	1455	180	1278.	554.4	1590.0	*	1	2315	280	1955.	1969.2	1594.1
1	0640	81	0.	.0	1585.0	*	1	1500	181	1297.	583.7	1590.1	*	1	2320	281	1953.	1963.1	1594.1
1	0645	82	0.	.0	1585.0	*	1	1505	182	1316.	614.6	1590.3	*	1	2325	282	1951.	1957.0	1594.0
1	0650	83	0.	.0	1585.0	*	1	1510	183	1336.	647.4	1590.4	*	1	2330	283	1948.	1950.8	1594.0
1	0655	84	0.	.0	1585.0	*	1	1515	184	1357.	682.0	1590.5	*	1	2335	284	1946.	1944.6	1594.0
1	0700	85	0.	.0	1585.0	*	1	1520	185	1378.	718.6	1590.7	*	1	2340	285	1943.	1938.4	1594.0
1	0705	86	0.	.0	1585.0	*	1	1525	186	1401.	757.1	1590.8	*	1	2345	286	1941.	1932.1	1594.0
1	0710	87	0.	.0	1585.0	*	1	1530	187	1423.	797.5	1590.9	*	1	2350	287	1939.	1925.8	1594.0
1	0715	88	0.	.0	1585.0	*	1	1535	188	1447.	839.5	1591.1	*	1	2355	288	1936.	1919.5	1594.0
1	0720	89	0.	.0	1585.0	*	1	1540	189	1470.	883.0	1591.2	*	2	0000	289	1934.	1913.1	1593.9
1	0725	90	0.	.0	1585.0	*	1	1545	190	1494.	927.7	1591.4	*	2	0005	290	1931.	1906.7	1593.9
1	0730	91	0.	.0	1585.0	*	1	1550	191	1518.	973.3	1591.5	*	2	0010	291	1928.	1900.2	1593.9
1	0735	92	0.	.0	1585.0	*	1	1555	192	1541.	1019.6	1591.7	*	2	0015	292	1926.	1893.7	1593.9
1	0740	93	0.	.0	1585.0	*	1	1600	193	1565.	1066.2	1591.8	*	2	0020	293	1923.	1887.2	1593.9
1	0745	94	0.	.0	1585.0	*	1	1605	194	1588.	1112.7	1591.9	*	2	0025	294	1921.	1880.7	1593.9
1	0750	95	0.	.0	1585.0	*	1	1610	195	1610.	1159.0	1592.1	*	2	0030	295	1918.	1874.1	1593.9
1	0755	96	0.	.0	1585.0	*	1	1615	196	1632.	1204.8	1592.2	*	2	0035	296	1916.	1867.5	1593.8
1	0800	97	0.	.0	1585.0	*	1	1620	197	1653.	1249.8	1592.3	*	2	0040	297	1913.	1860.8	1593.8
1	0805	98	0.	.0	1585.0	*	1	1625	198	1673.	1293.8	1592.4	*	2	0045	298	1910.	1854.1	1593.8

1	0810	99	0.	.0	1585.0	*	1	1630	199	1692.	1336.8	1592.6	*	2	0050	299	1907.	1847.3	1593.6
1	0815	100	0.	.0	1585.0	*	1	1635	200	1711.	1378.6	1592.7	*	2	0055	300	1905.	1840.4	1593.8

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PEAK OUTFLOW IS 2021. AT TIME 19.75 HOURS

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
		(CFS)				
+ 2021.	19.75		1991.	931.	898.	898.
		(INCHES)	.388	.726	.727	.727
		(AC-FT)	987.	1847.	1849.	1849.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
2140.	19.75	2062.	774.	745.	745.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)				
1594.43	19.75	1594.26	1588.91	1588.76	1588.76

CUMULATIVE AREA = 47.69 SQ MI

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INTERPOLATED HYDROGRAPH AT RESR

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0000	1	583.	1		0615	76	0.	1		1230	151	666.	1		1845	226	2016.
1		0005	2	0.	1		0620	77	0.	1		1235	152	694.	1		1850	227	2019.
1		0010	3	0.	1		0625	78	0.	1		1240	153	720.	1		1855	228	2022.
1		0015	4	0.	1		0630	79	0.	1		1245	154	746.	1		1900	229	2024.
1		0020	5	0.	1		0635	80	0.	1		1250	155	770.	1		1905	230	2026.
1		0025	6	0.	1		0640	81	0.	1		1255	156	794.	1		1910	231	2028.
1		0030	7	0.	1		0645	82	0.	1		1300	157	816.	1		1915	232	2029.
1		0035	8	0.	1		0650	83	0.	1		1305	158	839.	1		1920	233	2030.
1		0040	9	0.	1		0655	84	0.	1		1310	159	860.	1		1925	234	2031.
1		0045	10	0.	1		0700	85	0.	1		1315	160	882.	1		1930	235	2031.
1		0050	11	0.	1		0705	86	0.	1		1320	161	903.	1		1935	236	2032.
1		0055	12	0.	1		0710	87	0.	1		1325	162	924.	1		1940	237	2032.
1		0100	13	0.	1		0715	88	0.	1		1330	163	945.	1		1945	238	2032.
1		0105	14	0.	1		0720	89	0.	1		1335	164	967.	1		1950	239	2032.
1		0110	15	0.	1		0725	90	0.	1		1340	165	990.	1		1955	240	2032.
1		0115	16	0.	1		0730	91	0.	1		1345	166	1012.	1		2000	241	2031.
1		0120	17	0.	1		0735	92	0.	1		1350	167	1035.	1		2005	242	2031.
1		0125	18	0.	1		0740	93	0.	1		1355	168	1057.	1		2010	243	2030.
1		0130	19	0.	1		0745	94	0.	1		1400	169	1079.	1		2015	244	2029.
1		0135	20	0.	1		0750	95	0.	1		1405	170	1100.	1		2020	245	2029.
1		0140	21	0.	1		0755	96	0.	1		1410	171	1120.	1		2025	246	2028.
1		0145	22	0.	1		0800	97	0.	1		1415	172	1140.	1		2030	247	2027.
1		0150	23	0.	1		0805	98	0.	1		1420	173	1159.	1		2035	248	2026.

1	0155	24	0.	*	1	0810	99	0.	*	1	1425	174	1177.	*	1	2040	249	2025.
1	0200	25	0.	*	1	0815	100	0.	*	1	1430	175	1195.	*	1	2045	250	2023.
1	0205	26	0.	*	1	0820	101	0.	*	1	1435	176	1213.	*	1	2050	251	2022.
1	0210	27	0.	*	1	0825	102	0.	*	1	1440	177	1231.	*	1	2055	252	2021.
1	0215	28	0.	*	1	0830	103	0.	*	1	1445	178	1248.	*	1	2100	253	2020.
1	0220	29	0.	*	1	0835	104	0.	*	1	1450	179	1266.	*	1	2105	254	2018.
1	0225	30	0.	*	1	0840	105	0.	*	1	1455	180	1284.	*	1	2110	255	2017.
1	0230	31	0.	*	1	0845	106	108.	*	1	1500	181	1303.	*	1	2115	256	2015.
1	0235	32	0.	*	1	0850	107	0.	*	1	1505	182	1323.	*	1	2120	257	2014.
1	0240	33	0.	*	1	0855	108	583.	*	1	1510	183	1343.	*	1	2125	258	2012.
1	0245	34	0.	*	1	0900	109	0.	*	1	1515	184	1364.	*	1	2130	259	2010.
1	0250	35	0.	*	1	0905	110	583.	*	1	1520	185	1386.	*	1	2135	260	2009.
1	0255	36	0.	*	1	0910	111	0.	*	1	1525	186	1408.	*	1	2140	261	2007.
1	0300	37	0.	*	1	0915	112	583.	*	1	1530	187	1431.	*	1	2145	262	2005.
1	0305	38	0.	*	1	0920	113	0.	*	1	1535	188	1454.	*	1	2150	263	2003.
1	0310	39	0.	*	1	0925	114	583.	*	1	1540	189	1478.	*	1	2155	264	2001.
1	0315	40	0.	*	1	0930	115	0.	*	1	1545	190	1502.	*	1	2200	265	2000.
1	0320	41	0.	*	1	0935	116	583.	*	1	1550	191	1526.	*	1	2205	266	1998.
1	0325	42	0.	*	1	0940	117	0.	*	1	1555	192	1549.	*	1	2210	267	1996.
1	0330	43	0.	*	1	0945	118	583.	*	1	1600	193	1573.	*	1	2215	268	1994.
1	0335	44	0.	*	1	0950	119	0.	*	1	1605	194	1596.	*	1	2220	269	1992.
1	0340	45	0.	*	1	0955	120	583.	*	1	1610	195	1618.	*	1	2225	270	1989.
1	0345	46	0.	*	1	1000	121	0.	*	1	1615	196	1640.	*	1	2230	271	1987.
1	0350	47	0.	*	1	1005	122	583.	*	1	1620	197	1661.	*	1	2235	272	1985.
1	0355	48	0.	*	1	1010	123	0.	*	1	1625	198	1682.	*	1	2240	273	1983.
1	0400	49	0.	*	1	1015	124	583.	*	1	1630	199	1701.	*	1	2245	274	1981.
1	0405	50	0.	*	1	1020	125	0.	*	1	1635	200	1720.	*	1	2250	275	1979.
1	0410	51	0.	*	1	1025	126	583.	*	1	1640	201	1738.	*	1	2255	276	1976.
1	0415	52	0.	*	1	1030	127	0.	*	1	1645	202	1755.	*	1	2300	277	1974.
1	0420	53	0.	*	1	1035	128	583.	*	1	1650	203	1772.	*	1	2305	278	1972.
1	0425	54	0.	*	1	1040	129	0.	*	1	1655	204	1788.	*	1	2310	279	1969.
1	0430	55	0.	*	1	1045	130	583.	*	1	1700	205	1804.	*	1	2315	280	1967.
1	0435	56	0.	*	1	1050	131	0.	*	1	1705	206	1819.	*	1	2320	281	1965.
1	0440	57	0.	*	1	1055	132	583.	*	1	1710	207	1834.	*	1	2325	282	1962.
1	0445	58	0.	*	1	1100	133	0.	*	1	1715	208	1849.	*	1	2330	283	1960.
1	0450	59	0.	*	1	1105	134	583.	*	1	1720	209	1863.	*	1	2335	284	1958.
1	0455	60	0.	*	1	1110	135	0.	*	1	1725	210	1876.	*	1	2340	285	1955.
1	0500	61	0.	*	1	1115	136	583.	*	1	1730	211	1890.	*	1	2345	286	1953.
1	0505	62	0.	*	1	1120	137	0.	*	1	1735	212	1903.	*	1	2350	287	1950.
1	0510	63	0.	*	1	1125	138	583.	*	1	1740	213	1915.	*	1	2355	288	1948.
1	0515	64	0.	*	1	1130	139	0.	*	1	1745	214	1927.	*	2	0000	289	1945.
1	0520	65	0.	*	1	1135	140	583.	*	1	1750	215	1938.	*	2	0005	290	1943.
1	0525	66	0.	*	1	1140	141	0.	*	1	1755	216	1949.	*	2	0010	291	1940.
1	0530	67	0.	*	1	1145	142	583.	*	1	1800	217	1959.	*	2	0015	292	1938.
1	0535	68	0.	*	1	1150	143	0.	*	1	1805	218	1968.	*	2	0020	293	1935.
1	0540	69	0.	*	1	1155	144	583.	*	1	1810	219	1977.	*	2	0025	294	1932.
1	0545	70	0.	*	1	1200	145	0.	*	1	1815	220	1984.	*	2	0030	295	1930.
1	0550	71	0.	*	1	1205	146	583.	*	1	1820	221	1991.	*	2	0035	296	1927.
1	0555	72	0.	*	1	1210	147	108.	*	1	1825	222	1997.	*	2	0040	297	1925.
1	0600	73	0.	*	1	1215	148	626.	*	1	1830	223	2003.	*	2	0045	298	1922.
1	0605	74	0.	*	1	1220	149	583.	*	1	1835	224	2008.	*	2	0050	299	1919.
1	0610	75	0.	*	1	1225	150	636.	*	1	1840	225	2012.	*	2	0055	300	1916.
				*					*					*				

****

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)	(CFS)			
+ 2032.	19.75	2002.	937.	903.	903.

```
                    (INCHES)     .390        .731        .731        .731
                    (AC-FT)      993.        1858.       1860.       1860.

 PEAK STORAGE   TIME                        MAXIMUM AVERAGE STORAGE
                                 6-HR        24-HR       72-HR     24.92-HR
+ (AC-FT)       (HR)
    2140.      19.75            2062.         774.        745.        745.

  PEAK STAGE    TIME                         MAXIMUM AVERAGE STAGE
                                 6-HR        24-HR       72-HR     24.92-HR
+   (FEET)      (HR)
   1594.43     19.75           1594.26     1588.91     1588.76     1588.76

                    CUMULATIVE AREA =   47.69 SQ MI

1                                                        STATION     RESR

                     (O) OUTFLOW
        0.     200.      400.      600.      800.     1000.     1200.     1400.     1600.     1800.     2000.     2200.      0.
 DAHRMN PER
  10000   1.---------.---------.---------O.---------.---------.---------.---------.---------.---------.---------.---------.---------.
  10005  20          .         .         .         .         .         .         .         .         .         .         .         .
  10010  30          .         .         .         .         .         .         .         .         .         .         .         .
  10015  40          .         .         .         .         .         .         .         .         .         .         .         .
  10020  50          .         .         .         .         .         .         .         .         .         .         .         .
  10025  60          .         .         .         .         .         .         .         .         .         .         .         .
  10030  70          .         .         .         .         .         .         .         .         .         .         .         .
  10035  80          .         .         .         .         .         .         .         .         .         .         .         .
  10040  90          .         .         .         .         .         .         .         .         .         .         .         .
  10045 100          .         .         .         .         .         .         .         .         .         .         .         .
  10050 110 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
  10055 120          .         .         .         .         .         .         .         .         .         .         .         .
  10100 130          .         .         .         .         .         .         .         .         .         .         .         .
  10105 140          .         .         .         .         .         .         .         .         .         .         .         .
  10110 150          .         .         .         .         .         .         .         .         .         .         .         .
  10115 160          .         .         .         .         .         .         .         .         .         .         .         .
  10120 170          .         .         .         .         .         .         .         .         .         .         .         .
  10125 180          .         .         .         .         .         .         .         .         .         .         .         .
  10130 190          .         .         .         .         .         .         .         .         .         .         .         .
  10135 200          .         .         .         .         .         .         .         .         .         .         .         .
  10140 210 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
  10145 220          .         .         .         .         .         .         .         .         .         .         .         .
  10150 230          .         .         .         .         .         .         .         .         .         .         .         .
  10155 240          .         .         .         .         .         .         .         .         .         .         .         .
  10200 250          .         .         .         .         .         .         .         .         .         .         .         .
  10205 260          .         .         .         .         .         .         .         .         .         .         .         .
  10210 270          .         .         .         .         .         .         .         .         .         .         .         .
  10215 280          .         .         .         .         .         .         .         .         .         .         .         .
  10220 290          .         .         .         .         .         .         .         .         .         .         .         .
  10225 300          .         .         .         .         .         .         .         .         .         .         .         .
  10230 310 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
  10235 320          .         .         .         .         .         .         .         .         .         .         .         .
  10240 330          .         .         .         .         .         .         .         .         .         .         .         .
  10245 340          .         .         .         .         .         .         .         .         .         .         .         .
  10250 350          .         .         .         .         .         .         .         .         .         .         .         .
  10255 360          .         .         .         .         .         .         .         .         .         .         .         .
  10300 370          .         .         .         .         .         .         .         .         .         .         .         .
  10305 380          .         .         .         .         .         .         .         .         .         .         .         .
  10310 390          .         .         .         .         .         .         .         .         .         .         .         .
  10315 400          .         .         .         .         .         .         .         .         .         .         .         .
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10330 430
10335 440
10340 450
10345 460
10350 470
10355 480
10400 490
10405 500
10410 510
10415 520
10420 530
10425 540
10430 550
10435 560
10440 570
10445 580
10450 590
10455 600
10500 610
10505 620
10510 630
10515 640
10520 650
10525 660
10530 670
10535 680
10540 690
10545 700
10550 710
10555 720
10600 730
10605 740
10610 750
10615 760
10620 770
10625 780
10630 790
10635 800
10640 810
10645 820
10650 830
10655 840
10700 850
10705 860
10710 870
10715 880
10720 890
10725 900
10730 910
10735 920
10740 930
10745 940
10750 950
10755 960
10800 970
10805 980
10810 990
10815 1000

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10820 1010 . . . . . .
10825 1020 . . . . . .
10830 1030 . . . . . .
10835 1040 . . . . . .
10840 1050 . . . . . .
10845 106. 0 . . . . . .
10850 1070 . . . . . .
10855 108. . . 0. . . . . .
10900 1090 . . . . . .
10905 110. . . 0. . . . . .
10910 1110 . . . . . .
10915 112. . . 0. . . . . .
10920 1130 . . . . . .
10925 114. . . 0. . . . . .
10930 1150 . . . . . .
10935 116. . . 0. . . . . .
10940 1170 . . . . . .
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11000 1210 . . . . . .
11005 122. . . 0. . . . . .
11010 1230 . . . . . .
11015 124. . . 0. . . . . .
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11025 126. . . 0. . . . . .
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11035 128. . . 0. . . . . .
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11045 130. . . 0. . . . . .
11050 1310 . . . . . .
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11105 134. . . 0. . . . . .
11110 1350 . . . . . .
11115 136. . . 0. . . . . .
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11125 138. . . 0. . . . . .
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11140 1410 . . . . . .
11145 142. . . 0. . . . . .
11150 1430 . . . . . .
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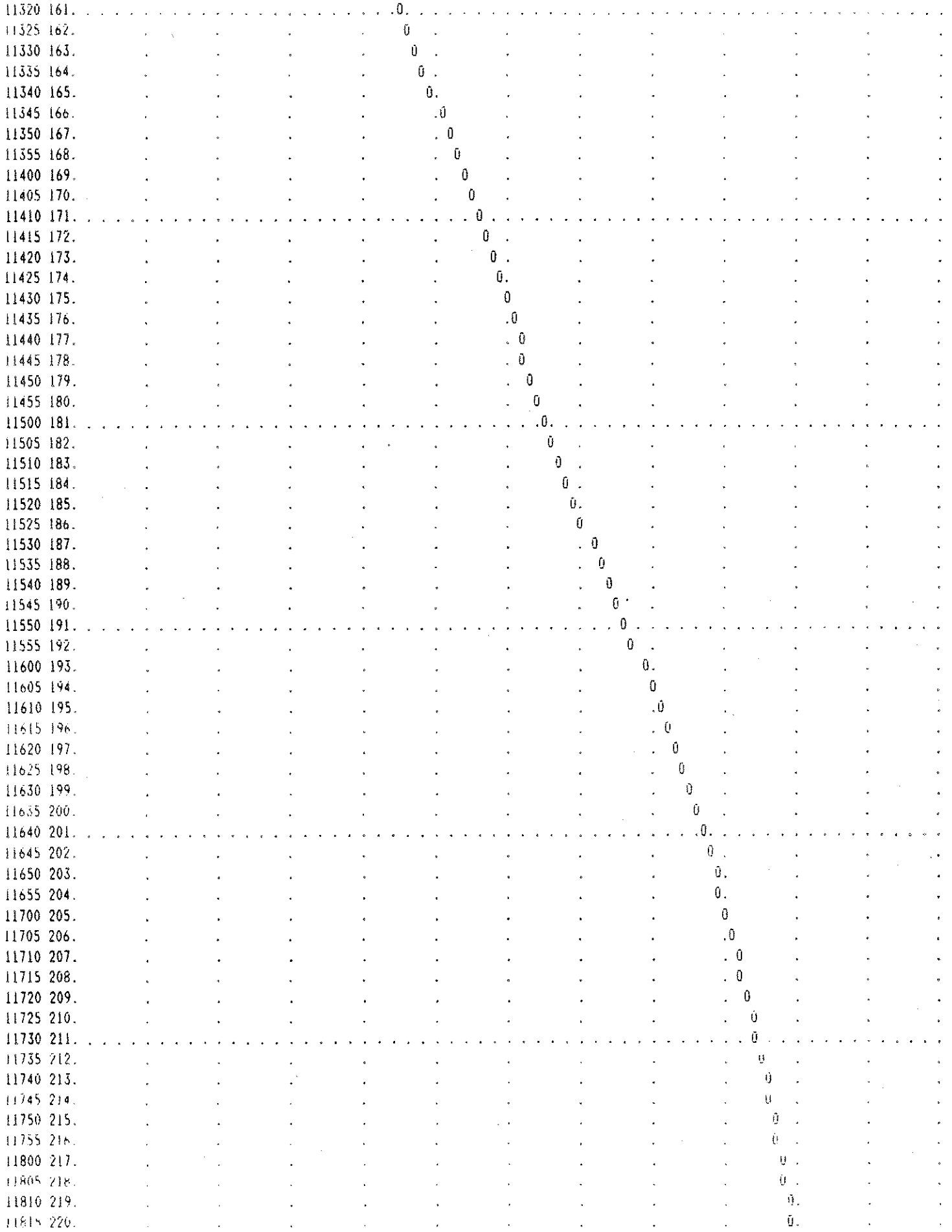
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11715 208.
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11745 214.
11750 215.
11755 216.
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11810 219.
11815 220.

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11915	232.	.0
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11930	235.	.0
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11940	237.	.0
11945	238.	.0
11950	239.	.0
11955	240.	.0
12000	241.	.0
12005	242.	.0
12010	243.	.0
12015	244.	.0
12020	245.	.0
12025	246.	.0
12030	247.	.0
12035	248.	.0
12040	249.	.0
12045	250.	.0
12050	251.	.0
12055	252.	.0
12100	253.	.0
12105	254.	.0
12110	255.	.0
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12120	257.	.0
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 12325 282.         .         .         .         .         .         .         .         .         .        0 .         .         .
 12330 283.         .         .         .         .         .         .         .         .         .        0 .         .         .
 12335 284.         .         .         .         .         .         .         .         .         .        0 .         .         .
 12340 285.         .         .         .         .         .         .         .         .         .        0 .         .         .
 12345 286.         .         .         .         .         .         .         .         .         .        0 .         .         .
 12350 287.         .         .         .         .         .         .         .         .         .        0 .         .         .
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 20000 289.         .         .         .         .         .         .         .         .         .       0  .         .         .
 20005 290.         .         .         .         .         .         .         .         .         .       0  .         .         .
 20010 291. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .0. . . . . . . . . . . .
 20015 292.         .         .         .         .         .         .         .         .         .       0  .         .         .
 20020 293.         .         .         .         .         .         .         .         .         .       0  .         .         .
 20025 294.         .         .         .         .         .         .         .         .         .       0  .         .         .
 20030 295.         .         .         .         .         .         .         .         .         .      0   .         .         .
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 20050 299.         .         .         .         .         .         .         .         .         .      0   .         .         .
 20055 300.---------.---------.---------.---------.---------.---------.---------.---------.---------.-----0---.---------.---------.
1

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN    19775. TO    36999.
                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    70561.
                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     1925. TO   337747.
                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     9058. TO    77382.
                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     1226.
                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.)


*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***


            **************
            *            *
 486 KK     *      RESV  *
            *            *
            **************

 488 KO          OUTPUT CONTROL VARIABLES
                        IPRNT           1  PRINT CONTROL
                        IPLOT           2  PLOT CONTROL
                        QSCAL          0.  HYDROGRAPH PLOT SCALE

               HYDROGRAPH ROUTING DATA
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489 RS        STORAGE POUTING
                   NSTPS          1  NUMBER OF SUBREACHES
                    ITYP       STOR  TYPE OF INITIAL CONDITION
                  RSVRIC        .00  INITIAL CONDITION
                       X        .00 WORKING R AND D COEFFICIENT

490 SA             AREA         .0     65.0     200.0     400.0     600.0     800.0    1000.0    1200.0

491 SE        ELEVATION    1564.20   1565.00   1566.60   1569.50   1571.80   1574.20   1576.10   1579.20

492 SL        LOW-LEVEL OUTLET
                   ELEVL    1561.50  ELEVATION AT CENTER OF OUTLET
                   CAREA      15.90  CROSS-SECTIONAL AREA
                    COQL        .70  COEFFICIENT
                    EXPL       1.50  EXPONENT OF HEAD

493 SS        SPILLWAY
                    CREL    1574.80  SPILLWAY CREST ELEVATION
                   SPWID     600.00  SPILLWAY WIDTH
                    COQW       3.00  WEIR COEFFICIENT
                    EXPW       1.50  EXPONENT OF HEAD

494 ST        TOP OF DAM
                   TOPEL    1579.50  ELEVATION AT TOP OF DAM
                  DAMWID   28829.00  DAM WIDTH
                    COQD       3.30  WEIR COEFFICIENT
                    EXPD       1.50  EXPONENT OF HEAD
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***

COMPUTED STORAGE-ELEVATION DATA

STORAGE	.00	17.33	219.47	1072.90	2215.18	3889.36	5595.86	9001.12
ELEVATION	1564.20	1565.00	1566.60	1569.50	1571.80	1574.20	1576.10	1579.20

COMPUTED OUTFLOW-ELEVATION DATA

(EXCLUDING FLOW OVER DAM)

OUTFLOW	.00	579.78	813.08	1101.82	1451.91	1869.30	2359.81	2929.45	3584.08	4329.62
ELEVATION	1564.20	1564.98	1565.86	1566.84	1567.92	1569.10	1570.37	1571.75	1573.23	1574.80
OUTFLOW	4490.64	4809.33	5388.79	6306.65	7639.98	9465.85	11863.04	14908.50	18681.66	23259.61
ELEVATION	1574.94	1575.12	1575.37	1575.70	1576.10	1576.57	1577.12	1577.74	1578.43	1579.20

COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

(INCLUDING FLOW OVER DAM)

STORAGE	.00	16.14	17.33	99.16	219.47	269.37	536.29	918.36	1072.90	1453.39
OUTFLOW	396.01	579.78	584.48	813.08	1028.07	1101.82	1451.91	1869.30	2019.78	2359.81
ELEVATION	1564.20	1564.98	1565.00	1565.86	1566.60	1566.84	1567.92	1569.10	1569.50	1570.37
STORAGE	2185.56	2215.18	3151.59	3889.36	4387.56	4508.02	4666.85	4896.32	5202.67	5593.78
OUTFLOW	2929.45	2950.72	3584.08	4039.92	4329.62	4490.64	4809.33	5388.79	6306.65	7639.98
ELEVATION	1571.75	1571.80	1573.23	1574.20	1574.80	1574.94	1575.12	1575.37	1575.70	1576.10
STORAGE	6074.04	6646.43	7318.59	8100.04	9001.12					
OUTFLOW	9465.85	11863.04	14908.50	18681.66	23259.61					

ELEVATION 1576.57 1577.12 1577.74 1578.43 1579.20

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HYDROGRAPH AT RESV
TRANSPOSITION AREA .3 SQ MI

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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
1		0000	1	396.	.0	1564.2	1		0820	101	0.	.0	1564.2	1		1640	201	3380.	2837.9	1572.8
1		0005	2	0.	.0	1564.2	1		0825	102	396.	.0	1564.2	1		1645	202	3399.	2867.1	1572.8
1		0010	3	0.	.0	1564.2	1		0830	103	0.	.0	1564.2	1		1650	203	3416.	2893.3	1572.9
1		0015	4	0.	.0	1564.2	1		0835	104	396.	.0	1564.2	1		1655	204	3432.	2916.8	1572.9
1		0020	5	0.	.0	1564.2	1		0840	105	0.	.0	1564.2	1		1700	205	3445.	2937.7	1572.9
1		0025	6	0.	.0	1564.2	1		0845	106	396.	.0	1564.2	1		1705	206	3458.	2956.2	1572.9
1		0030	7	0.	.0	1564.2	1		0850	107	0.	.0	1564.2	1		1710	207	3468.	2972.5	1573.0
1		0035	8	0.	.0	1564.2	1		0855	108	396.	.0	1564.2	1		1715	208	3477.	2986.7	1573.0
1		0040	9	0.	.0	1564.2	1		0900	109	0.	.0	1564.2	1		1720	209	3486.	2999.1	1573.0
1		0045	10	0.	.0	1564.2	1		0905	110	396.	.0	1564.2	1		1725	210	3492.	3009.7	1573.0
1		0050	11	0.	.0	1564.2	1		0910	111	0.	.0	1564.2	1		1730	211	3498.	3018.8	1573.0
1		0055	12	0.	.0	1564.2	1		0915	112	396.	.0	1564.2	1		1735	212	3503.	3026.3	1573.0
1		0100	13	0.	.0	1564.2	1		0920	113	0.	.0	1564.2	1		1740	213	3507.	3032.4	1573.1
1		0105	14	0.	.0	1564.2	1		0925	114	396.	.0	1564.2	1		1745	214	3510.	3037.3	1573.1
1		0110	15	0.	.0	1564.2	1		0930	115	0.	.0	1564.2	1		1750	215	3513.	3041.2	1573.1
1		0115	16	0.	.0	1564.2	1		0935	116	396.	.0	1564.2	1		1755	216	3515.	3043.9	1573.1
1		0120	17	0.	.0	1564.2	1		0940	117	0.	.0	1564.2	1		1800	217	3516.	3045.7	1573.1
1		0125	18	0.	.0	1564.2	1		0945	118	396.	.0	1564.2	1		1805	218	3516.	3046.7	1573.1
1		0130	19	0.	.0	1564.2	1		0950	119	0.	.0	1564.2	1		1810	219	3517.	3046.8	1573.1
1		0135	20	0.	.0	1564.2	1		0955	120	396.	.0	1564.2	1		1815	220	3516.	3046.5	1573.1
1		0140	21	0.	.0	1564.2	1		1000	121	0.	.0	1564.2	1		1820	221	3515.	3045.1	1573.1
1		0145	22	0.	.0	1564.2	1		1005	122	396.	.0	1564.2	1		1825	222	3514.	3043.3	1573.1
1		0150	23	0.	.0	1564.2	1		1010	123	0.	.0	1564.2	1		1830	223	3513.	3041.0	1573.1
1		0155	24	0.	.0	1564.2	1		1015	124	396.	.0	1564.2	1		1835	224	3511.	3038.1	1573.1
1		0200	25	0.	.0	1564.2	1		1020	125	0.	.0	1564.2	1		1840	225	3509.	3034.8	1573.1
1		0205	26	0.	.0	1564.2	1		1025	126	396.	.0	1564.2	1		1845	226	3506.	3030.9	1573.1
1		0210	27	0.	.0	1564.2	1		1030	127	0.	.0	1564.2	1		1850	227	3503.	3026.6	1573.0
1		0215	28	0.	.0	1564.2	1		1035	128	396.	.0	1564.2	1		1855	228	3500.	3021.9	1573.0
1		0220	29	0.	.0	1564.2	1		1040	129	0.	.0	1564.2	1		1900	229	3497.	3016.9	1573.0
1		0225	30	0.	.0	1564.2	1		1045	130	396.	.0	1564.2	1		1905	230	3494.	3011.5	1573.0
1		0230	31	0.	.0	1564.2	1		1050	131	0.	.0	1564.2	1		1910	231	3490.	3005.8	1573.0
1		0235	32	0.	.0	1564.2	1		1055	132	396.	.0	1564.2	1		1915	232	3486.	2999.8	1573.0
1		0240	33	0.	.0	1564.2	1		1100	133	396.	.0	1564.2	1		1920	233	3482.	2993.5	1573.0
1		0245	34	0.	.0	1564.2	1		1105	134	396.	.0	1564.2	1		1925	234	3478.	2986.9	1573.0
1		0250	35	0.	.0	1564.2	1		1110	135	396.	.0	1564.2	1		1930	235	3473.	2980.1	1573.0
1		0255	36	0.	.0	1564.2	1		1115	136	396.	.0	1564.2	1		1935	236	3469.	2973.2	1573.0
1		0300	37	0.	.0	1564.2	1		1120	137	396.	.0	1564.2	1		1940	237	3464.	2966.0	1573.0
1		0305	38	0.	.0	1564.2	1		1125	138	396.	.0	1564.2	1		1945	238	3459.	2958.6	1573.0
1		0310	39	0.	.0	1564.2	1		1130	139	396.	.0	1564.2	1		1950	239	3454.	2951.1	1572.9
1		0315	40	0.	.0	1564.2	1		1135	140	432.	.1	1564.4	1		1955	240	3449.	2943.3	1572.9
1		0320	41	0.	.0	1564.2	1		1140	141	450.	.5	1564.4	1		2000	241	3444.	2935.4	1572.9
1		0325	42	0.	.0	1564.2	1		1145	142	469.	1.1	1564.5	1		2005	242	3439.	2927.3	1572.9
1		0330	43	0.	.0	1564.2	1		1150	143	490.	2.3	1564.6	1		2010	243	3433.	2919.1	1572.9
1		0335	44	0.	.0	1564.2	1		1155	144	512.	4.3	1564.7	1		2015	244	3428.	2910.7	1572.9
1		0340	45	0.	.0	1564.2	1		1200	145	536.	7.5	1564.8	1		2020	245	3422.	2902.3	1572.9
1		0345	46	0.	.0	1564.2	1		1205	146	562.	12.2	1564.9	1		2025	246	3416.	2893.7	1572.9
1		0350	47	0.	.0	1564.2	1		1210	147	590.	18.7	1565.0	1		2030	247	3411.	2884.9	1572.8
1		0355	48	0.	.0	1564.2	1		1215	148	621.	27.4	1565.1	1		2035	248	3405.	2876.0	1572.8
1		0400	49	0.	.0	1564.2	1		1220	149	657.	38.5	1565.3	1		2040	249	3399.	2866.9	1572.8

1	0405	50	0.	.0	1564.2	*	1	1225	150	698.	32.4	1565.4	*	1	2045	250	[illegible]	[illegible]
1	0410	51	0.	.0	1564.2	*	1	1230	151	743.	69.3	1565.6	*	1	2050	251	3387.	2848.5	1572.8
1	0415	52	0.	.0	1564.2	*	1	1235	152	792.	89.5	1565.8	*	1	2055	252	3380.	2839.0	1572.8
1	0420	53	0.	.0	1564.2	*	1	1240	153	842.	113.0	1566.0	*	1	2100	253	3374.	2829.5	1572.8
1	0425	54	0.	.0	1564.2	*	1	1245	154	895.	140.1	1566.2	*	1	2105	254	3368.	2819.9	1572.7
1	0430	55	0.	.0	1564.2	*	1	1250	155	950.	170.7	1566.3	*	1	2110	255	3361.	2810.0	1572.7
1	0435	56	0.	.0	1564.2	*	1	1255	156	1005.	204.6	1566.5	*	1	2115	256	3355.	2800.2	1572.7
1	0440	57	0.	.0	1564.2	*	1	1300	157	1062.	241.8	1566.7	*	1	2120	257	3348.	2790.2	1572.7
1	0445	58	0.	.0	1564.2	*	1	1305	158	1120.	282.2	1566.9	*	1	2125	258	3341.	2780.1	1572.7
1	0450	59	0.	.0	1564.2	*	1	1310	159	1181.	325.3	1567.1	*	1	2130	259	3334.	2769.9	1572.7
1	0455	60	0.	.0	1564.2	*	1	1315	160	1243.	370.8	1567.3	*	1	2135	260	3327.	2759.6	1572.7
1	0500	61	0.	.0	1564.2	*	1	1320	161	1305.	418.2	1567.5	*	1	2140	261	3320.	2749.2	1572.6
1	0505	62	0.	.0	1564.2	*	1	1325	162	1367.	467.1	1567.7	*	1	2145	262	3313.	2738.7	1572.6
1	0510	63	0.	.0	1564.2	*	1	1330	163	1429.	517.2	1567.9	*	1	2150	263	3306.	2728.2	1572.6
1	0515	64	0.	.0	1564.2	*	1	1335	164	1490.	568.4	1568.0	*	1	2155	264	3299.	2717.6	1572.6
1	0520	65	0.	.0	1564.2	*	1	1340	165	1551.	620.7	1568.2	*	1	2200	265	3292.	2706.9	1572.6
1	0525	66	0.	.0	1564.2	*	1	1345	166	1611.	674.1	1568.4	*	1	2205	266	3285.	2696.1	1572.6
1	0530	67	0.	.0	1564.2	*	1	1350	167	1672.	728.9	1568.6	*	1	2210	267	3278.	2685.3	1572.5
1	0535	68	0.	.0	1564.2	*	1	1355	168	1732.	785.0	1568.7	*	1	2215	268	3270.	2674.5	1572.5
1	0540	69	0.	.0	1564.2	*	1	1400	169	1792.	842.4	1568.9	*	1	2220	269	3263.	2663.6	1572.5
1	0545	70	0.	.0	1564.2	*	1	1405	170	1852.	901.2	1569.1	*	1	2225	270	3255.	2652.6	1572.5
1	0550	71	0.	.0	1564.2	*	1	1410	171	1912.	961.2	1569.2	*	1	2230	271	3248.	2641.6	1572.5
1	0555	72	0.	.0	1564.2	*	1	1415	172	1972.	1022.5	1569.4	*	1	2235	272	3240.	2630.6	1572.5
1	0600	73	0.	.0	1564.2	*	1	1420	173	2031.	1084.9	1569.5	*	1	2240	273	3233.	2619.5	1572.4
1	0605	74	0.	.0	1564.2	*	1	1425	174	2091.	1148.5	1569.7	*	1	2245	274	3225.	2608.4	1572.4
1	0610	75	0.	.0	1564.2	*	1	1430	175	2150.	1213.4	1569.8	*	1	2250	275	3218.	2597.2	1572.4
1	0615	76	0.	.0	1564.2	*	1	1435	176	2209.	1279.6	1570.0	*	1	2255	276	3210.	2586.1	1572.4
1	0620	77	0.	.0	1564.2	*	1	1440	177	2268.	1347.0	1570.1	*	1	2300	277	3202.	2574.9	1572.4
1	0625	78	0.	.0	1564.2	*	1	1445	178	2328.	1415.9	1570.3	*	1	2305	278	3195.	2563.7	1572.4
1	0630	79	0.	.0	1564.2	*	1	1450	179	2387.	1486.0	1570.4	*	1	2310	279	3187.	2552.5	1572.3
1	0635	80	0.	.0	1564.2	*	1	1455	180	2447.	1557.6	1570.6	*	1	2315	280	3179.	2541.3	1572.3
1	0640	81	0.	.0	1564.2	*	1	1500	181	2506.	1630.4	1570.7	*	1	2320	281	3172.	2530.0	1572.3
1	0645	82	396.	.0	1564.2	*	1	1505	182	2566.	1704.3	1570.9	*	1	2325	282	3164.	2518.8	1572.3
1	0650	83	0.	.0	1564.2	*	1	1510	183	2625.	1779.1	1571.0	*	1	2330	283	3156.	2507.6	1572.3
1	0655	84	396.	.0	1564.2	*	1	1515	184	2683.	1854.4	1571.2	*	1	2335	284	3148.	2496.4	1572.3
1	0700	85	0.	.0	1564.2	*	1	1520	185	2741.	1929.8	1571.3	*	1	2340	285	3141.	2485.1	1572.2
1	0705	86	396.	.0	1564.2	*	1	1525	186	2797.	2004.9	1571.4	*	1	2345	286	3133.	2473.9	1572.2
1	0710	87	0.	.0	1564.2	*	1	1530	187	2852.	2079.2	1571.6	*	1	2350	287	3125.	2462.7	1572.2
1	0715	88	396.	.0	1564.2	*	1	1535	188	2905.	2152.2	1571.7	*	1	2355	288	3117.	2451.6	1572.2
1	0720	89	0.	.0	1564.2	*	1	1540	189	2957.	2223.4	1571.8	*	2	0000	289	3110.	2440.4	1572.2
1	0725	90	396.	.0	1564.2	*	1	1545	190	3006.	2292.3	1571.9	*	2	0005	290	3102.	2429.3	1572.1
1	0730	91	0.	.0	1564.2	*	1	1550	191	3053.	2358.8	1572.0	*	2	0010	291	3094.	2418.2	1572.1
1	0735	92	396.	.0	1564.2	*	1	1555	192	3097.	2422.3	1572.1	*	2	0015	292	3086.	2407.0	1572.1
1	0740	93	0.	.0	1564.2	*	1	1600	193	3139.	2482.6	1572.2	*	2	0020	293	3079.	2395.8	1572.1
1	0745	94	396.	.0	1564.2	*	1	1605	194	3178.	2539.5	1572.3	*	2	0025	294	3071.	2384.6	1572.1
1	0750	95	0.	.0	1564.2	*	1	1610	195	3215.	2592.9	1572.4	*	2	0030	295	3063.	2373.4	1572.1
1	0755	96	396.	.0	1564.2	*	1	1615	196	3249.	2642.6	1572.5	*	2	0035	296	3055.	2362.2	1572.0
1	0800	97	0.	.0	1564.2	*	1	1620	197	3280.	2688.7	1572.6	*	2	0040	297	3047.	2350.8	1572.0
1	0805	98	396.	.0	1564.2	*	1	1625	198	3308.	2731.2	1572.6	*	2	0045	298	3039.	2339.3	1572.0
1	0810	99	0.	.0	1564.2	*	1	1630	199	3334.	2770.2	1572.7	*	2	0050	299	3031.	2327.8	1572.0
1	0815	100	396.	.0	1564.2	*	1	1635	200	3358.	2805.7	1572.7	*	2	0055	300	3023.	2316.2	1572.0
						*							*						

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PEAK OUTFLOW IS 3517. AT TIME 18.17 HOURS

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)				

		(CFS)				
+ 3517.	18.17		3427.	1593.	1536.	1536.
		(INCHES)	.611	1.137	1.138	1.138
		(AC-FT)	1699.	3161.	3162.	3162.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
3047.	18.17	2910.	1194.	1150.	1150.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)				
1573.08	18.17	1572.88	1568.11	1567.97	1567.97

CUMULATIVE AREA = 52.12 SQ MI

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HYDROGRAPH AT RESV
TRANSPOSITION AREA 5.0 SQ MI

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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
1		0000	1	396.	.0	1564.2	1		0820	101	396.	.0	1564.2	1		1640	201	3304.	2724.7	1572.6
1		0005	2	0.	.0	1564.2	1		0825	102	0.	.0	1564.2	1		1645	202	3323.	2752.6	1572.6
1		0010	3	0.	.0	1564.2	1		0830	103	396.	.0	1564.2	1		1650	203	3339.	2777.6	1572.7
1		0015	4	0.	.0	1564.2	1		0835	104	0.	.0	1564.2	1		1655	204	3354.	2800.0	1572.7
1		0020	5	0.	.0	1564.2	1		0840	105	396.	.0	1564.2	1		1700	205	3368.	2819.9	1572.7
1		0025	6	0.	.0	1564.2	1		0845	106	0.	.0	1564.2	1		1705	206	3379.	2837.6	1572.8
1		0030	7	0.	.0	1564.2	1		0850	107	396.	.0	1564.2	1		1710	207	3390.	2853.1	1572.8
1		0035	8	0.	.0	1564.2	1		0855	108	0.	.0	1564.2	1		1715	208	3399.	2866.6	1572.8
1		0040	9	0.	.0	1564.2	1		0900	109	396.	.0	1564.2	1		1720	209	3406.	2878.4	1572.8
1		0045	10	0.	.0	1564.2	1		0905	110	0.	.0	1564.2	1		1725	210	3413.	2888.5	1572.8
1		0050	11	0.	.0	1564.2	1		0910	111	396.	.0	1564.2	1		1730	211	3419.	2897.0	1572.9
1		0055	12	0.	.0	1564.2	1		0915	112	0.	.0	1564.2	1		1735	212	3423.	2904.1	1572.9
1		0100	13	0.	.0	1564.2	1		0920	113	396.	.0	1564.2	1		1740	213	3427.	2909.8	1572.9
1		0105	14	0.	.0	1564.2	1		0925	114	0.	.0	1564.2	1		1745	214	3430.	2914.3	1572.9
1		0110	15	0.	.0	1564.2	1		0930	115	396.	.0	1564.2	1		1750	215	3432.	2917.8	1572.9
1		0115	16	0.	.0	1564.2	1		0935	116	0.	.0	1564.2	1		1755	216	3434.	2920.2	1572.9
1		0120	17	0.	.0	1564.2	1		0940	117	396.	.0	1564.2	1		1800	217	3435.	2921.8	1572.9
1		0125	18	0.	.0	1564.2	1		0945	118	0.	.0	1564.2	1		1805	218	3435.	2922.6	1572.9
1		0130	19	0.	.0	1564.2	1		0950	119	396.	.0	1564.2	1		1810	219	3435.	2922.6	1572.9
1		0135	20	0.	.0	1564.2	1		0955	120	0.	.0	1564.2	1		1815	220	3435.	2921.9	1572.9
1		0140	21	0.	.0	1564.2	1		1000	121	396.	.0	1564.2	1		1820	221	3434.	2920.6	1572.9
1		0145	22	0.	.0	1564.2	1		1005	122	0.	.0	1564.2	1		1825	222	3433.	2918.8	1572.9
1		0150	23	0.	.0	1564.2	1		1010	123	396.	.0	1564.2	1		1830	223	3431.	2916.3	1572.9
1		0155	24	0.	.0	1564.2	1		1015	124	0.	.0	1564.2	1		1835	224	3429.	2913.3	1572.9
1		0200	25	0.	.0	1564.2	1		1020	125	396.	.0	1564.2	1		1840	225	3427.	2910.0	1572.9
1		0205	26	0.	.0	1564.2	1		1025	126	0.	.0	1564.2	1		1845	226	3425.	2906.1	1572.9
1		0210	27	0.	.0	1564.2	1		1030	127	396.	.0	1564.2	1		1850	227	3422.	2901.9	1572.9
1		0215	28	0.	.0	1564.2	1		1035	128	0.	.0	1564.2	1		1855	228	3419.	2897.2	1572.9
1		0220	29	0.	.0	1564.2	1		1040	129	396.	.0	1564.2	1		1900	229	3415.	2892.2	1572.9
1		0225	30	0.	.0	1564.2	1		1045	130	0.	.0	1564.2	1		1905	230	3412.	2886.8	1572.8
1		0230	31	0.	.0	1564.2	1		1050	131	396.	.0	1564.2	1		1910	231	3408.	2881.1	1572.8
1		0235	32	0.	.0	1564.2	1		1055	132	0.	.0	1564.2	1		1915	232	3404.	2875.2	1572.8
1		0240	33	0.	.0	1564.2	1		1100	133	396.	.0	1564.2	1		1920	233	3400.	2869.1	1572.8

1	0245	34	0.	.0	1564.2	*	1	1105	134	396.	.0	1564.2	*	1	1925	234	3396.	2862.7	1572.8
1	0250	35	0.	.0	1564.2	*	1	1110	135	396.	.0	1564.2	*	1	1930	235	3392.	2856.0	1572.8
1	0255	36	0.	.0	1564.2	*	1	1115	136	396.	.0	1564.2	*	1	1935	236	3387.	2849.1	1572.8
1	0300	37	0.	.0	1564.2	*	1	1120	137	396.	.0	1564.2	*	1	1940	237	3382.	2842.1	1572.8
1	0305	38	0.	.0	1564.2	*	1	1125	138	396.	.0	1564.2	*	1	1945	238	3378.	2834.9	1572.8
1	0310	39	0.	.0	1564.2	*	1	1130	139	396.	.0	1564.2	*	1	1950	239	3373.	2827.4	1572.8
1	0315	40	0.	.0	1564.2	*	1	1135	140	398.	.0	1564.2	*	1	1955	240	3368.	2819.9	1572.7
1	0320	41	0.	.0	1564.2	*	1	1140	141	436.	.2	1564.4	*	1	2000	241	3362.	2812.1	1572.7
1	0325	42	0.	.0	1564.2	*	1	1145	142	456.	.6	1564.5	*	1	2005	242	3357.	2804.2	1572.7
1	0330	43	0.	.0	1564.2	*	1	1150	143	477.	1.5	1564.6	*	1	2010	243	3352.	2796.2	1572.7
1	0335	44	0.	.0	1564.2	*	1	1155	144	500.	3.1	1564.7	*	1	2015	244	3346.	2787.9	1572.7
1	0340	45	0.	.0	1564.2	*	1	1200	145	524.	5.8	1564.8	*	1	2020	245	3341.	2779.6	1572.7
1	0345	46	0.	.0	1564.2	*	1	1205	146	551.	10.0	1564.9	*	1	2025	246	3335.	2771.2	1572.7
1	0350	47	0.	.0	1564.2	*	1	1210	147	579.	15.9	1565.0	*	1	2030	247	3329.	2762.6	1572.7
1	0355	48	0.	.0	1564.2	*	1	1215	148	609.	23.9	1565.1	*	1	2035	248	3324.	2753.9	1572.7
1	0400	49	0.	.0	1564.2	*	1	1220	149	644.	34.2	1565.2	*	1	2040	249	3318.	2745.0	1572.6
1	0405	50	0.	.0	1564.2	*	1	1225	150	684.	47.3	1565.4	*	1	2045	250	3312.	2736.0	1572.6
1	0410	51	0.	.0	1564.2	*	1	1230	151	728.	63.2	1565.6	*	1	2050	251	3306.	2727.0	1572.6
1	0415	52	0.	.0	1564.2	*	1	1235	152	775.	82.3	1565.7	*	1	2055	252	3299.	2717.7	1572.6
1	0420	53	0.	.0	1564.2	*	1	1240	153	825.	104.6	1565.9	*	1	2100	253	3293.	2708.4	1572.6
1	0425	54	0.	.0	1564.2	*	1	1245	154	877.	130.4	1566.1	*	1	2105	254	3287.	2699.0	1572.6
1	0430	55	0.	.0	1564.2	*	1	1250	155	931.	159.5	1566.3	*	1	2110	255	3280.	2689.4	1572.6
1	0435	56	0.	.0	1564.2	*	1	1255	156	985.	191.9	1566.5	*	1	2115	256	3274.	2679.7	1572.5
1	0440	57	0.	.0	1564.2	*	1	1300	157	1040.	227.5	1566.6	*	1	2120	257	3267.	2669.9	1572.5
1	0445	58	0.	.0	1564.2	*	1	1305	158	1097.	266.1	1566.8	*	1	2125	258	3260.	2660.1	1572.5
1	0450	59	0.	.0	1564.2	*	1	1310	159	1156.	307.3	1567.0	*	1	2130	259	3254.	2650.1	1572.5
1	0455	60	0.	.0	1564.2	*	1	1315	160	1216.	350.9	1567.2	*	1	2135	260	3247.	2640.0	1572.5
1	0500	61	0.	.0	1564.2	*	1	1320	161	1276.	396.3	1567.4	*	1	2140	261	3240.	2629.9	1572.5
1	0505	62	0.	.0	1564.2	*	1	1325	162	1337.	443.1	1567.6	*	1	2145	262	3233.	2619.6	1572.4
1	0510	63	0.	.0	1564.2	*	1	1330	163	1397.	491.2	1567.8	*	1	2150	263	3226.	2609.3	1572.4
1	0515	64	0.	.0	1564.2	*	1	1335	164	1457.	540.4	1567.9	*	1	2155	264	3219.	2598.9	1572.4
1	0520	65	0.	.0	1564.2	*	1	1340	165	1516.	590.6	1568.1	*	1	2200	265	3212.	2588.5	1572.4
1	0525	66	0.	.0	1564.2	*	1	1345	166	1575.	641.9	1568.3	*	1	2205	266	3205.	2578.0	1572.4
1	0530	67	0.	.0	1564.2	*	1	1350	167	1634.	694.5	1568.4	*	1	2210	267	3197.	2567.4	1572.4
1	0535	68	0.	.0	1564.2	*	1	1355	168	1693.	748.5	1568.6	*	1	2215	268	3190.	2556.8	1572.3
1	0540	69	0.	.0	1564.2	*	1	1400	169	1752.	803.7	1568.8	*	1	2220	269	3183.	2546.1	1572.3
1	0545	70	0.	.0	1564.2	*	1	1405	170	1810.	860.3	1568.9	*	1	2225	270	3175.	2535.4	1572.3
1	0550	71	0.	.0	1564.2	*	1	1410	171	1869.	918.0	1569.1	*	1	2230	271	3168.	2524.7	1572.3
1	0555	72	0.	.0	1564.2	*	1	1415	172	1927.	977.0	1569.3	*	1	2235	272	3161.	2514.0	1572.3
1	0600	73	0.	.0	1564.2	*	1	1420	173	1986.	1037.1	1569.4	*	1	2240	273	3153.	2503.1	1572.3
1	0605	74	0.	.0	1564.2	*	1	1425	174	2044.	1098.4	1569.6	*	1	2245	274	3146.	2492.3	1572.2
1	0610	75	0.	.0	1564.2	*	1	1430	175	2102.	1161.0	1569.7	*	1	2250	275	3138.	2481.4	1572.2
1	0615	76	0.	.0	1564.2	*	1	1435	176	2160.	1224.7	1569.9	*	1	2255	276	3131.	2470.5	1572.2
1	0620	77	0.	.0	1564.2	*	1	1440	177	2218.	1289.8	1570.0	*	1	2300	277	3123.	2459.6	1572.2
1	0625	78	0.	.0	1564.2	*	1	1445	178	2276.	1356.2	1570.2	*	1	2305	278	3115.	2448.7	1572.2
1	0630	79	0.	.0	1564.2	*	1	1450	179	2335.	1423.9	1570.3	*	1	2310	279	3108.	2437.7	1572.2
1	0635	80	0.	.0	1564.2	*	1	1455	180	2393.	1492.9	1570.5	*	1	2315	280	3100.	2426.7	1572.1
1	0640	81	0.	.0	1564.2	*	1	1500	181	2451.	1563.1	1570.6	*	1	2320	281	3093.	2415.8	1572.1
1	0645	82	0.	.0	1564.2	*	1	1505	182	2510.	1634.4	1570.7	*	1	2325	282	3085.	2404.8	1572.1
1	0650	83	396.	.0	1564.2	*	1	1510	183	2567.	1706.5	1570.9	*	1	2330	283	3077.	2393.8	1572.1
1	0655	84	0.	.0	1564.2	*	1	1515	184	2625.	1779.2	1571.0	*	1	2335	284	3070.	2382.9	1572.1
1	0700	85	396	.0	1564.2	*	1	1520	185	2681.	1852.0	1571.2	*	1	2340	285	3062.	2372.0	1572.1
1	0705	86	0.	.0	1564.2	*	1	1525	186	2737.	1924.5	1571.3	*	1	2345	286	3054.	2361.1	1572.0
1	0710	87	396.	.0	1564.2	*	1	1530	187	2791.	1996.2	1571.4	*	1	2350	287	3047.	2350.2	1572.0
1	0715	88	0.	.0	1564.2	*	1	1535	188	2843.	2066.5	1571.5	*	1	2355	288	3039.	2339.4	1572.0
1	0720	89	396	.0	1564.2	*	1	1540	189	2893.	2135.2	1571.7	*	2	0000	289	3031.	2328.5	1572.0
1	0725	90	0.	.0	1564.2	*	1	1545	190	2941.	2201.6	1571.8	*	2	0005	290	3024.	2317.7	1572.0
1	0730	91	396.	.0	1564.2	*	1	1550	191	2987.	2265.5	1571.9	*	2	0010	291	3016.	2306.8	1572.0
1	0735	92	0.	.0	1564.2	*	1	1555	192	3030.	2326.6	1572.0	*	2	0015	292	3008.	2295.9	1571.9
1	0740	93	396.	.0	1564.2	*	1	1600	193	3071.	2384.5	1572.1	*	2	0020	293	3001.	2285.1	1571.9

1	0745	94	0.	.0	1564.2	*	1	1605	194	3109.	2439.1	1572.2	*	2	0025	294	2993.	2274.1	1571.9
1	0750	95	396.	.0	1564.2	*	1	1610	195	3144.	2490.2	1572.2	*	2	0030	295	2985.	2263.2	1571.9
1	0755	96	0.	.0	1564.2	*	1	1615	196	3177.	2537.8	1572.3	*	2	0035	296	2977.	2252.2	1571.9
1	0800	97	396.	.0	1564.2	*	1	1620	197	3207.	2581.9	1572.4	*	2	0040	297	2969.	2241.1	1571.8
1	0805	98	0.	.0	1564.2	*	1	1625	198	3235.	2622.6	1572.5	*	2	0045	298	2961.	2230.0	1571.8
1	0810	99	396.	.0	1564.2	*	1	1630	199	3260.	2659.8	1572.5	*	2	0050	299	2953.	2218.8	1571.8
1	0815	100	0.	.0	1564.2	*	1	1635	200	3283.	2693.8	1572.6	*	2	0055	300	2945.	2207.5	1571.8
						*							*						

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PEAK OUTFLOW IS 3435. AT TIME 18.08 HOURS

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
		(CFS)				
+ 3435.	18.08		3347.	1556.	1499.	1499.
		(INCHES)	.597	1.110	1.111	1.111
		(AC-FT)	1660.	3086.	3087.	3087.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE 6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
2923.	18.08	2789.	1143.	1101.	1101.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE 6-HR	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)				
1572.90	18.08	1572.70	1568.03	1567.88	1567.88

CUMULATIVE AREA = 52.12 SQ MI

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HYDROGRAPH AT RESV
TRANSPOSITION AREA 15.0 SQ MI

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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
							*								*							
1		0000	1	396.	.0	1564.2	*	1		0820	101	0.	.0	1564.2	*	1		1640	201	3124.	2460.4	1572.2
1		0005	2	0.	.0	1564.2	*	1		0825	102	396.	.0	1564.2	*	1		1645	202	3141.	2485.1	1572.2
1		0010	3	0.	.0	1564.2	*	1		0830	103	0.	.0	1564.2	*	1		1650	203	3156.	2507.3	1572.3
1		0015	4	0.	.0	1564.2	*	1		0835	104	396.	.0	1564.2	*	1		1655	204	3170.	2527.1	1572.3
1		0020	5	0.	.0	1564.2	*	1		0840	105	0.	.0	1564.2	*	1		1700	205	3182.	2544.7	1572.3
1		0025	6	0.	.0	1564.2	*	1		0845	106	396.	.0	1564.2	*	1		1705	206	3192.	2560.2	1572.4
1		0030	7	0.	.0	1564.2	*	1		0850	107	0.	.0	1564.2	*	1		1710	207	3202.	2573.8	1572.4
1		0035	8	0.	.0	1564.2	*	1		0855	108	396.	.0	1564.2	*	1		1715	208	3210.	2585.7	1572.4
1		0040	9	0.	.0	1564.2	*	1		0900	109	0.	.0	1564.2	*	1		1720	209	3217.	2596.0	1572.4
1		0045	10	0.	.0	1564.2	*	1		0905	110	396.	.0	1564.2	*	1		1725	210	3223.	2604.7	1572.4
1		0050	11	0.	.0	1564.2	*	1		0910	111	0.	.0	1564.2	*	1		1730	211	3228.	2612.1	1572.4
1		0055	12	0.	.0	1564.2	*	1		0915	112	396.	.0	1564.2	*	1		1735	212	3232.	2618.1	1572.4
1		0100	13	0.	.0	1564.2	*	1		0920	113	0.	.0	1564.2	*	1		1740	213	3235.	2622.9	1572.5
1		0105	14	0.	.0	1564.2	*	1		0925	114	396.	.0	1564.2	*	1		1745	214	3238.	2626.6	1572.5
1		0110	15	0.	.0	1564.2	*	1		0930	115	0.	.0	1564.2	*	1		1750	215	3240.	2629.3	1572.5
1		0115	16	0.	.0	1564.2	*	1		0935	116	396.	.0	1564.2	*	1		1755	216	3241.	2631.2	1572.5
1		0120	17	0.	.0	1564.2	*	1		0940	117	0.	.0	1564.2	*	1		1800	217	3241.	2632.2	1572.5

1	0125	18	0.	.0	1564.2	*	1	0945	118	396.	.0	1564.2	*	1	1805	218	3242.	2632.5	1572.5
1	0130	19	0.	.0	1564.2	*	1	0950	119	0.	.0	1564.2	*	1	1810	219	3241.	2632.2	1572.5
1	0135	20	0.	.0	1564.2	*	1	0955	120	396.	.0	1564.2	*	1	1815	220	3241.	2631.2	1572.5
1	0140	21	0.	.0	1564.2	*	1	1000	121	0.	.0	1564.2	*	1	1820	221	3240.	2629.7	1572.5
1	0145	22	0.	.0	1564.2	*	1	1005	122	396.	.0	1564.2	*	1	1825	222	3238.	2627.6	1572.5
1	0150	23	0.	.0	1564.2	*	1	1010	123	0.	.0	1564.2	*	1	1830	223	3237.	2625.1	1572.5
1	0155	24	0.	.0	1564.2	*	1	1015	124	396.	.0	1564.2	*	1	1835	224	3235.	2622.1	1572.5
1	0200	25	0.	.0	1564.2	*	1	1020	125	0.	.0	1564.2	*	1	1840	225	3232.	2618.6	1572.4
1	0205	26	0.	.0	1564.2	*	1	1025	126	396.	.0	1564.2	*	1	1845	226	3230.	2614.7	1572.4
1	0210	27	0.	.0	1564.2	*	1	1030	127	0.	.0	1564.2	*	1	1850	227	3227.	2610.4	1572.4
1	0215	28	0.	.0	1564.2	*	1	1035	128	396.	.0	1564.2	*	1	1855	228	3224.	2605.8	1572.4
1	0220	29	0.	.0	1564.2	*	1	1040	129	0.	.0	1564.2	*	1	1900	229	3220.	2600.9	1572.4
1	0225	30	0.	.0	1564.2	*	1	1045	130	396.	.0	1564.2	*	1	1905	230	3217.	2595.7	1572.4
1	0230	31	0.	.0	1564.2	*	1	1050	131	0.	.0	1564.2	*	1	1910	231	3213.	2590.2	1572.4
1	0235	32	0.	.0	1564.2	*	1	1055	132	396.	.0	1564.2	*	1	1915	232	3209.	2584.4	1572.4
1	0240	33	0.	.0	1564.2	*	1	1100	133	0.	.0	1564.2	*	1	1920	233	3205.	2578.4	1572.4
1	0245	34	0.	.0	1564.2	*	1	1105	134	396.	.0	1564.2	*	1	1925	234	3201.	2572.3	1572.4
1	0250	35	0.	.0	1564.2	*	1	1110	135	0.	.0	1564.2	*	1	1930	235	3196.	2565.9	1572.4
1	0255	36	0.	.0	1564.2	*	1	1115	136	396.	.0	1564.2	*	1	1935	236	3192.	2559.3	1572.4
1	0300	37	0.	.0	1564.2	*	1	1120	137	396.	.0	1564.2	*	1	1940	237	3187.	2552.6	1572.3
1	0305	38	0.	.0	1564.2	*	1	1125	138	396.	.0	1564.2	*	1	1945	238	3182.	2545.7	1572.3
1	0310	39	0.	.0	1564.2	*	1	1130	139	396.	.0	1564.2	*	1	1950	239	3178.	2538.6	1572.3
1	0315	40	0.	.0	1564.2	*	1	1135	140	396.	.0	1564.2	*	1	1955	240	3173.	2531.4	1572.3
1	0320	41	0.	.0	1564.2	*	1	1140	141	396.	.0	1564.2	*	1	2000	241	3168.	2524.0	1572.3
1	0325	42	0.	.0	1564.2	*	1	1145	142	417.	.0	1564.3	*	1	2005	242	3162.	2516.5	1572.3
1	0330	43	0.	.0	1564.2	*	1	1150	143	446.	.4	1564.4	*	1	2010	243	3157.	2508.9	1572.3
1	0335	44	0.	.0	1564.2	*	1	1155	144	471.	1.2	1564.5	*	1	2015	244	3152.	2501.1	1572.3
1	0340	45	0.	.0	1564.2	*	1	1200	145	498.	3.0	1564.6	*	1	2020	245	3146.	2493.2	1572.[illegible]
1	0345	46	0.	.0	1564.2	*	1	1205	146	525.	5.9	1564.8	*	1	2025	246	3141.	2485.1	1572.2
1	0350	47	0.	.0	1564.2	*	1	1210	147	554.	10.5	1564.9	*	1	2030	247	3135.	2477.0	1572.2
1	0355	48	0.	.0	1564.2	*	1	1215	148	583.	16.9	1565.0	*	1	2035	248	3129.	2468.8	1572.2
1	0400	49	0.	.0	1564.2	*	1	1220	149	614.	25.4	1565.1	*	1	2040	249	3124.	2460.4	1572.2
1	0405	50	0.	.0	1564.2	*	1	1225	150	651.	36.3	1565.3	*	1	2045	250	3118.	2451.9	1572.2
1	0410	51	0.	.0	1564.2	*	1	1230	151	691.	49.9	1565.4	*	1	2050	251	3112.	2443.3	1572.2
1	0415	52	0.	.0	1564.2	*	1	1235	152	736.	66.4	1565.6	*	1	2055	252	3106.	2434.5	1572.2
1	0420	53	0.	.0	1564.2	*	1	1240	153	783.	85.9	1565.8	*	1	2100	253	3099.	2425.7	1572.1
1	0425	54	0.	.0	1564.2	*	1	1245	154	833.	108.5	1565.9	*	1	2105	254	3093.	2416.8	1572.1
1	0430	55	0.	.0	1564.2	*	1	1250	155	884.	134.2	1566.1	*	1	2110	255	3087.	2407.8	1572.1
1	0435	56	0.	.0	1564.2	*	1	1255	156	937.	162.9	1566.3	*	1	2115	256	3081.	2398.6	1572.1
1	0440	57	0.	.0	1564.2	*	1	1300	157	989.	194.5	1566.5	*	1	2120	257	3074.	2389.4	1572.1
1	0445	58	0.	.0	1564.2	*	1	1305	158	1042.	228.9	1566.6	*	1	2125	258	3068.	2380.1	1572.1
1	0450	59	0.	.0	1564.2	*	1	1310	159	1097.	265.7	1566.8	*	1	2130	259	3061.	2370.7	1572.1
1	0455	60	0.	.0	1564.2	*	1	1315	160	1152.	304.8	1567.0	*	1	2135	260	3054.	2361.2	1572.0
1	0500	61	0.	.0	1564.2	*	1	1320	161	1209.	345.5	1567.2	*	1	2140	261	3048.	2351.6	1572.0
1	0505	62	0.	.0	1564.2	*	1	1325	162	1265.	387.7	1567.4	*	1	2145	262	3041.	2342.0	1572.0
1	0510	63	0.	.0	1564.2	*	1	1330	163	1321.	431.0	1567.5	*	1	2150	263	3034.	2332.3	1572.0
1	0515	64	0.	.0	1564.2	*	1	1335	164	1377.	475.3	1567.7	*	1	2155	264	3027.	2322.5	1572.0
1	0520	65	0.	.0	1564.2	*	1	1340	165	1433.	520.6	1567.9	*	1	2200	265	3020.	2312.7	1572.0
1	0525	66	0.	.0	1564.2	*	1	1345	166	1489.	567.0	1568.0	*	1	2205	266	3013.	2302.9	1571.9
1	0530	67	0.	.0	1564.2	*	1	1350	167	1544.	614.6	1568.2	*	1	2210	267	3006.	2292.9	1571.9
1	0535	68	0.	.0	1564.2	*	1	1355	168	1599.	663.5	1568.3	*	1	2215	268	2999.	2283.0	1571.9
1	0540	69	0.	.0	1564.2	*	1	1400	169	1655.	713.6	1568.5	*	1	2220	269	2992.	2273.0	1571.9
1	0545	70	0.	.0	1564.2	*	1	1405	170	1710.	764.9	1568.7	*	1	2225	270	2985.	2262.9	1571.9
1	0550	71	0.	.0	1564.2	*	1	1410	171	1766.	817.4	1568.8	*	1	2230	271	2978.	2252.8	1571.9
1	0555	72	0.	.0	1564.2	*	1	1415	172	1821.	871.0	1569.0	*	1	2235	272	2970.	2242.6	1571.8
1	0600	73	0.	.0	1564.2	*	1	1420	173	1877.	925.8	1569.1	*	1	2240	273	2963.	2232.5	1571.8
1	0605	74	0.	.0	1564.2	*	1	1425	174	1932.	981.6	1569.3	*	1	2245	274	2956.	2222.3	1571.8
1	0610	75	0.	.0	1564.2	*	1	1430	175	1987.	1038.6	1569.4	*	1	2250	275	2949.	2212.1	1571.8
1	0615	76	0.	.0	1564.2	*	1	1435	176	2042.	1096.8	1569.6	*	1	2255	276	2941.	2201.9	1571.8
1	0620	77	0.	.0	1564.2	*	1	1440	177	2098.	1156.2	1569.7	*	1	2300	277	2934.	2191.6	1571.8

1	0745	94	0.	.0	1564.2	*	1	1605	194	3109.	2439.1	1572.2	*	2	0025	294	2993.	2274.1	1571.9
1	0750	95	396.	.0	1564.2	*	1	1610	195	3144.	2490.2	1572.2	*	2	0030	295	2985.	2263.2	1571.9
1	0755	96	0.	.0	1564.2	*	1	1615	196	3177.	2537.8	1572.3	*	2	0035	296	2977.	2252.2	1571.9
1	0800	97	396.	.0	1564.2	*	1	1620	197	3207.	2581.9	1572.4	*	2	0040	297	2969.	2241.1	1571.8
1	0805	98	0.	.0	1564.2	*	1	1625	198	3235.	2622.6	1572.5	*	2	0045	298	2961.	2230.0	1571.8
1	0810	99	396.	.0	1564.2	*	1	1630	199	3260.	2659.8	1572.5	*	2	0050	299	2953.	2218.8	1571.8
1	0815	100	0.	.0	1564.2	*	1	1635	200	3283.	2693.8	1572.6	*	2	0055	300	2945.	2207.5	1571.8
						*							*						

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PEAK OUTFLOW IS 3435. AT TIME 18.08 HOURS

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
		(CFS)				
+ 3435.	18.08		3347.	1556.	1499.	1499.
		(INCHES)	.597	1.110	1.111	1.111
		(AC-FT)	1660.	3086.	3087.	3087.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
2923.	18.08	2789.	1143.	1101.	1101.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)				
1572.90	18.08	1572.70	1568.03	1567.88	1567.88

CUMULATIVE AREA = 52.12 SQ MI

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HYDROGRAPH AT RESV
TRANSPOSITION AREA 15.0 SQ MI

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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
1		0000	1	396.	.0	1564.2	*	1		0820	101	0.	.0	1564.2	*	1		1640	201	3124.	2460.4	1572.2
1		0005	2	0.	.0	1564.2	*	1		0825	102	396.	.0	1564.2	*	1		1645	202	3141.	2485.1	1572.2
1		0010	3	0.	.0	1564.2	*	1		0830	103	0.	.0	1564.2	*	1		1650	203	3156.	2507.3	1572.3
1		0015	4	0.	.0	1564.2	*	1		0835	104	396.	.0	1564.2	*	1		1655	204	3170.	2527.1	1572.3
1		0020	5	0.	.0	1564.2	*	1		0840	105	0.	.0	1564.2	*	1		1700	205	3182.	2544.7	1572.3
1		0025	6	0.	.0	1564.2	*	1		0845	106	396.	.0	1564.2	*	1		1705	206	3192.	2560.2	1572.4
1		0030	7	0.	.0	1564.2	*	1		0850	107	0.	.0	1564.2	*	1		1710	207	3202.	2573.8	1572.4
1		0035	8	0.	.0	1564.2	*	1		0855	108	396.	.0	1564.2	*	1		1715	208	3210.	2585.7	1572.4
1		0040	9	0.	.0	1564.2	*	1		0900	109	0.	.0	1564.2	*	1		1720	209	3217.	2596.0	1572.4
1		0045	10	0.	.0	1564.2	*	1		0905	110	396.	.0	1564.2	*	1		1725	210	3223.	2604.7	1572.4
1		0050	11	0.	.0	1564.2	*	1		0910	111	0.	.0	1564.2	*	1		1730	211	3228.	2612.1	1572.4
1		0055	12	0.	.0	1564.2	*	1		0915	112	396.	.0	1564.2	*	1		1735	212	3232.	2618.1	1572.4
1		0100	13	0.	.0	1564.2	*	1		0920	113	0.	.0	1564.2	*	1		1740	213	3235.	2622.9	1572.5
1		0105	14	0.	.0	1564.2	*	1		0925	114	396.	.0	1564.2	*	1		1745	214	3238.	2626.6	1572.5
1		0110	15	0.	.0	1564.2	*	1		0930	115	0.	.0	1564.2	*	1		1750	215	3240.	2629.3	1572.5
1		0115	16	0.	.0	1564.2	*	1		0935	116	396.	.0	1564.2	*	1		1755	216	3241.	2631.2	1572.5
1		0120	17	0.	.0	1564.2	*	1		0940	117	0.	.0	1564.2	*	1		1800	217	3241.	2632.2	1572.5

1	0125	18	0.	.0	1564.2	*	1	0945	118	396.	.0	1564.2	*	1	1805	218	3242.	2632.5	1572.5
1	0130	19	0.	.0	1564.2	*	1	0950	119	0.	.0	1564.2	*	1	1810	219	3241.	2632.2	1572.5
1	0135	20	0.	.0	1564.2	*	1	0955	120	396.	.0	1564.2	*	1	1815	220	3241.	2631.2	1572.5
1	0140	21	0.	.0	1564.2	*	1	1000	121	0.	.0	1564.2	*	1	1820	221	3240.	2629.7	1572.5
1	0145	22	0.	.0	1564.2	*	1	1005	122	396.	.0	1564.2	*	1	1825	222	3238.	2627.6	1572.5
1	0150	23	0.	.0	1564.2	*	1	1010	123	0.	.0	1564.2	*	1	1830	223	3237.	2625.1	1572.5
1	0155	24	0.	.0	1564.2	*	1	1015	124	396.	.0	1564.2	*	1	1835	224	3235.	2622.1	1572.5
1	0200	25	0.	.0	1564.2	*	1	1020	125	0.	.0	1564.2	*	1	1840	225	3232.	2618.6	1572.4
1	0205	26	0.	.0	1564.2	*	1	1025	126	396.	.0	1564.2	*	1	1845	226	3230.	2614.7	1572.4
1	0210	27	0.	.0	1564.2	*	1	1030	127	0.	.0	1564.2	*	1	1850	227	3227.	2610.4	1572.4
1	0215	28	0.	.0	1564.2	*	1	1035	128	396.	.0	1564.2	*	1	1855	228	3224.	2605.8	1572.4
1	0220	29	0.	.0	1564.2	*	1	1040	129	0.	.0	1564.2	*	1	1900	229	3220.	2600.9	1572.4
1	0225	30	0.	.0	1564.2	*	1	1045	130	396.	.0	1564.2	*	1	1905	230	3217.	2595.7	1572.4
1	0230	31	0.	.0	1564.2	*	1	1050	131	0.	.0	1564.2	*	1	1910	231	3213.	2590.2	1572.4
1	0235	32	0.	.0	1564.2	*	1	1055	132	396.	.0	1564.2	*	1	1915	232	3209.	2584.4	1572.4
1	0240	33	0.	.0	1564.2	*	1	1100	133	0.	.0	1564.2	*	1	1920	233	3205.	2578.4	1572.4
1	0245	34	0.	.0	1564.2	*	1	1105	134	396.	.0	1564.2	*	1	1925	234	3201.	2572.3	1572.4
1	0250	35	0.	.0	1564.2	*	1	1110	135	0.	.0	1564.2	*	1	1930	235	3196.	2565.9	1572.4
1	0255	36	0.	.0	1564.2	*	1	1115	136	396.	.0	1564.2	*	1	1935	236	3192.	2559.3	1572.4
1	0300	37	0.	.0	1564.2	*	1	1120	137	396.	.0	1564.2	*	1	1940	237	3187.	2552.6	1572.3
1	0305	38	0.	.0	1564.2	*	1	1125	138	396.	.0	1564.2	*	1	1945	238	3182.	2545.7	1572.3
1	0310	39	0.	.0	1564.2	*	1	1130	139	396.	.0	1564.2	*	1	1950	239	3178.	2538.6	1572.3
1	0315	40	0.	.0	1564.2	*	1	1135	140	396.	.0	1564.2	*	1	1955	240	3173.	2531.4	1572.3
1	0320	41	0.	.0	1564.2	*	1	1140	141	396.	.0	1564.2	*	1	2000	241	3168.	2524.0	1572.3
1	0325	42	0.	.0	1564.2	*	1	1145	142	417.	.0	1564.3	*	1	2005	242	3162.	2516.5	1572.3
1	0330	43	0.	.0	1564.2	*	1	1150	143	446.	.4	1564.4	*	1	2010	243	3157.	2508.9	1572.3
1	0335	44	0.	.0	1564.2	*	1	1155	144	471.	1.2	1564.5	*	1	2015	244	3152.	2501.1	1572.3
1	0340	45	0.	.0	1564.2	*	1	1200	145	498.	3.0	1564.6	*	1	2020	245	3146.	2493.2	1572.3
1	0345	46	0.	.0	1564.2	*	1	1205	146	525.	5.9	1564.8	*	1	2025	246	3141.	2485.1	1572.2
1	0350	47	0.	.0	1564.2	*	1	1210	147	554.	10.5	1564.9	*	1	2030	247	3135.	2477.0	1572.2
1	0355	48	0.	.0	1564.2	*	1	1215	148	583.	16.9	1565.0	*	1	2035	248	3129.	2468.8	1572.2
1	0400	49	0.	.0	1564.2	*	1	1220	149	614.	25.4	1565.1	*	1	2040	249	3124.	2460.4	1572.2
1	0405	50	0.	.0	1564.2	*	1	1225	150	651.	36.3	1565.3	*	1	2045	250	3118.	2451.9	1572.2
1	0410	51	0.	.0	1564.2	*	1	1230	151	691.	49.9	1565.4	*	1	2050	251	3112.	2443.3	1572.2
1	0415	52	0.	.0	1564.2	*	1	1235	152	736.	66.4	1565.6	*	1	2055	252	3106.	2434.5	1572.2
1	0420	53	0.	.0	1564.2	*	1	1240	153	783.	85.9	1565.8	*	1	2100	253	3099.	2425.7	1572.1
1	0425	54	0.	.0	1564.2	*	1	1245	154	833.	108.5	1565.9	*	1	2105	254	3093.	2416.8	1572.1
1	0430	55	0.	.0	1564.2	*	1	1250	155	884.	134.2	1566.1	*	1	2110	255	3087.	2407.8	1572.1
1	0435	56	0.	.0	1564.2	*	1	1255	156	937.	162.9	1566.3	*	1	2115	256	3081.	2398.6	1572.1
1	0440	57	0.	.0	1564.2	*	1	1300	157	989.	194.5	1566.5	*	1	2120	257	3074.	2389.4	1572.1
1	0445	58	0.	.0	1564.2	*	1	1305	158	1042.	228.9	1566.6	*	1	2125	258	3068.	2380.1	1572.1
1	0450	59	0.	.0	1564.2	*	1	1310	159	1097.	265.7	1566.8	*	1	2130	259	3061.	2370.7	1572.1
1	0455	60	0.	.0	1564.2	*	1	1315	160	1152.	304.8	1567.0	*	1	2135	260	3054.	2361.2	1572.0
1	0500	61	0.	.0	1564.2	*	1	1320	161	1209.	345.5	1567.2	*	1	2140	261	3048.	2351.6	1572.0
1	0505	62	0.	.0	1564.2	*	1	1325	162	1265.	387.7	1567.4	*	1	2145	262	3041.	2342.0	1572.0
1	0510	63	0.	.0	1564.2	*	1	1330	163	1321.	431.0	1567.5	*	1	2150	263	3034.	2332.3	1572.0
1	0515	64	0.	.0	1564.2	*	1	1335	164	1377.	475.3	1567.7	*	1	2155	264	3027.	2322.5	1572.0
1	0520	65	0.	.0	1564.2	*	1	1340	165	1433.	520.6	1567.9	*	1	2200	265	3020.	2312.7	1572.0
1	0525	66	0.	.0	1564.2	*	1	1345	166	1489.	567.0	1568.0	*	1	2205	266	3013.	2302.9	1571.9
1	0530	67	0.	.0	1564.2	*	1	1350	167	1544.	614.6	1568.2	*	1	2210	267	3006.	2292.9	1571.9
1	0535	68	0.	.0	1564.2	*	1	1355	168	1599.	663.5	1568.3	*	1	2215	268	2999.	2283.0	1571.9
1	0540	69	0.	.0	1564.2	*	1	1400	169	1655.	713.6	1568.5	*	1	2220	269	2992.	2273.0	1571.9
1	0545	70	0.	.0	1564.2	*	1	1405	170	1710.	764.9	1568.7	*	1	2225	270	2985.	2262.9	1571.9
1	0550	71	0.	.0	1564.2	*	1	1410	171	1766.	817.4	1568.8	*	1	2230	271	2978.	2252.8	1571.9
1	0555	72	0.	.0	1564.2	*	1	1415	172	1821.	871.0	1569.0	*	1	2235	272	2970.	2242.6	1571.8
1	0600	73	0.	.0	1564.2	*	1	1420	173	1877.	925.8	1569.1	*	1	2240	273	2963.	2232.5	1571.8
1	0605	74	0.	.0	1564.2	*	1	1425	174	1932.	981.6	1569.3	*	1	2245	274	2956.	2222.3	1571.8
1	0610	75	0.	.0	1564.2	*	1	1430	175	1987.	1038.6	1569.4	*	1	2250	275	2949.	2212.1	1571.8
1	0615	76	0.	.0	1564.2	*	1	1435	176	2042.	1096.8	1569.6	*	1	2255	276	2941.	2201.9	1571.8
1	0620	77	0.	.0	1564.2	*	1	1440	177	2098.	1156.2	1569.7	*	1	2300	277	2934.	2191.6	1571.8

1	0625	78	0.	.0	1564.2	*	1	1445	178	2153.	1216.8	1569.8	*	1	2305	278	2926.	2181.3	1571.7
1	0630	79	0.	.0	1564.2	*	1	1450	179	2208.	1278.7	1570.0	*	1	2310	279	2919.	2171.1	1571.7
1	0635	80	0.	.0	1564.2	*	1	1455	180	2264.	1341.8	1570.1	*	1	2315	280	2912.	2160.8	1571.7
1	0640	81	0.	.0	1564.2	*	1	1500	181	2319.	1406.0	1570.3	*	1	2320	281	2904.	2150.5	1571.7
1	0645	82	0.	.0	1564.2	*	1	1505	182	2375.	1471.2	1570.4	*	1	2325	282	2897.	2140.2	1571.7
1	0650	83	0.	.0	1564.2	*	1	1510	183	2430.	1537.2	1570.5	*	1	2330	283	2889.	2130.0	1571.7
1	0655	84	0.	.0	1564.2	*	1	1515	184	2485.	1603.7	1570.7	*	1	2335	284	2882.	2119.7	1571.6
1	0700	85	0.	.0	1564.2	*	1	1520	185	2538.	1670.3	1570.8	*	1	2340	285	2874.	2109.4	1571.6
1	0705	86	396.	.0	1564.2	*	1	1525	186	2591.	1736.7	1570.9	*	1	2345	286	2867.	2099.2	1571.6
1	0710	87	0.	.0	1564.2	*	1	1530	187	2643.	1802.3	1571.1	*	1	2350	287	2859.	2089.0	1571.6
1	0715	88	396.	.0	1564.2	*	1	1535	188	2693.	1866.7	1571.2	*	1	2355	288	2852.	2078.8	1571.6
1	0720	89	0.	.0	1564.2	*	1	1540	189	2740.	1929.4	1571.3	*	2	0000	289	2844.	2068.6	1571.6
1	0725	90	396.	.0	1564.2	*	1	1545	190	2786.	1990.0	1571.4	*	2	0005	290	2837.	2058.5	1571.5
1	0730	91	0.	.0	1564.2	*	1	1550	191	2829.	2048.2	1571.5	*	2	0010	291	2829.	2048.3	1571.5
1	0735	92	396.	.0	1564.2	*	1	1555	192	2870.	2103.6	1571.6	*	2	0015	292	2822.	2038.1	1571.5
1	0740	93	0.	.0	1564.2	*	1	1600	193	2908.	2156.0	1571.7	*	2	0020	293	2814.	2027.9	1571.5
1	0745	94	396.	.0	1564.2	*	1	1605	194	2944.	2205.3	1571.8	*	2	0025	294	2807.	2017.7	1571.5
1	0750	95	0.	.0	1564.2	*	1	1610	195	2977.	2251.3	1571.9	*	2	0030	295	2799.	2007.5	1571.4
1	0755	96	396.	.0	1564.2	*	1	1615	196	3007.	2294.0	1571.9	*	2	0035	296	2791.	1997.2	1571.4
1	0800	97	0.	.0	1564.2	*	1	1620	197	3035.	2333.4	1572.0	*	2	0040	297	2784.	1986.9	1571.4
1	0805	98	396.	.0	1564.2	*	1	1625	198	3060.	2369.6	1572.1	*	2	0045	298	2776.	1976.4	1571.4
1	0810	99	0.	.0	1564.2	*	1	1630	199	3083.	2402.8	1572.1	*	2	0050	299	2768.	1966.0	1571.4
1	0815	100	396.	.0	1564.2	*	1	1635	200	3105.	2433.0	1572.2	*	2	0055	300	2760.	1955.5	1571.4
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PEAK OUTFLOW IS 3242. AT TIME 18.08 HOURS

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
		(CFS)				
+ 3242.	18.08		3155.	1465.	1412.	1412.
		(INCHES)	.563	1.045	1.046	1.046
		(AC-FT)	1565.	2906.	2907.	2907.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
2633.	18.08	2507.	1025.	987.	987.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)				
1572.47	18.08	1572.27	1567.82	1567.69	1567.69

CUMULATIVE AREA = 52.12 SQ MI

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HYDROGRAPH AT RESV
TRANSPOSITION AREA 30.0 SQ MI

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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
1		0000	1	396.	.0	1564.2	*	1		0820	101	0.	.0	1564.2	*	1		1640	201	3019.	2311.4	1572.0

1	0005	2	0.	.0	1564.2	*	1	0825	102	396.	.0	1564.2	*	1	1645	202	3035.	2334.1	1572.0
1	0010	3	0.	.0	1564.2	*	1	0830	103	0.	.0	1564.2	*	1	1650	203	3050.	2354.5	1572.0
1	0015	4	0.	.0	1564.2	*	1	0835	104	396.	.0	1564.2	*	1	1655	204	3062.	2372.8	1572.1
1	0020	5	0.	.0	1564.2	*	1	0840	105	0.	.0	1564.2	*	1	1700	205	3074.	2388.9	1572.1
1	0025	6	0.	.0	1564.2	*	1	0845	106	396.	.0	1564.2	*	1	1705	206	3084.	2403.1	1572.1
1	0030	7	0.	.0	1564.2	*	1	0850	107	0.	.0	1564.2	*	1	1710	207	3092.	2415.6	1572.1
1	0035	8	0.	.0	1564.2	*	1	0855	108	396.	.0	1564.2	*	1	1715	208	3100.	2426.4	1572.1
1	0040	9	0.	.0	1564.2	*	1	0900	109	0.	.0	1564.2	*	1	1720	209	3106.	2435.7	1572.2
1	0045	10	0.	.0	1564.2	*	1	0905	110	396.	.0	1564.2	*	1	1725	210	3112.	2443.6	1572.2
1	0050	11	0.	.0	1564.2	*	1	0910	111	0.	.0	1564.2	*	1	1730	211	3116.	2450.2	1572.2
1	0055	12	0.	.0	1564.2	*	1	0915	112	396.	.0	1564.2	*	1	1735	212	3120.	2455.6	1572.2
1	0100	13	0.	.0	1564.2	*	1	0920	113	0.	.0	1564.2	*	1	1740	213	3123.	2459.9	1572.2
1	0105	14	0.	.0	1564.2	*	1	0925	114	396.	.0	1564.2	*	1	1745	214	3125.	2463.1	1572.2
1	0110	15	0.	.0	1564.2	*	1	0930	115	0.	.0	1564.2	*	1	1750	215	3127.	2465.4	1572.2
1	0115	16	0.	.0	1564.2	*	1	0935	116	396.	.0	1564.2	*	1	1755	216	3128.	2466.9	1572.2
1	0120	17	0.	.0	1564.2	*	1	0940	117	0.	.0	1564.2	*	1	1800	217	3129.	2467.7	1572.2
1	0125	18	0.	.0	1564.2	*	1	0945	118	396.	.0	1564.2	*	1	1805	218	3129.	2467.8	1572.2
1	0130	19	0.	.0	1564.2	*	1	0950	119	0.	.0	1564.2	*	1	1810	219	3128.	2467.2	1572.2
1	0135	20	0.	.0	1564.2	*	1	0955	120	396.	.0	1564.2	*	1	1815	220	3127.	2466.1	1572.2
1	0140	21	0.	.0	1564.2	*	1	1000	121	0.	.0	1564.2	*	1	1820	221	3126.	2464.4	1572.2
1	0145	22	0.	.0	1564.2	*	1	1005	122	396.	.0	1564.2	*	1	1825	222	3125.	2462.3	1572.2
1	0150	23	0.	.0	1564.2	*	1	1010	123	0.	.0	1564.2	*	1	1830	223	3123.	2459.7	1572.2
1	0155	24	0.	.0	1564.2	*	1	1015	124	396.	.0	1564.2	*	1	1835	224	3121.	2456.6	1572.2
1	0200	25	0.	.0	1564.2	*	1	1020	125	0.	.0	1564.2	*	1	1840	225	3118.	2453.0	1572.2
1	0205	26	0.	.0	1564.2	*	1	1025	126	396.	.0	1564.2	*	1	1845	226	3116.	2449.2	1572.2
1	0210	27	0.	.0	1564.2	*	1	1030	127	0.	.0	1564.2	*	1	1850	227	3113.	2445.0	1572.2
1	0215	28	0.	.0	1564.2	*	1	1035	128	396.	.0	1564.2	*	1	1855	228	3110.	2440.4	1572.2
1	0220	29	0.	.0	1564.2	*	1	1040	129	0.	.0	1564.2	*	1	1900	229	3106.	2435.6	1572.2
1	0225	30	0.	.0	1564.2	*	1	1045	130	396.	.0	1564.2	*	1	1905	230	3103.	2430.5	1572.2
1	0230	31	0.	.0	1564.2	*	1	1050	131	0.	.0	1564.2	*	1	1910	231	3099.	2425.1	1572.1
1	0235	32	0.	.0	1564.2	*	1	1055	132	396.	.0	1564.2	*	1	1915	232	3095.	2419.5	1572.1
1	0240	33	0.	.0	1564.2	*	1	1100	133	0.	.0	1564.2	*	1	1920	233	3091.	2413.7	1572.1
1	0245	34	0.	.0	1564.2	*	1	1105	134	396.	.0	1564.2	*	1	1925	234	3087.	2407.7	1572.1
1	0250	35	0.	.0	1564.2	*	1	1110	135	0.	.0	1564.2	*	1	1930	235	3083.	2401.4	1572.1
1	0255	36	0.	.0	1564.2	*	1	1115	136	396.	.0	1564.2	*	1	1935	236	3078.	2395.1	1572.1
1	0300	37	0.	.0	1564.2	*	1	1120	137	0.	.0	1564.2	*	1	1940	237	3073.	2388.4	1572.1
1	0305	38	0.	.0	1564.2	*	1	1125	138	415.	.0	1564.3	*	1	1945	238	3069.	2381.7	1572.1
1	0310	39	0.	.0	1564.2	*	1	1130	139	396.	.0	1564.2	*	1	1950	239	3064.	2374.8	1572.1
1	0315	40	0.	.0	1564.2	*	1	1135	140	396.	.0	1564.2	*	1	1955	240	3059.	2367.8	1572.1
1	0320	41	0.	.0	1564.2	*	1	1140	141	396.	.0	1564.2	*	1	2000	241	3054.	2360.6	1572.0
1	0325	42	0.	.0	1564.2	*	1	1145	142	396.	.0	1564.2	*	1	2005	242	3049.	2353.3	1572.0
1	0330	43	0.	.0	1564.2	*	1	1150	143	429.	.1	1564.3	*	1	2010	243	3043.	2345.8	1572.0
1	0335	44	0.	.0	1564.2	*	1	1155	144	456.	.7	1564.5	*	1	2015	244	3038.	2338.3	1572.0
1	0340	45	0.	.0	1564.2	*	1	1200	145	484.	1.9	1564.6	*	1	2020	245	3033.	2330.6	1572.0
1	0345	46	0.	.0	1564.2	*	1	1205	146	512.	4.3	1564.7	*	1	2025	246	3027.	2322.8	1572.0
1	0350	47	0.	.0	1564.2	*	1	1210	147	540.	8.1	1564.8	*	1	2030	247	3022.	2315.0	1572.0
1	0355	48	0.	.0	1564.2	*	1	1215	148	569.	13.7	1564.9	*	1	2035	248	3016.	2307.0	1572.0
1	0400	49	0.	.0	1564.2	*	1	1220	149	599.	21.1	1565.1	*	1	2040	249	3010.	2298.8	1571.9
1	0405	50	0.	.0	1564.2	*	1	1225	150	633.	30.9	1565.2	*	1	2045	250	3004.	2290.6	1571.9
1	0410	51	0.	.0	1564.2	*	1	1230	151	672.	43.1	1565.3	*	1	2050	251	2999.	2282.3	1571.9
1	0415	52	0.	.0	1564.2	*	1	1235	152	714.	58.1	1565.5	*	1	2055	252	2993.	2273.8	1571.9
1	0420	53	0.	.0	1564.2	*	1	1240	153	760.	75.9	1565.7	*	1	2100	253	2987.	2265.3	1571.9
1	0425	54	0.	.0	1564.2	*	1	1245	154	808.	96.7	1565.8	*	1	2105	254	2980.	2256.7	1571.9
1	0430	55	0.	.0	1564.2	*	1	1250	155	857.	120.4	1566.0	*	1	2110	255	2974.	2248.0	1571.9
1	0435	56	0.	.0	1564.2	*	1	1255	156	908.	147.0	1566.2	*	1	2115	256	2968.	2239.1	1571.8
1	0440	57	0.	.0	1564.2	*	1	1300	157	960.	176.5	1566.4	*	1	2120	257	2961.	2230.2	1571.8
1	0445	58	0.	.0	1564.2	*	1	1305	158	1011.	208.5	1566.5	*	1	2125	258	2955.	2221.2	1571.8
1	0450	59	0.	.0	1564.2	*	1	1310	159	1063.	242.9	1566.7	*	1	2130	259	2949.	2212.1	1571.8
1	0455	60	0.	.0	1564.2	*	1	1315	160	1116.	279.3	1566.9	*	1	2135	260	2942.	2203.0	1571.8
1	0500	61	0.	.0	1564.2	*	1	1320	161	1170.	317.4	1567.1	*	1	2140	261	2935.	2193.7	1571.8

1	0505	62	0.	.0	1564.2	*	1	1325	162	1224.	356.9	1567.2	*	1	2145	262	2929.	2184.4	1571.7
1	0510	63	0.	.0	1564.2	*	1	1330	163	1278.	397.4	1567.4	*	1	2150	263	2922.	2175.0	1571.7
1	0515	64	0.	.0	1564.2	*	1	1335	164	1332.	439.0	1567.6	*	1	2155	264	2915.	2165.6	1571.7
1	0520	65	0.	.0	1564.2	*	1	1340	165	1385.	481.5	1567.7	*	1	2200	265	2908.	2156.2	1571.7
1	0525	66	0.	.0	1564.2	*	1	1345	166	1438.	525.1	1567.9	*	1	2205	266	2901.	2146.7	1571.7
1	0530	67	0.	.0	1564.2	*	1	1350	167	1492.	569.8	1568.0	*	1	2210	267	2894.	2137.1	1571.7
1	0535	68	0.	.0	1564.2	*	1	1355	168	1545.	615.8	1568.2	*	1	2215	268	2887.	2127.5	1571.7
1	0540	69	0.	.0	1564.2	*	1	1400	169	1599.	662.9	1568.3	*	1	2220	269	2880.	2117.9	1571.6
1	0545	70	0.	.0	1564.2	*	1	1405	170	1652.	711.2	1568.5	*	1	2225	270	2873.	2108.2	1571.6
1	0550	71	0.	.0	1564.2	*	1	1410	171	1706.	760.7	1568.6	*	1	2230	271	2866.	2098.5	1571.6
1	0555	72	0.	.0	1564.2	*	1	1415	172	1760.	811.2	1568.8	*	1	2235	272	2859.	2088.7	1571.6
1	0600	73	0.	.0	1564.2	*	1	1420	173	1813.	862.9	1568.9	*	1	2240	273	2852.	2078.9	1571.6
1	0605	74	0.	.0	1564.2	*	1	1425	174	1867.	915.6	1569.1	*	1	2245	274	2845.	2069.1	1571.6
1	0610	75	0.	.0	1564.2	*	1	1430	175	1920.	969.4	1569.2	*	1	2250	275	2837.	2059.3	1571.5
1	0615	76	0.	.0	1564.2	*	1	1435	176	1974.	1024.4	1569.4	*	1	2255	276	2830.	2049.4	1571.5
1	0620	77	0.	.0	1564.2	*	1	1440	177	2027.	1080.6	1569.5	*	1	2300	277	2823.	2039.6	1571.5
1	0625	78	0.	.0	1564.2	*	1	1445	178	2081.	1137.9	1569.7	*	1	2305	278	2815.	2029.7	1571.5
1	0630	79	0.	.0	1564.2	*	1	1450	179	2134.	1196.4	1569.8	*	1	2310	279	2808.	2019.8	1571.5
1	0635	80	0.	.0	1564.2	*	1	1455	180	2188.	1256.1	1569.9	*	1	2315	280	2801.	2009.9	1571.4
1	0640	81	0.	.0	1564.2	*	1	1500	181	2242.	1316.9	1570.1	*	1	2320	281	2793.	2000.0	1571.4
1	0645	82	0.	.0	1564.2	*	1	1505	182	2296.	1378.6	1570.2	*	1	2325	282	2786.	1990.1	1571.4
1	0650	83	0.	.0	1564.2	*	1	1510	183	2349.	1441.1	1570.3	*	1	2330	283	2779.	1980.2	1571.4
1	0655	84	0.	.0	1564.2	*	1	1515	184	2402.	1504.1	1570.5	*	1	2335	284	2771.	1970.3	1571.4
1	0700	85	0.	.0	1564.2	*	1	1520	185	2455.	1567.2	1570.6	*	1	2340	285	2764.	1960.5	1571.4
1	0705	86	0.	.0	1564.2	*	1	1525	186	2506.	1630.1	1570.7	*	1	2345	286	2756.	1950.7	1571.3
1	0710	87	0.	.0	1564.2	*	1	1530	187	2556.	1692.3	1570.9	*	1	2350	287	2749.	1940.9	1571.3
1	0715	88	396.	.0	1564.2	*	1	1535	188	2604.	1753.3	1571.0	*	1	2355	288	2742.	1931.1	1571.3
1	0720	89	0.	.0	1564.2	*	1	1540	189	2651.	1812.7	1571.1	*	2	0000	289	2734.	1921.3	1571.3
1	0725	90	396.	.0	1564.2	*	1	1545	190	2695.	1870.2	1571.2	*	2	0005	290	2727.	1911.6	1571.3
1	0730	91	0.	.0	1564.2	*	1	1550	191	2737.	1925.3	1571.3	*	2	0010	291	2719.	1901.8	1571.3
1	0735	92	396.	.0	1564.2	*	1	1555	192	2777.	1977.7	1571.4	*	2	0015	292	2712.	1892.1	1571.2
1	0740	93	0.	.0	1564.2	*	1	1600	193	2814.	2027.2	1571.5	*	2	0020	293	2704.	1882.3	1571.2
1	0745	94	396.	.0	1564.2	*	1	1605	194	2848.	2073.6	1571.6	*	2	0025	294	2697.	1872.5	1571.2
1	0750	95	0.	.0	1564.2	*	1	1610	195	2880.	2116.8	1571.6	*	2	0030	295	2689.	1862.7	1571.2
1	0755	96	396.	.0	1564.2	*	1	1615	196	2909.	2156.8	1571.7	*	2	0035	296	2682.	1852.9	1571.2
1	0800	97	0.	.0	1564.2	*	1	1620	197	2935.	2193.6	1571.8	*	2	0040	297	2674.	1843.0	1571.1
1	0805	98	396.	.0	1564.2	*	1	1625	198	2959.	2227.3	1571.8	*	2	0045	298	2667.	1833.0	1571.1
1	0810	99	0.	.0	1564.2	*	1	1630	199	2981.	2258.1	1571.9	*	2	0050	299	2659.	1823.0	1571.1
1	0815	100	396.	.0	1564.2	*	1	1635	200	3001.	2286.1	1571.9	*	2	0055	300	2651.	1812.9	1571.1
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PEAK OUTFLOW IS 3129. AT TIME 18.08 HOURS

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
		(CFS)				
+ 3129.	18.08		3044.	1412.	1361.	1361.
		(INCHES)	.543	1.007	1.008	1.008
		(AC-FT)	1509.	2801.	2802.	2802.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
2468.	18.08	2347.	958.	922.	922.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	24.92-HR

+ (FEET)	(HR)				
1572.21	18.08	1572.01	1567.70	1567.57	1567.57

CUMULATIVE AREA = 52.12 SQ MI

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HYDROGRAPH AT RESV
TRANSPOSITION AREA 53.0 SQ MI

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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
1		0000	1	396.	.0	1564.2	1		0820	101	0.	.0	1564.2	1		1640	201	2916.	2166.3	1571.7
1		0005	2	0.	.0	1564.2	1		0825	102	396.	.0	1564.2	1		1645	202	2931.	2187.2	1571.8
1		0010	3	0.	.0	1564.2	1		0830	103	0.	.0	1564.2	1		1650	203	2944.	2205.7	1571.8
1		0015	4	0.	.0	1564.2	1		0835	104	396.	.0	1564.2	1		1655	204	2956.	2222.3	1571.8
1		0020	5	0.	.0	1564.2	1		0840	105	0.	.0	1564.2	1		1700	205	2966.	2236.9	1571.8
1		0025	6	0.	.0	1564.2	1		0845	106	396.	.0	1564.2	1		1705	206	2975.	2249.7	1571.9
1		0030	7	0.	.0	1564.2	1		0850	107	0.	.0	1564.2	1		1710	207	2983.	2260.9	1571.9
1		0035	8	0.	.0	1564.2	1		0855	108	396.	.0	1564.2	1		1715	208	2990.	2270.5	1571.9
1		0040	9	0.	.0	1564.2	1		0900	109	0.	.0	1564.2	1		1720	209	2996.	2278.7	1571.9
1		0045	10	0.	.0	1564.2	1		0905	110	396.	.0	1564.2	1		1725	210	3001.	2285.6	1571.9
1		0050	11	0.	.0	1564.2	1		0910	111	0.	.0	1564.2	1		1730	211	3005.	2291.4	1571.9
1		0055	12	0.	.0	1564.2	1		0915	112	396.	.0	1564.2	1		1735	212	3008.	2295.9	1571.9
1		0100	13	0.	.0	1564.2	1		0920	113	0.	.0	1564.2	1		1740	213	3011.	2299.6	1571.9
1		0105	14	0.	.0	1564.2	1		0925	114	396.	.0	1564.2	1		1745	214	3013.	2302.3	1571.9
1		0110	15	0.	.0	1564.2	1		0930	115	0.	.0	1564.2	1		1750	215	3014.	2304.1	1571.9
1		0115	16	0.	.0	1564.2	1		0935	116	396.	.0	1564.2	1		1755	216	3015.	2305.2	1571.9
1		0120	17	0.	.0	1564.2	1		0940	117	0.	.0	1564.2	1		1800	217	3015.	2305.5	1571.9
1		0125	18	0.	.0	1564.2	1		0945	118	396.	.0	1564.2	1		1805	218	3015.	2305.3	1571.9
1		0130	19	0.	.0	1564.2	1		0950	119	0.	.0	1564.2	1		1810	219	3014.	2304.5	1571.9
1		0135	20	0.	.0	1564.2	1		0955	120	396.	.0	1564.2	1		1815	220	3013.	2303.2	1571.9
1		0140	21	0.	.0	1564.2	1		1000	121	0.	.0	1564.2	1		1820	221	3012.	2301.4	1571.9
1		0145	22	0.	.0	1564.2	1		1005	122	396.	.0	1564.2	1		1825	222	3010.	2299.0	1571.9
1		0150	23	0.	.0	1564.2	1		1010	123	0.	.0	1564.2	1		1830	223	3009.	2296.3	1571.9
1		0155	24	0.	.0	1564.2	1		1015	124	396.	.0	1564.2	1		1835	224	3006.	2293.1	1571.9
1		0200	25	0.	.0	1564.2	1		1020	125	0.	.0	1564.2	1		1840	225	3004.	2289.5	1571.9
1		0205	26	0.	.0	1564.2	1		1025	126	396.	.0	1564.2	1		1845	226	3001.	2285.6	1571.9
1		0210	27	0.	.0	1564.2	1		1030	127	0.	.0	1564.2	1		1850	227	2998.	2281.4	1571.9
1		0215	28	0.	.0	1564.2	1		1035	128	396.	.0	1564.2	1		1855	228	2995.	2276.9	1571.9
1		0220	29	0.	.0	1564.2	1		1040	129	0.	.0	1564.2	1		1900	229	2991.	2272.1	1571.9
1		0225	30	0.	.0	1564.2	1		1045	130	396.	.0	1564.2	1		1905	230	2988.	2267.0	1571.9
1		0230	31	0.	.0	1564.2	1		1050	131	0.	.0	1564.2	1		1910	231	2984.	2261.8	1571.9
1		0235	32	0.	.0	1564.2	1		1055	132	396.	.0	1564.2	1		1915	232	2980.	2256.3	1571.9
1		0240	33	0.	.0	1564.2	1		1100	133	0.	.0	1564.2	1		1920	233	2976.	2250.6	1571.9
1		0245	34	0.	.0	1564.2	1		1105	134	396.	.0	1564.2	1		1925	234	2972.	2244.7	1571.8
1		0250	35	0.	.0	1564.2	1		1110	135	0.	.0	1564.2	1		1930	235	2967.	2238.6	1571.8
1		0255	36	0.	.0	1564.2	1		1115	136	396.	.0	1564.2	1		1935	236	2963.	2232.3	1571.8
1		0300	37	0.	.0	1564.2	1		1120	137	0.	.0	1564.2	1		1940	237	2958.	2226.0	1571.8
1		0305	38	0.	.0	1564.2	1		1125	138	396.	.0	1564.2	1		1945	238	2954.	2219.4	1571.8
1		0310	39	0.	.0	1564.2	1		1130	139	396.	.0	1564.2	1		1950	239	2949.	2212.8	1571.8
1		0315	40	0.	.0	1564.2	1		1135	140	396.	.0	1564.2	1		1955	240	2944.	2206.0	1571.8
1		0320	41	0.	.0	1564.2	1		1140	141	396.	.0	1564.2	1		2000	241	2939.	2199.0	1571.8
1		0325	42	0.	.0	1564.2	1		1145	142	396.	.0	1564.2	1		2005	242	2934.	2192.0	1571.8
1		0330	43	0.	.0	1564.2	1		1150	143	396.	.0	1564.2	1		2010	243	2929.	2184.8	1571.8
1		0335	44	0.	.0	1564.2	1		1155	144	443.	.3	1564.4	1		2015	244	2924.	2177.4	1571.7
1		0340	45	0.	.0	1564.2	1		1200	145	471.	1.2	1564.5	1		2020	245	2918.	2170.0	1571.7

1	0345	46	0.	.0	1564.2	*	1	1205	146	499.	3.1	1564.7	*	1	2025	246	2913.	2162.5	1571.7
1	0350	47	0.	.0	1564.2	*	1	1210	147	528.	6.3	1564.8	*	1	2030	247	2907.	2154.9	1571.7
1	0355	48	0.	.0	1564.2	*	1	1215	148	557.	11.0	1564.9	*	1	2035	248	2902.	2147.2	1571.7
1	0400	49	0.	.0	1564.2	*	1	1220	149	585.	17.6	1565.0	*	1	2040	249	2896.	2139.3	1571.7
1	0405	50	0.	.0	1564.2	*	1	1225	150	617.	26.2	1565.1	*	1	2045	250	2890.	2131.4	1571.7
1	0410	51	0.	.0	1564.2	*	1	1230	151	653.	37.1	1565.3	*	1	2050	251	2884.	2123.4	1571.6
1	0415	52	0.	.0	1564.2	*	1	1235	152	693.	50.6	1565.4	*	1	2055	252	2878.	2115.2	1571.6
1	0420	53	0.	.0	1564.2	*	1	1240	153	737.	66.8	1565.6	*	1	2100	253	2872.	2107.0	1571.6
1	0425	54	0.	.0	1564.2	*	1	1245	154	783.	85.7	1565.8	*	1	2105	254	2866.	2098.7	1571.6
1	0430	55	0.	.0	1564.2	*	1	1250	155	831.	107.5	1565.9	*	1	2110	255	2860.	2090.2	1571.6
1	0435	56	0.	.0	1564.2	*	1	1255	156	880.	132.0	1566.1	*	1	2115	256	2854.	2081.8	1571.6
1	0440	57	0.	.0	1564.2	*	1	1300	157	930.	159.2	1566.3	*	1	2120	257	2848.	2073.1	1571.6
1	0445	58	0.	.0	1564.2	*	1	1305	158	980.	188.9	1566.4	*	1	2125	258	2841.	2064.5	1571.5
1	0450	59	0.	.0	1564.2	*	1	1310	159	1030.	220.8	1566.6	*	1	2130	259	2835.	2055.7	1571.5
1	0455	60	0.	.0	1564.2	*	1	1315	160	1080.	254.7	1566.8	*	1	2135	260	2828.	2046.9	1571.5
1	0500	61	0.	.0	1564.2	*	1	1320	161	1132.	290.2	1566.9	*	1	2140	261	2822.	2038.0	1571.5
1	0505	62	0.	.0	1564.2	*	1	1325	162	1183.	327.0	1567.1	*	1	2145	262	2815.	2029.1	1571.5
1	0510	63	0.	.0	1564.2	*	1	1330	163	1235.	364.8	1567.3	*	1	2150	263	2808.	2020.1	1571.5
1	0515	64	0.	.0	1564.2	*	1	1335	164	1286.	403.7	1567.4	*	1	2155	264	2802.	2011.0	1571.5
1	0520	65	0.	.0	1564.2	*	1	1340	165	1337.	443.4	1567.6	*	1	2200	265	2795.	2001.9	1571.4
1	0525	66	0.	.0	1564.2	*	1	1345	166	1388.	484.2	1567.7	*	1	2205	266	2788.	1992.7	1571.4
1	0530	67	0.	.0	1564.2	*	1	1350	167	1440.	526.1	1567.9	*	1	2210	267	2781.	1983.5	1571.4
1	0535	68	0.	.0	1564.2	*	1	1355	168	1491.	569.2	1568.0	*	1	2215	268	2774.	1974.2	1571.4
1	0540	69	0.	.0	1564.2	*	1	1400	169	1543.	613.4	1568.2	*	1	2220	269	2767.	1964.9	1571.4
1	0545	70	0.	.0	1564.2	*	1	1405	170	1594.	658.8	1568.3	*	1	2225	270	2760.	1955.7	1571.4
1	0550	71	0.	.0	1564.2	*	1	1410	171	1646.	705.2	1568.5	*	1	2230	271	2753.	1946.3	1571.3
1	0555	72	0.	.0	1564.2	*	1	1415	172	1697.	752.8	1568.6	*	1	2235	272	2746.	1937.0	1571.3
1	0600	73	0.	.0	1564.2	*	1	1420	173	1749.	801.3	1568.8	*	1	2240	273	2739.	1927.6	1571.3
1	0605	74	0.	.0	1564.2	*	1	1425	174	1801.	851.0	1568.9	*	1	2245	274	2732.	1918.2	1571.3
1	0610	75	0.	.0	1564.2	*	1	1430	175	1853.	901.7	1569.1	*	1	2250	275	2725.	1908.8	1571.3
1	0615	76	0.	.0	1564.2	*	1	1435	176	1904.	953.5	1569.2	*	1	2255	276	2717.	1899.4	1571.2
1	0620	77	0.	.0	1564.2	*	1	1440	177	1956.	1006.5	1569.3	*	1	2300	277	2710.	1889.9	1571.2
1	0625	78	0.	.0	1564.2	*	1	1445	178	2008.	1060.5	1569.5	*	1	2305	278	2703.	1880.4	1571.2
1	0630	79	0.	.0	1564.2	*	1	1450	179	2060.	1115.7	1569.6	*	1	2310	279	2696.	1870.9	1571.2
1	0635	80	0.	.0	1564.2	*	1	1455	180	2112.	1172.0	1569.7	*	1	2315	280	2688.	1861.4	1571.2
1	0640	81	0.	.0	1564.2	*	1	1500	181	2164.	1229.4	1569.9	*	1	2320	281	2681.	1852.0	1571.2
1	0645	82	0.	.0	1564.2	*	1	1505	182	2216.	1287.6	1570.0	*	1	2325	282	2674.	1842.5	1571.1
1	0650	83	0.	.0	1564.2	*	1	1510	183	2268.	1346.6	1570.1	*	1	2330	283	2667.	1833.0	1571.1
1	0655	84	0.	.0	1564.2	*	1	1515	184	2320.	1406.1	1570.3	*	1	2335	284	2659.	1823.6	1571.1
1	0700	85	0.	.0	1564.2	*	1	1520	185	2370.	1465.8	1570.4	*	1	2340	285	2652.	1814.2	1571.1
1	0705	86	0.	.0	1564.2	*	1	1525	186	2420.	1525.2	1570.5	*	1	2345	286	2645.	1804.7	1571.1
1	0710	87	0.	.0	1564.2	*	1	1530	187	2469.	1584.0	1570.6	*	1	2350	287	2637.	1795.3	1571.1
1	0715	88	0.	.0	1564.2	*	1	1535	188	2515.	1641.7	1570.8	*	1	2355	288	2630.	1785.9	1571.0
1	0720	89	0.	.0	1564.2	*	1	1540	189	2561.	1698.0	1570.9	*	2	0000	289	2623.	1776.6	1571.0
1	0725	90	396.	.0	1564.2	*	1	1545	190	2604.	1752.3	1571.0	*	2	0005	290	2615.	1767.3	1571.0
1	0730	91	0.	.0	1564.2	*	1	1550	191	2644.	1804.4	1571.1	*	2	0010	291	2608.	1758.0	1571.0
1	0735	92	396.	.0	1564.2	*	1	1555	192	2683.	1853.9	1571.2	*	2	0015	292	2601.	1748.6	1571.0
1	0740	93	0.	.0	1564.2	*	1	1600	193	2719.	1900.7	1571.3	*	2	0020	293	2593.	1739.2	1571.0
1	0745	94	396.	.0	1564.2	*	1	1605	194	2752.	1944.4	1571.3	*	2	0025	294	2586.	1729.9	1570.9
1	0750	95	0.	.0	1564.2	*	1	1610	195	2782.	1985.1	1571.4	*	2	0030	295	2579.	1720.5	1570.9
1	0755	96	396.	.0	1564.2	*	1	1615	196	2810.	2022.6	1571.5	*	2	0035	296	2571.	1711.1	1570.9
1	0800	97	0.	.0	1564.2	*	1	1620	197	2836.	2057.1	1571.5	*	2	0040	297	2563.	1701.6	1570.9
1	0805	98	396.	.0	1564.2	*	1	1625	198	2859.	2088.6	1571.6	*	2	0045	298	2556.	1692.1	1570.9
1	0810	99	0.	.0	1564.2	*	1	1630	199	2880.	2117.2	1571.6	*	2	0050	299	2548.	1682.5	1570.8
1	0815	100	396.	.0	1564.2	*	1	1635	200	2899.	2143.0	1571.7	*	2	0055	300	2540.	1672.8	1570.8
						*							*						

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PEAK OUTFLOW IS 3015. AT TIME 18.00 HOURS

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
		(CFS)				
+ 3015.	18.00		2931.	1360.	1310.	1310.
		(INCHES)	.523	.970	.971	.971
		(AC-FT)	1454.	2697.	2698.	2698.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
2306.	18.00	2189.	892.	859.	859.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)				
1571.95	18.00	1571.75	1567.58	1567.45	1567.45

CUMULATIVE AREA = 52.12 SQ MI

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INTERPOLATED HYDROGRAPH AT RESV

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0000	1	396.	1		0615	76	0.	1		1230	151	654.	1		1845	226	3004.
1		0005	2	0.	1		0620	77	0.	1		1235	152	694.	1		1850	227	3001.
1		0010	3	0.	1		0625	78	0.	1		1240	153	738.	1		1855	228	2998.
1		0015	4	0.	1		0630	79	0.	1		1245	154	784.	1		1900	229	2995.
1		0020	5	0.	1		0635	80	0.	1		1250	155	832.	1		1905	230	2991.
1		0025	6	0.	1		0640	81	0.	1		1255	156	881.	1		1910	231	2987.
1		0030	7	0.	1		0645	82	0.	1		1300	157	931.	1		1915	232	2983.
1		0035	8	0.	1		0650	83	0.	1		1305	158	981.	1		1920	233	2979.
1		0040	9	0.	1		0655	84	0.	1		1310	159	1031.	1		1925	234	2975.
1		0045	10	0.	1		0700	85	0.	1		1315	160	1081.	1		1930	235	2971.
1		0050	11	0.	1		0705	86	0.	1		1320	161	1133.	1		1935	236	2966.
1		0055	12	0.	1		0710	87	0.	1		1325	162	1184.	1		1940	237	2962.
1		0100	13	0.	1		0715	88	12.	1		1330	163	1236.	1		1945	238	2957.
1		0105	14	0.	1		0720	89	0.	1		1335	164	1287.	1		1950	239	2952.
1		0110	15	0.	1		0725	90	396.	1		1340	165	1339.	1		1955	240	2947.
1		0115	16	0.	1		0730	91	0.	1		1345	166	1390.	1		2000	241	2943.
1		0120	17	0.	1		0735	92	396.	1		1350	167	1441.	1		2005	242	2937.
1		0125	18	0.	1		0740	93	0.	1		1355	168	1493.	1		2010	243	2932.
1		0130	19	0.	1		0745	94	396.	1		1400	169	1544.	1		2015	244	2927.
1		0135	20	0.	1		0750	95	0.	1		1405	170	1596.	1		2020	245	2922.
1		0140	21	0.	1		0755	96	396.	1		1410	171	1648.	1		2025	246	2916.
1		0145	22	0.	1		0800	97	0.	1		1415	172	1699.	1		2030	247	2911.
1		0150	23	0.	1		0805	98	396.	1		1420	173	1751.	1		2035	248	2905.
1		0155	24	0.	1		0810	99	0.	1		1425	174	1803.	1		2040	249	2899.
1		0200	25	0.	1		0815	100	396.	1		1430	175	1855.	1		2045	250	2894.
1		0205	26	0.	1		0820	101	0.	1		1435	176	1906.	1		2050	251	2888.
1		0210	27	0.	1		0825	102	396.	1		1440	177	1958.	1		2055	252	2882.
1		0215	28	0.	1		0830	103	0.	1		1445	178	2010.	1		2100	253	2876.
1		0220	29	0.	1		0835	104	396.	1		1450	179	2062.	1		2105	254	2870.
1		0225	30	0.	1		0840	105	0.	1		1455	180	2114.	1		2110	255	2864.

1	0230	31	0.	*	1	0845	106	396.	*	1	1500	181	2167.	*	1	2115	256	2857.
1	0235	32	0.	*	1	0850	107	0.	*	1	1505	182	2219.	*	1	2120	257	2851.
1	0240	33	0.	*	1	0855	108	396.	*	1	1510	183	2271.	*	1	2125	258	2845.
1	0245	34	0.	*	1	0900	109	0.	*	1	1515	184	2322.	*	1	2130	259	2838.
1	0250	35	0.	*	1	0905	110	396.	*	1	1520	185	2373.	*	1	2135	260	2832.
1	0255	36	0.	*	1	0910	111	0.	*	1	1525	186	2423.	*	1	2140	261	2825.
1	0300	37	0.	*	1	0915	112	396.	*	1	1530	187	2471.	*	1	2145	262	2818.
1	0305	38	0.	*	1	0920	113	0.	*	1	1535	188	2518.	*	1	2150	263	2812.
1	0310	39	0.	*	1	0925	114	396.	*	1	1540	189	2563.	*	1	2155	264	2805.
1	0315	40	0.	*	1	0930	115	0.	*	1	1545	190	2606.	*	1	2200	265	2798.
1	0320	41	0.	*	1	0935	116	396.	*	1	1550	191	2647.	*	1	2205	266	2791.
1	0325	42	0.	*	1	0940	117	0.	*	1	1555	192	2685.	*	1	2210	267	2784.
1	0330	43	0.	*	1	0945	118	396.	*	1	1600	193	2721.	*	1	2215	268	2777.
1	0335	44	0.	*	1	0950	119	0.	*	1	1605	194	2755.	*	1	2220	269	2770.
1	0340	45	0.	*	1	0955	120	396.	*	1	1610	195	2785.	*	1	2225	270	2763.
1	0345	46	0.	*	1	1000	121	0.	*	1	1615	196	2813.	*	1	2230	271	2756.
1	0350	47	0.	*	1	1005	122	396.	*	1	1620	197	2839.	*	1	2235	272	2749.
1	0355	48	0.	*	1	1010	123	0.	*	1	1625	198	2862.	*	1	2240	273	2742.
1	0400	49	0.	*	1	1015	124	396.	*	1	1630	199	2883.	*	1	2245	274	2735.
1	0405	50	0.	*	1	1020	125	0.	*	1	1635	200	2902.	*	1	2250	275	2728.
1	0410	51	0.	*	1	1025	126	396.	*	1	1640	201	2919.	*	1	2255	276	2721.
1	0415	52	0.	*	1	1030	127	0.	*	1	1645	202	2934.	*	1	2300	277	2714.
1	0420	53	0.	*	1	1035	128	396.	*	1	1650	203	2947.	*	1	2305	278	2706.
1	0425	54	0.	*	1	1040	129	0.	*	1	1655	204	2959.	*	1	2310	279	2699.
1	0430	55	0.	*	1	1045	130	396.	*	1	1700	205	2969.	*	1	2315	280	2692.
1	0435	56	0.	*	1	1050	131	0.	*	1	1705	206	2979.	*	1	2320	281	2684.
1	0440	57	0.	*	1	1055	132	396.	*	1	1710	207	2987.	*	1	2325	282	2677.
1	0445	58	0.	*	1	1100	133	0.	*	1	1715	208	2993.	*	1	2330	283	2670.
1	0450	59	0.	*	1	1105	134	396.	*	1	1720	209	2999.	*	1	2335	284	2663.
1	0455	60	0.	*	1	1110	135	0.	*	1	1725	210	3004.	*	1	2340	285	2655.
1	0500	61	0.	*	1	1115	136	396.	*	1	1730	211	3008.	*	1	2345	286	2648.
1	0505	62	0.	*	1	1120	137	0.	*	1	1735	212	3012.	*	1	2350	287	2641.
1	0510	63	0.	*	1	1125	138	397.	*	1	1740	213	3014.	*	1	2355	288	2633.
1	0515	64	0.	*	1	1130	139	396.	*	1	1745	214	3016.	*	2	0000	289	2626.
1	0520	65	0.	*	1	1135	140	396.	*	1	1750	215	3017.	*	2	0005	290	2619.
1	0525	66	0.	*	1	1140	141	396.	*	1	1755	216	3018.	*	2	0010	291	2611.
1	0530	67	0.	*	1	1145	142	396.	*	1	1800	217	3018.	*	2	0015	292	2604.
1	0535	68	0.	*	1	1150	143	397.	*	1	1805	218	3018.	*	2	0020	293	2597.
1	0540	69	0.	*	1	1155	144	443.	*	1	1810	219	3018.	*	2	0025	294	2589.
1	0545	70	0.	*	1	1200	145	471.	*	1	1815	220	3017.	*	2	0030	295	2582.
1	0550	71	0.	*	1	1205	146	500.	*	1	1820	221	3015.	*	2	0035	296	2574.
1	0555	72	0.	*	1	1210	147	528.	*	1	1825	222	3014.	*	2	0040	297	2567.
1	0600	73	0.	*	1	1215	148	557.	*	1	1830	223	3012.	*	2	0045	298	2559.
1	0605	74	0.	*	1	1220	149	586.	*	1	1835	224	3010.	*	2	0050	299	2551.
1	0610	75	0.	*	1	1225	150	617.	*	1	1840	225	3007.	*	2	0055	300	2544.
				*					*					*				

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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
		(CFS)				
+ 3018.	18.00		2935.	1361.	1312.	1312.
		(INCHES)	.524	.971	.972	.972
		(AC-FT)	1455.	2700.	2701.	2701.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
2306.	18.00	2189.	892.	859.	859.

PEAK STAGE (FEET)	TIME (HR)	MAXIMUM AVERAGE STAGE 6-HR	24-HR	72-HR	24.92-HR
1571.95	18.00	1571.75	1567.58	1567.45	1567.45

CUMULATIVE AREA = 52.12 SQ MI

1 STATION RESV

(O) OUTFLOW

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          0.     400.     800.    1200.    1600.    2000.    2400.    2800.    3200.       0.       0.       0.       0.
DAHRMN PER
 10000   1.---------0---------.---------.---------.---------.---------.---------.---------.---------.---------.---------.
 10005  20         .         .         .         .         .         .         .         .         .         .         .
 10010  30         .         .         .         .         .         .         .         .         .         .         .
 10015  40         .         .         .         .         .         .         .         .         .         .         .
 10020  50         .         .         .         .         .         .         .         .         .         .         .
 10025  60         .         .         .         .         .         .         .         .         .         .         .
 10030  70         .         .         .         .         .         .         .         .         .         .         .
 10035  80         .         .         .         .         .         .         .         .         .         .         .
 10040  90         .         .         .         .         .         .         .         .         .         .         .
 10045 100         .         .         .         .         .         .         .         .         .         .         .
 10050 110 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10055 120         .         .         .         .         .         .         .         .         .         .         .
 10100 130         .         .         .         .         .         .         .         .         .         .         .
 10105 140         .         .         .         .         .         .         .         .         .         .         .
 10110 150         .         .         .         .         .         .         .         .         .         .         .
 10115 160         .         .         .         .         .         .         .         .         .         .         .
 10120 170         .         .         .         .         .         .         .         .         .         .         .
 10125 180         .         .         .         .         .         .         .         .         .         .         .
 10130 190         .         .         .         .         .         .         .         .         .         .         .
 10135 200         .         .         .         .         .         .         .         .         .         .         .
 10140 210 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10145 220         .         .         .         .         .         .         .         .         .         .         .
 10150 230         .         .         .         .         .         .         .         .         .         .         .
 10155 240         .         .         .         .         .         .         .         .         .         .         .
 10200 250         .         .         .         .         .         .         .         .         .         .         .
 10205 260         .         .         .         .         .         .         .         .         .         .         .
 10210 270         .         .         .         .         .         .         .         .         .         .         .
 10215 280         .         .         .         .         .         .         .         .         .         .         .
 10220 290         .         .         .         .         .         .         .         .         .         .         .
 10225 300         .         .         .         .         .         .         .         .         .         .         .
 10230 310 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10235 320         .         .         .         .         .         .         .         .         .         .         .
 10240 330         .         .         .         .         .         .         .         .         .         .         .
 10245 340         .         .         .         .         .         .         .         .         .         .         .
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 10310 390         .         .         .         .         .         .         .         .         .         .         .
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 10320 410 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10325 420         .         .         .         .         .         .         .         .         .         .         .
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10435	560	
10440	570	
10445	580	
10450	590	
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10520	650	
10525	660	
10530	670	
10535	680	
10540	690	
10545	700	
10550	710	
10555	720	
10600	730	
10605	740	
10610	750	
10615	760	
10620	770	
10625	780	
10630	790	
10635	800	
10640	810	
10645	820	
10650	830	
10655	840	
10700	850	
10705	860	
10710	870	
10715	880	
10720	890	
10725	90.	0
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10740	930	
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10850	1070	

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11010 1230         .         .         .         .         .         .         .         .         .         .         .         .
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11140 141. . . . . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
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11230 151. . . . . . . . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
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11245 154.         .         0         .         .         .         .         .         .         .         .         .         .
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11305 158.         .         .    0    .         .         .         .         .         .         .         .         .         .
11310 159.         .         .     0   .         .         .         .         .         .         .         .         .         .
11315 160.         .         .      0  .         .         .         .         .         .         .         .         .         .
11320 161. . . . . . . . . . . . . . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
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11340 165.         .         .         .  0      .         .         .         .         .         .         .         .         .
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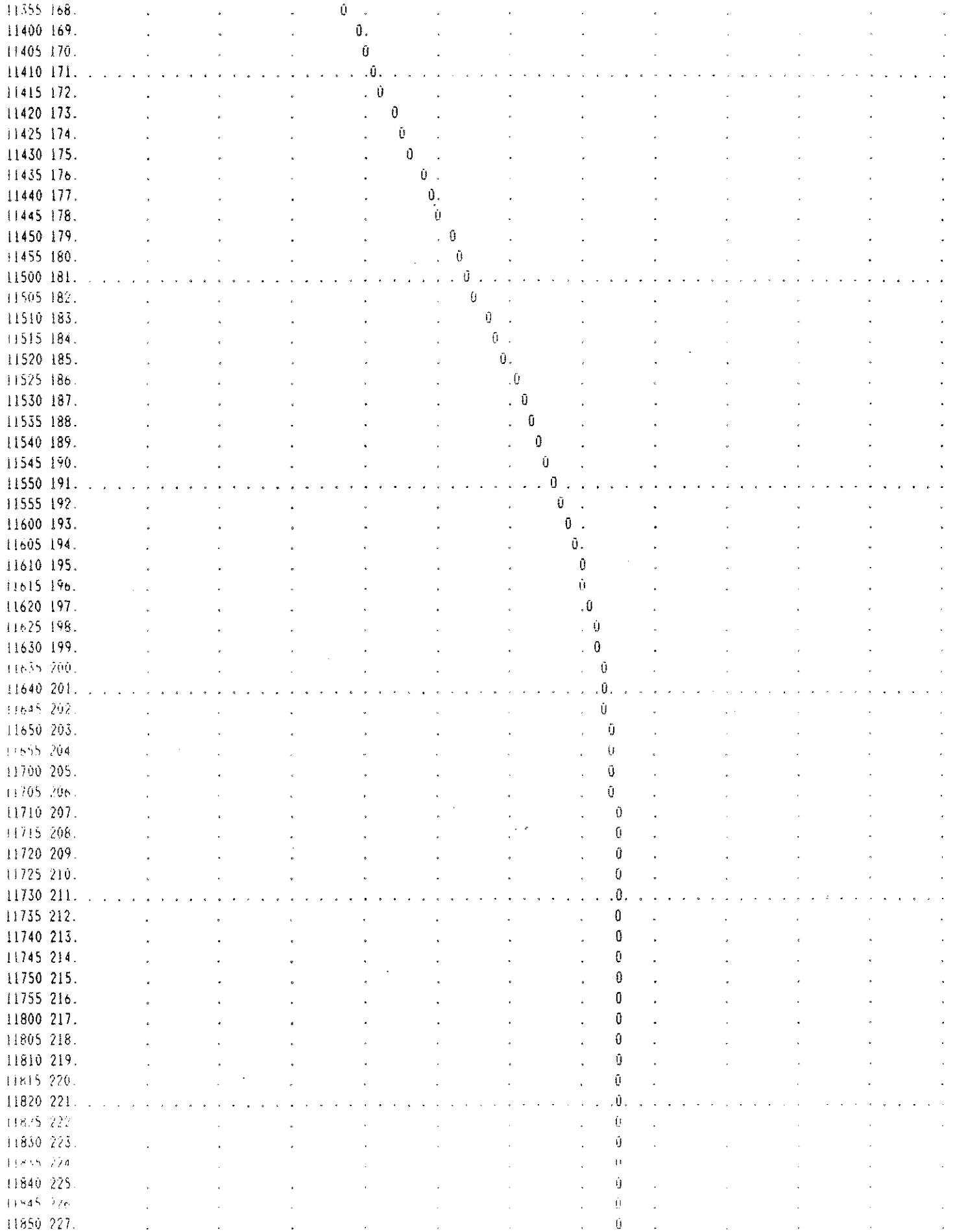
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RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT	SUBR1	853.	12.67	245.	76.	73.	1.56		
+	ROUTED TO	RR2a	829.	12.75	245.	74.	71.	1.56		
+									1812.94	12.75
+	ROUTED TO	RR2-1	754.	13.83	243.	72.	70.	1.56		
+	ROUTED TO	RR2-2	697.	14.92	242.	71.	68.	1.56		
+	ROUTED TO	RR2-3	654.	16.00	241.	69.	67.	1.56		
+	HYDROGRAPH AT	SUBR2	1944.	14.00	1084.	344.	332.	8.43		
+	2 COMBINED AT	HCR2	1914.	14.00	1264.	404.	389.	9.99		
+	HYDROGRAPH AT	SUBR3	652.	12.58	181.	56.	54.	1.10		
+	ROUTED TO	RR4a	621.	12.75	181.	55.	53.	1.10		
+									1830.24	12.75
+	ROUTED TO	RR4-1	571.	13.58	180.	54.	52.	1.10		
+	ROUTED TO	RR4-2	533.	14.50	180.	53.	51.	1.10		
+	HYDROGRAPH AT	SUBR4	1037.	13.00	380.	118.	113.	2.67		

	2 COMBINED AT								
+		HCR4	1053.	13.00	547.	170.	163.	3.77	
	HYDROGRAPH AT								
+		SUBR5	3011.	12.25	571.	178.	172.	2.71	
	ROUTED TO								
+		RR6	2660.	12.75	571.	178.	172.	2.71	
	HYDROGRAPH AT								
+		SUBR6	3096.	12.58	848.	264.	254.	4.19	
	2 COMBINED AT								
+		HCR6	5441.	12.75	1385.	432.	416.	6.90	
	ROUTED TO								
+		RR7	4997.	13.42	1384.	429.	413.	6.90	
	HYDROGRAPH AT								
+		SUBR7	2662.	12.25	526.	163.	157.	2.67	
	2 COMBINED AT								
+		HCR7	5325.	13.42	1845.	574.	553.	9.57	
	ROUTED TO								
+		RR8-1	5017.	14.08	1843.	568.	547.	9.57	
	ROUTED TO								
+		RR8-2	4778.	14.75	1842.	561.	540.	9.57	
	HYDROGRAPH AT								
+		SUBR8	944.	12.75	300.	93.	89.	2.00	
	2 COMBINED AT								
+		HCR8	4894.	14.75	2070.	639.	615.	11.57	
	ROUTED TO								
+		RR9a	4843.	14.83	2070.	635.	612.	11.57	
+									1834.78 14.83
	ROUTED TO								
+		RR9	4742.	15.25	2068.	630.	607.	11.57	
	HYDROGRAPH AT								
+		SUBR9	201.	12.17	32.	10.	10.	.26	
	2 COMBINED AT								
+		HCR9	4746.	15.25	2078.	638.	615.	11.83	
	HYDROGRAPH AT								
+		SUBR10	1822.	12.83	608.	188.	181.	3.35	
	HYDROGRAPH AT								
+		SUBR11	2380.	12.67	708.	219.	211.	3.90	
	2 COMBINED AT								
+		HCR11	4035.	12.75	1277.	396.	381.	7.25	
	ROUTED TO								

+		RR12	3867.	13.33	1276.	393.	379.	7.25	
	HYDROGRAPH AT								
+		SUBR12	2432.	12.67	720.	222.	214.	4.46	
	2 COMBINED AT								
+		HCR12	5145.	13.17	1902.	587.	565.	11.71	
	ROUTED TO								
+		RR13a	5127.	13.17	1901.	582.	561.	11.71	
+									1823.54 13.17
	ROUTED TO								
+		RR13	5034.	13.58	1900.	578.	557.	11.71	
	HYDROGRAPH AT								
+		SUBR13	650.	12.75	208.	64.	62.	1.27	
	2 COMBINED AT								
+		HCR13a	5296.	13.58	2069.	632.	609.	12.98	
	2 COMBINED AT								
+		HCR13b	6808.	13.83	3934.	1208.	1163.	24.81	
	ROUTED TO								
+		RR14	6638.	15.00	3923.	1181.	1138.	24.81	
	HYDROGRAPH AT								
+		SUBR14	1277.	12.67	387.	119.	115.	2.82	
	2 COMBINED AT								
+		HCR14a	6765.	14.92	4087.	1274.	1227.	27.63	
	2 COMBINED AT								
+		HCR14b	7289.	14.83	4487.	1406.	1354.	31.40	
	ROUTED TO								
+		RR15-1	7198.	15.50	4478.	1388.	1337.	31.40	
	ROUTED TO								
+		RR15-2	7109.	16.17	4470.	1369.	1319.	31.40	
	HYDROGRAPH AT								
+		SUBR15	1897.	13.50	895.	279.	269.	6.30	
	2 COMBINED AT								
+		HCR15a	7427.	16.08	4961.	1585.	1527.	37.70	
	2 COMBINED AT								
+		HCR15b	8540.	16.08	5891.	1900.	1830.	47.69	
	DIVERSION TO								
+		DVR16	102.	12.25	102.	56.	54.	47.69	
	HYDROGRAPH AT								
+		HDR16	8438.	16.08	5789.	1844.	1776.	47.69	
	ROUTED TO								
+		RESR	2032.	19.75	2002.	937.	903.	47.69	
+									1594.43 19.75

	HYDROGRAPH AT								
+		SUBV1	2499.	12.42	574.	178.	171.	3.03	
	HYDROGRAPH AT								
+		SUBV2	2849.	12.33	610.	189.	182.	3.34	
	ROUTED TO								
+		RV3	2668.	12.75	610.	188.	182.	3.34	
	HYDROGRAPH AT								
+		SUBV3	401.	12.17	67.	21.	20.	.40	
	3 COMBINED AT								
+		HCV3	4659.	12.58	1216.	376.	362.	6.77	
	ROUTED TO								
+		RV4	4436.	13.00	1215.	375.	362.	6.77	
	HYDROGRAPH AT								
+		SUBV4	1458.	12.42	333.	107.	103.	1.85	
	2 COMBINED AT								
+		HCV4	4979.	13.00	1509.	471.	453.	8.62	
	ROUTED TO								
+		RV5	4787.	13.67	1507.	466.	449.	8.62	
	HYDROGRAPH AT								
+		SUBV5	1352.	12.33	283.	87.	84.	1.66	
	2 COMBINED AT								
+		HCV5	4952.	13.67	1743.	542.	522.	10.28	
	ROUTED TO								
+		RV6a	4890.	13.75	1742.	538.	518.	10.28	
+									1743.94 13.75
	ROUTED TO								
+		RV6-1	4684.	14.58	1739.	530.	510.	10.28	
	ROUTED TO								
+		RV6-2	4512.	15.42	1736.	521.	502.	10.28	
	HYDROGRAPH AT								
+		SUBV6	896.	13.00	342.	108.	104.	3.59	
	2 COMBINED AT								
+		HCV6	4601.	15.33	1949.	606.	584.	13.87	
	HYDROGRAPH AT								
+		SUBV7	1165.	12.67	333.	104.	100.	1.69	
	HYDROGRAPH AT								
+		SUBV8	920.	12.17	162.	55.	53.	.73	
	2 COMBINED AT								
+		HCV8	1714.	12.33	490.	158.	152.	2.42	
	ROUTED TO								

+		RV9	1683.	12.58	490.	158.	152.	2.42		
	HYDROGRAPH AT									
+		SUBV9	854.	12.33	170.	52.	50.	.95		
	2 COMBINED AT									
+		HCV9	2316.	12.50	656.	209.	201.	3.37		
	ROUTED TO									
+		RV10a	476.	14.17	264.	89.	85.	3.37		
+									1773.38	15.08
	ROUTED TO									
+		RV10-1	467.	15.08	262.	86.	83.	3.37		
	ROUTED TO									
+		RV10-2	459.	16.00	260.	83.	80.	3.37		
	ROUTED TO									
+		RV10-3	451.	16.92	259.	79.	76.	3.37		
	HYDROGRAPH AT									
+		SUBV10	1853.	13.50	891.	278.	267.	5.48		
	2 COMBINED AT									
+		HCV10	1784.	13.50	980.	339.	326.	8.85		
	HYDROGRAPH AT									
+		SUBV11	253.	12.83	85.	26.	25.	.44		
	ROUTED TO									
+		RV12a	229.	13.08	85.	26.	25.	.44		
+									1777.74	13.08
	ROUTED TO									
+		RV12-1	215.	14.25	85.	26.	25.	.44		
	ROUTED TO									
+		RV12-2	203.	15.42	84.	25.	24.	.44		
	HYDROGRAPH AT									
+		SUBV12	1233.	13.33	550.	171.	165.	3.32		
	2 COMBINED AT									
+		HCV12	1243.	13.33	627.	195.	188.	3.76		
	HYDROGRAPH AT									
+		SUBV13	1267.	12.92	444.	138.	133.	2.35		
	ROUTED TO									
+		RV14a	1198.	13.08	443.	136.	131.	2.35		
+									1790.90	13.08
	ROUTED TO									
+		RV14-1	1150.	14.08	443.	134.	129.	2.35		
	ROUTED TO									
+		RV14-2	1104.	15.08	442.	132.	127.	2.35		
	ROUTED TO									

+		RV14-3	1064.	16.00	441.	129.	124.	2.35		
	HYDROGRAPH AT									
+		SUBV14	1280.	13.75	664.	208.	200.	4.09		
	2 COMBINED AT									
+		HCV14	1512.	15.92	1039.	329.	317.	6.44		
	HYDROGRAPH AT									
+		SUBV15	1230.	12.50	313.	97.	93.	1.64		
	ROUTED TO									
+		RV16a	1053.	12.75	312.	96.	92.	1.64		
+									1789.93	12.75
	ROUTED TO									
+		RV16	1009.	13.25	312.	95.	92.	1.64		
	HYDROGRAPH AT									
+		SUBV16	908.	12.17	146.	45.	44.	.76		
	2 COMBINED AT									
+		HCV16	1112.	13.25	453.	140.	135.	2.40		
	HYDROGRAPH AT									
+		SUBV17	3028.	12.58	822.	256.	247.	4.06		
	ROUTED TO									
+		RV18	2661.	13.75	821.	253.	243.	4.06		
	HYDROGRAPH AT									
+		SUBV18	2829.	12.83	948.	294.	283.	5.06		
	2 COMBINED AT									
+		HCV18	3989.	13.58	1691.	524.	505.	9.12		
	ROUTED TO									
+		RV19	3954.	13.92	1690.	521.	502.	9.12		
	HYDROGRAPH AT									
+		SUBV19	2047.	12.50	506.	157.	151.	2.77		
	2 COMBINED AT									
+		HCV19	4272.	13.92	2121.	657.	633.	11.89		
	ROUTED TO									
+		RV20a	4260.	13.92	2121.	652.	628.	11.89		
+									1799.51	14.00
	ROUTED TO									
+		RV20	4192.	14.58	2118.	644.	620.	11.89		
	HYDROGRAPH AT									
+		SUBV20	391.	12.33	80.	25.	24.	.48		
	2 COMBINED AT									
+		HCV20a	4212.	14.58	2166.	665.	640.	12.37		
	2 COMBINED AT									
+		HCV20b	4468.	14.58	2540.	784.	755.	14.77		

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        ROUTED TO
+                       RV21      4426.   15.58        2529.        766.        738.      14.77

        HYDROGRAPH AT
+                      SUBV21      1212.   13.83         656.        207.        199.       4.43

        2 COMBINED AT
+                      HCV21a      4999.   15.00        3048.        937.        903.      19.20

        5 COMBINED AT
+                      HCV21b     10955.   15.33        6691.       2121.       2043.      52.12

        HYDROGRAPH AT
+                      HCV22a       102.   12.25         102.         56.         54.      47.69

        2 COMBINED AT
+                      HCV22b     11057.   15.33        6793.       2177.       2097.      52.12

        ROUTED TO
+                        RESV      3018.   18.00        2935.       1361.       1312.      52.12
+                                                                                                    1571.95       18.00
1                              SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION     RESR


PLAN  1 ...............                    INITIAL VALUE     SPILLWAY CREST     TOP OF DAM
                              ELEVATION        1585.00           1597.60          1602.30
                              STORAGE               0.              3944.            7575.
                              OUTFLOW             583.              2622.           21945.


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

                1.00      1595.84       .00       2873.      2282.       .00        19.92        .00


PLAN  2 ...............                    INITIAL VALUE     SPILLWAY CREST     TOP OF DAM
                              ELEVATION        1585.00           1597.60          1602.30
                              STORAGE               0.              3944.            7575.
                              OUTFLOW             583.              2622.           21945.


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

                1.00      1595.62       .00       2750.      2240.       .00        19.92        .00


PLAN  3 ...............                    INITIAL VALUE     SPILLWAY CREST     TOP OF DAM
                              ELEVATION        1585.00           1597.60          1602.30
                              STORAGE               0.              3944.            7575.
                              OUTFLOW             583.              2622.           21945.


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

1.00	1595.08	.00	2463.	2140.	.00	19.83	.00

PLAN 4 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1585.00	1597.60	1602.30
STORAGE	0.	3944.	7575.
OUTFLOW	583.	2622.	21945.

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	1594.76	.00	2300.	2081.	.00	19.75	.00

PLAN 5 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1585.00	1597.60	1602.30
STORAGE	0.	3944.	7575.
OUTFLOW	583.	2622.	21945.

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	1594.43	.00	2140.	2021.	.00	19.75	.00

1 SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION RESV

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1564.20	1574.80	1579.50
STORAGE	0.	4388.	9364.
OUTFLOW	396.	4330.	25157.

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	1573.08	.00	3047.	3517.	.00	18.17	.00

PLAN 2 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1564.20	1574.80	1579.50
STORAGE	0.	4388.	9364.
OUTFLOW	396.	4330.	25157.

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	1572.90	.00	2923.	3435.	.00	18.08	.00

PLAN 3 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1564.20	1574.80	1579.50
STORAGE	0.	4388.	9364.

OUTFLOW	396.	4330.	25157.

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	1572.47	.00	2633.	3242.	.00	18.08	.00

PLAN 4 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1564.20	1574.80	1579.50
STORAGE	0.	4388.	9364.
OUTFLOW	396.	4330.	25157.

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	1572.21	.00	2468.	3129.	.00	18.08	.00

PLAN 5 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1564.20	1574.80	1579.50
STORAGE	0.	4388.	9364.
OUTFLOW	396.	4330.	25157.

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	1571.95	.00	2306.	3015.	.00	18.00	.00

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

DM3 - Vineyard & Rittenhouse
25-year

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

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THIS HEC-1 VERSION CONTAINS ALL OPTIONS EXCEPT ECONOMICS, AND THE NUMBER OF PLANS ARE REDUCED TO 3

1 HEC-1 INPUT PAGE 1

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

              *DIAGRAM
   1          ID     VINEYARD AND RITTENHOUSE F.R.S. ANALYSIS
   2          ID     25-YEAR, 24-HOUR STORM: SCS EXCESS & HYDROGRAPH DEVELOPMENT,
   3          ID     MUSKINGUM ROUTING
   4          ID     TIME INCREMENT = 5 MINUTES
   5          ID     FILENAME = DM3IN, DM3OUT
   6          IT       5       0       0     300
   7          IO       5
   8          IN      15
   9          JD    3.29    0.25
  10          PC       0    .002    .005    .008    .011    .014    .017    .020    .023    .026
  11          PC    .029    .032    .035    .038    .041    .044    .048    .052    .056    .060
  12          PC    .064    .068    .072    .076    .080    .085    .090    .095    .100    .105
  13          PC    .110    .115    .120    .126    .133    .140    .147    .155    .163    .172
  14          PC    .181    .191    .203    .218    .236    .257    .283    .387    .663    .707
  15          PC    .735    .758    .766    .791    .804    .815    .825    .834    .842    .849
  16          PC    .856    .863    .869    .875    .881    .887    .893    .898    .903    .908
  17          PC    .913    .918    .922    .926    .930    .934    .938    .942    .946    .950
  18          PC    .953    .956    .959    .962    .965    .968    .971    .974    .977    .980
  19          PC    .983    .986    .992    .995    .998   1.000
  20          JD    3.22     5.0
  21          JD    3.06    15.0
  22          JD    2.96    30.0
  23          JD    2.86    53.0

  24          KK   SUBR1
  25          KM     HYDROGRAPH FOR SUBBASIN R1
  26          BA    1.56
  27          LS       0     80.
  28          UD     .72

  29          KK    RR2a
  30          KM    ROUTE HYDROGRAPH FROM SUBBASIN R1 TO R2 ACROSS HWY 60
  31          RS       1    STOR       0
  32          SA       0       1      26     115     224     326
  33          SE    1800  1810.6    1820    1830    1840    1850
  34          SQ       0     290     692    1204    2198    6601   17223   34714
  35          SE  1810.6    1812    1813    1814  1815.9  1818.5  1819.5  1820.5

  36          KK   RR2-1
  37          KM     ROUTE HYDROGRAPH FROM SUBBASIN R1 THRU REACH R2-1
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 38          RM      9    1.06      .3

 39          KK   RR2-2
 40          KM     ROUTE HYDROGRAPH FROM SUBBASIN R1 THRU REACH R2-2
 41          RM      9    1.06      .3

 42          KK   RR2-3
 43          KM     ROUTE HYDROGRAPH FROM SUBBASIN R1 THRU REACH R2-3
 44          RM      9    1.06      .3
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


 45          KK   SUBR2
 46          KM     HYDROGRAPH FOR SUBBASIN R2
 47          BA    8.43
 48          LS      0     78.
 49          UD    1.90

 50          KK    HCR2
 51          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R1 & R2
 52          HC      2

 53          KK   SUBR3
 54          KM     HYDROGRAPH FOR SUBBASIN R3
 55          BA    1.10
 56          LS      0     81.
 57          UD     .69

 58          KK    RR4a
 59          KM    ROUTE HYDROGRAPH FROM SUBBASIN R3 TO R4 ACROSS HWY 60
 60          RS      1    STOR       0
 61          SA      0       1      26     115     205
 62          SE  1823.4  1827.8    1840    1850    1860
 63          SQ      0     412    1127    1832    9597   23670   46850
 64          SE  1827.8    1830    1832  1833.6    1837    1838    1839

 65          KK   RR4-1
 66          KM     ROUTE HYDROGRAPH FROM SUBBASIN R3 THRU REACH R4-1
 67          RM      7     .85      .3

 68          KK   RR4-2
 69          KM     ROUTE HYDROGRAPH FROM SUBBASIN R3 THRU REACH R4-2
 70          RM      7     .85      .3

 71          KK   SUBR4
 72          KM     HYDROGRAPH FOR SUBBASIN R4
 73          BA    2.67
 74          LS      0     78.
 75          UD    1.01

 76          KK    HCR4
 77          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R3 & R4
 78          HC      2

 79          KK   SUBR5
 80          KM     HYDROGRAPH FOR SUBBASIN R5
 81          BA    2.71
 82          LS      0     88.
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 83          UD     .39

 84          KK     RR6
 85          KM     ROUTE HYDROGRAPH FROM SUBBASIN R5
 86          RM       5     .51      .3
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 87          KK   SUBR6
 88          KM     HYDROGRAPH FOR SUBBASIN R6
 89          BA    4.19
 90          LS       0     87.
 91          UD     .70

 92          KK    HCR6
 93          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R5 & R6
 94          HC       2

 95          KK     RR7
 96          KM     ROUTE HYDROGRAPH FROM SUBBASINS R5 & R6
 97          RM       6     .68      .3

 98          KK   SUBR7
 99          KM     HYDROGRAPH FOR SUBBASIN R7
100          BA    2.67
101          LS       0     86.
102          UD     .41

103          KK    HCR7
104          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R5 THRU R7
105          HC       2

106          KK   RR8-1
107          KM     ROUTE HYDROGRAPH FROM SUBBASINS R5 THRU R7 THRU REACH R8-1
108          RM       6     .70      .3

109          KK   RR8-2
110          KM     ROUTE HYDROGRAPH FROM SUBBASINS R5 THRU R7 THRU REACH R8-2
111          RM       6     .70      .3

112          KK   SUBR8
113          KM     HYDROGRAPH FOR SUBBASIN R8
114          BA    2.00
115          LS       0     79.
116          UD     .83

117          KK    HCR8
118          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R5 THRU R8
119          HC       2

120          KK    RR9a
121          KM    ROUTE HYDROGRAPH FROM SUBBASINS R5 THRU R8 TO R9 ACROSS HWY 60
122          RS       1    STOR       0
123          SA       0       1      26      77     141
124          SE  1813.9  1829.5    1840    1850    1860
125          SQ       0     563    2236    4601    5986   27109
126          SE  1829.5    1831    1833    1835    1836    1840
```

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


 127          KK     RR9
 128          KM     ROUTE HYDROGRAPH FROM SUBBASINS R5 THRU R8
 129          RM       4     .44      .3

 130          KK   SUBR9
 131          KM     HYDROGRAPH FOR SUBBASIN R9
 132          BA    0.26
 133          LS       0     74.
 134          UD     .27

 135          KK    HCR9
 136          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R5 THRU R9
 137          HC       2

 138          KK  SUBR10
 139          KM     HYDROGRAPH FOR SUBBASIN R10
 140          BA    3.35
 141          LS       0     84.
 142          UD     .92

 143          KK  SUBR11
 144          KM     HYDROGRAPH FOR SUBBASIN R11
 145          BA    3.90
 146          LS       0     84.
 147          UD     .78

 148          KK   HCR11
 149          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R10 & R11
 150          HC       2

 151          KK    RR12
 152          KM     ROUTE HYDROGRAPH FROM SUBBASINS R10 & R11
 153          RM       5     .55      .3

 154          KK  SUBR12
 155          KM     HYDROGRAPH FOR SUBBASIN R12
 156          BA    4.46
 157          LS       0     81.
 158          UD     .76

 159          KK   HCR12
 160          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R10 THRU R12
 161          HC       2

 162          KK   RR13a
 163          KM    ROUTE HYDROGRAPH FROM SUBBASINS R10 THRU R12 TO R13 ACROSS HWY 60
 164          RS       1    STOR       0
 165          SA       0       1      83     186     358
 166          SE  1793.6  1819.4    1840    1850    1860
 167          SQ       0    2071    5240    9357   14240   18616   62142
 168          SE  1819.4    1822    1824    1826    1828  1829.6  1834.5
```


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

```
169          KK   RR13
170          KM    ROUTE HYDROGRAPH FROM SUBBASINS R10 THRU R13
171          RM      4     .41      .3

172          KK  SUBR13
173          KM    HYDROGRAPH FOR SUBBASIN R13
174          BA   1.27
175          LS      0     81.
176          UD    .85

177          KK  HCR13a
178          KM    COMBINE HYDROGRAPHS FOR SUBBASINS R10 THRU R13
179          HC      2

180          KK  HCR13b
181          KM    COMBINE HYDROGRAPHS FOR SUBBASINS R5 THRU R13
182          HC      2

183          KK   RR14
184          KM    ROUTE HYDROGRAPH FROM SUBBASINS R5 THRU R13
185          RM      9    1.10      .3

186          KK  SUBR14
187          KM    HYDROGRAPH FOR SUBBASIN R14
188          BA   2.82
189          LS      0     77.
190          UD    .76

191          KK  HCR14a
192          KM    COMBINE HYDROGRAPHS FOR SUBBASINS R5 THRU R14
193          HC      2

194          KK  HCR14b
195          KM    COMBINE HYDROGRAPHS FOR SUBBASINS R3 THRU R14
196          HC      2

197          KK  RR15-1
198          KM    ROUTE HYDROGRAPH FROM SUBBASINS R3 THRU R14 THRU REACH R15-1
199          RM      5     .63      .3

200          KK  RR15-2
201          KM    ROUTE HYDROGRAPH FROM SUBBASINS R3 THRU R14 THRU REACH R15-2
202          RM      5     .63      .3

203          KK  SUBR15
204          KM    HYDROGRAPH FOR SUBBASIN R15
205          BA   6.30
206          LS      0     79.
207          UD   1.47
```



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


208          KK  HCR15a
209          KM    COMBINE HYDROGRAPHS FOR SUBBASINS R3 THRU R15
210          HC      2

211          KK  HCR15b
212          KM    COMBINE HYDROGRAPHS FOR SUBBASINS R1 THRU R15
```

```
213          HC       2

214          KK   HDR16
215          KM     DIVERT FLOW FROM RITTENHOUSE (TO VINEYARD FRS)
216          DT   DVR16
217          DI       0      100      500     1000  100000
218          DQ       0       50      102      102     102

219          KK    RESR
220          KM    RESERVOIR ROUTING THRU RITTENHOUSE F.R.S.
221          KO       1        2
222          RS       1     STOR        0
223          SA       0      118      200      400     600     800
224          SE    1585   1587.5   1589.1   1592.9  1596.5  1600.5
225          SL  1577.7     5.94      .62      1.5
226          SS  1597.6      600        3      1.5
227          ST  1602.3    19000      3.3      1.5

228          KK   SUBV1
229          KM     HYDROGRAPH FOR SUBBASIN V1
230          BA    3.03
231          LS       0      85.
232          UD     .53

233          KK   SUBV2
234          KM     HYDROGRAPH FOR SUBBASIN V2
235          BA    3.34
236          LS       0      84.
237          UD     .47

238          KK     RV3
239          KM     ROUTE HYDROGRAPH FROM SUBBASIN V2
240          RM       4     .38       .3

241          KK   SUBV3
242          KM     HYDROGRAPH FOR SUBBASIN V3
243          BA    0.40
244          LS       0      81.
245          UD     .30

246          KK    HCV3
247          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V1 THRU V3
248          HC       3
```



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


249          KK     RV4
250          KM     ROUTE HYDROGRAPH FROM SUBBASINS V1 THRU V3
251          RM       4     .43       .3

252          KK   SUBV4
253          KM     HYDROGRAPH FOR SUBBASIN V4
254          BA    1.85
255          LS       0      81.      15
256          UD     .52

257          KK    HCV4
258          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V1 THRU V4
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```
259          HC       2

260          KK     RV5
261          KM     ROUTE HYDROGRAPH FROM SUBBASINS V1 THRU V4
262          RM       8     .66      .3

263          KK   SUBV5
264          KM     HYDROGRAPH FOR SUBBASIN V5
265          BA    1.66
266          LS       0     82.
267          UD     .45

268          KK    HCV5
269          KM    COMBINE HYDROGRAPHS FOR SUBBASINS V1 THRU V5
270          HC       2

271          KK    RV6a
272          KM    ROUTE HYDROGRAPH FROM SUBBASINS V1 THRU V5 TO V6 ACROSS HWY 60
273          RS       1    STOR       0
274          SA       0       1      45     147     205
275          SE  1719.9  1739.7    1750    1760    1770
276          SQ       0     387    2348    6889   19775   36999
277          SE  1739.7  1740.7  1742.7  1745.6    1749    1750

278          KK   RV6-1
279          KM     ROUTE HYDROGRAPH FROM SUBBASINS V1 THRU V5 THRU REACH RV6-1
280          RM       9     .83      .3

281          KK   RV6-2
282          KM     ROUTE HYDROGRAPH FROM SUBBASINS V1 THRU V5 THRU REACH RV6-2
283          RM       9     .83      .3

284          KK   SUBV6
285          KM     HYDROGRAPH FOR SUBBASIN V6
286          BA    3.59
287          LS       0     70.
288          UD     .99
```



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


289          KK    HCV6
290          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V1 THRU V6
291          HC       2

292          KK   SUBV7
293          KM     HYDROGRAPH FOR SUBBASIN V7
294          BA    1.69
295          LS       0     86.
296          UD     .74

297          KK   SUBV8
298          KM     HYDROGRAPH FOR SUBBASIN V8
299          BA    0.73
300          LS       0     81.      50
301          UD     .33

302          KK    HCV8
303          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V7 & V8
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```
304          HC      2

305          KK     RV9
306          KM     ROUTE HYDROGRAPH FROM SUBBASINS V7 & V8
307          RM      3     .23      .3

308          KK   SUBV9
309          KM     HYDROGRAPH FOR SUBBASIN V9
310          BA    0.95
311          LS      0     83.
312          UD     .41

313          KK    HCV9
314          KM    COMBINE HYDROGRAPHS FOR SUBBASINS V7 THRU V9
315          HC      2

316          KK   RV10a
317          KM    ROUTE HYDROGRAPH FROM SUBBASINS V7 THRU V9 TO V10 ACROSS HWY 60
318          RS      1    STOR       0
319          SA      0      19      77     179     294
320          SE   1745    1770    1780    1790    1800
321          SQ      0    1211    3230    6108    9716   14201   63126
322          SE   1773    1775    1777    1779    1781  1783.3  1788.5

323          KK  RV10-1
324          KM     ROUTE HYDROGRAPH FROM SUBBASINS V7 THRU V9 THRU REACH V10-1
325          RM      9     .86      .3

326          KK  RV10-2
327          KM     ROUTE HYDROGRAPH FROM SUBBASINS V7 THRU V9 THRU REACH V10-2
328          RM      9     .86      .3
```



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


329          KK  RV10-3
330          KM     ROUTE HYDROGRAPH FROM SUBBASINS V7 THRU V9 THRU REACH V10-3
331          RM      9     .86      .3

332          KK  SUBV10
333          KM     HYDROGRAPH FOR SUBBASIN V10
334          BA    5.48
335          LS      0     82.
336          UD    1.54

337          KK   HCV10
338          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V7 THRU V10
339          HC      2

340          KK  SUBV11
341          KM     HYDROGRAPH FOR SUBBASIN V11
342          BA    0.44
343          LS      0     85.
344          UD     .93

345          KK   RV12a
346          KM    ROUTE HYDROGRAPH FROM SUBBASIN V11 TO V12 ACROSS HWY 60
347          RS      1    STOR       0
348          SA      0      32      64      96
```

```
349          SE  1773.7    1790    1800    1810
350          SQ       0      24     237     363    5249   12106   38086
351          SE  1773.7  1774.7  1778.7  1780.7  1784.5  1785.5  1787.5

352          KK  RV12-1
353          KM     ROUTE HYDROGRAPH FROM SUBBASIN V11 THRU REACH V12-1
354          RM       9    1.15      .3

355          KK  RV12-2
356          KM     ROUTE HYDROGRAPH FROM SUBBASIN V11 THRU REACH V12-2
357          RM       9    1.15      .3

358          KK  SUBV12
359          KM     HYDROGRAPH FOR SUBBASIN V12
360          BA    3.32
361          LS       0     82.
362          UD    1.38

363          KK   HCV12
364          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V11 & V12
365          HC       2

366          KK  SUBV13
367          KM     HYDROGRAPH FOR SUBBASIN V13
368          BA    2.35
369          LS       0     85.
370          UD     .99
```



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

371          KK   RV14a
372          KM    ROUTE HYDROGRAPH FROM SUBBASIN V13 TO V14 ACROSS HWY 60
373          RS       1    STOR       0
374          SA       0       1      38      96     154
375          SE  1780.4  1786.9    1800    1810    1820
376          SQ       0     120     372    1191    1925   16426   62329
377          SE  1786.9    1788    1789  1791.5    1794    1796    1798

378          KK  RV14-1
379          KM     ROUTE HYDROGRAPH FROM SUBBASIN V13 THRU REACH V14-1
380          RM       9     .96      .3

381          KK  RV14-2
382          KM     ROUTE HYDROGRAPH FROM SUBBASIN V13 THRU REACH V14-2
383          RM       9     .96      .3

384          KK  RV14-3
385          KM     ROUTE HYDROGRAPH FROM SUBBASIN V13 THRU REACH V14-3
386          RM       9     .96      .3

387          KK  SUBV14
388          KM     HYDROGRAPH FOR SUBBASIN V14
389          BA    4.09
390          LS       0     82.
391          UD    1.73

392          KK   HCV14
393          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V13 & V14
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```
394          HC       2

395          KK  SUBV15
396          KM     HYDROGRAPH FOR SUBBASIN V15
397          BA    1.64
398          LS       0     85.
399          UD     .62

400          KK   RV16a
401          KM    ROUTE HYDROGRAPH FROM SUBBASIN V15 TO V16 ACROSS HWY 60
402          RS       1    STOR       0
403          SA       0       1      58     141     160
404          SE  1779.4    1786    1800    1810    1820
405          SQ       0     192     572    1061    1866    9058   26139
406          SE    1786  1787.5    1789  1790.5  1792.6    1796    1797

407          KK    RV16
408          KM     ROUTE HYDROGRAPH FROM SUBBASIN V15
409          RM       4     .48      .3

410          KK  SUBV16
411          KM     HYDROGRAPH FOR SUBBASIN V16
412          BA    0.76
413          LS       0     85.
414          UD     .29
```



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

415          KK   HCV16
416          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V15 & V16
417          HC       2

418          KK  SUBV17
419          KM     HYDROGRAPH FOR SUBBASIN V17
420          BA    4.06
421          LS       0     87.
422          UD     .69

423          KK    RV18
424          KM     ROUTE HYDROGRAPH FROM SUBBASIN V17
425          RM       9    1.14      .3

426          KK  SUBV18
427          KM     HYDROGRAPH FOR SUBBASIN V18
428          BA    5.06
429          LS       0     85.
430          UD     .93

431          KK   HCV18
432          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V17 & V18
433          HC       2

434          KK    RV19
435          KM     ROUTE HYDROGRAPH FROM SUBBASINS V17 & V18
436          RM       6     .38      .3

437          KK  SUBV19
438          KM     HYDROGRAPH FOR SUBBASIN V19
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```
439          BA    2.77
440          LS       0     84.
441          UD     .59

442          KK   HCV19
443          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V17 THRU V19
444          HC       2

445          KK   RV20a
446          KM    ROUTE HYDROGRAPH FROM SUBBASINS V17 THRU V19 TO V20 ACROSS HWY 60
447          RS       1    STOR       0
448          SA       0       1      13      51     154     294
449          SE    1768  1796.4    1800    1810    1820    1830
450          SQ       0    1226    4652    9549   16620   41739
451          SE  1796.4    1798    1800    1802  1804.3  1808.5

452          KK    RV20
453          KM     ROUTE HYDROGRAPH FROM SUBBASINS V17 THRU V19
454          RM       6     .72      .3
```



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


455          KK  SUBV20
456          KM     HYDROGRAPH FOR SUBBASIN V20
457          BA    0.48
458          LS       0     81.
459          UD     .43

460          KK  HCV20a
461          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V17 THRU V20
462          HC       2

463          KK  HCV20b
464          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V15 THRU V20
465          HC       2

466          KK    RV21
467          KM     ROUTE HYDROGRAPH FROM SUBBASINS V15 THRU V20
468          RM       9    1.21      .3

469          KK  SUBV21
470          KM     HYDROGRAPH FOR SUBBASIN V21
471          BA    4.43
472          LS       0     80.
473          UD    1.83

474          KK  HCV21a
475          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V15 THRU V21
476          HC       2

477          KK  HCV21b
478          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V1 THRU V21
479          HC       5

480          KK  HCV22a
481          KM     DIVERSION FROM RITTENHOUSE FRS
482          DR   DVR16
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```
483          KK  HCV22b
484          KM     COMBINING DIVERSION WITH UPSTREAM HYDROGRAPH
485          HC       2

486          KK    RESV
487          KM     RESERVOIR ROUTING THRU VINEYARD F.R.S.
488          KO       1       2
489          RS       1    STOR       0
490          SA       0      65     200     400     600     800    1000    1200
491          SE  1564.2    1565  1566.6  1569.5  1571.8  1574.2  1576.1  1579.2
492          SL  1561.5    15.9      .7     1.5
493          SS  1574.8     600       3     1.5
494          ST  1579.5   28829     3.3     1.5
495          ZZ
```

1

```
                SCHEMATIC DIAGRAM OF STREAM NETWORK
 INPUT
  LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

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

   24        SUBR1
                V
                V
   29         RR2a
                V
                V
   36        RR2-1
                V
                V
   39        RR2-2
                V
                V
   42        RR2-3
                .
                .
   45           .       SUBR2
                .          .
                .          .
   50         HCR2............
                .
                .
   53           .       SUBR3
                .          V
                .          V
   58           .        RR4a
                .          V
                .          V
   65           .       RR4-1
                .          V
                .          V
   68           .       RR4-2
                .          .
                .          .
   71           .          .       SUBR4
                .          .          .
                .          .          .
   76           .        HCR4............
                .          .
                .          .
```

```
79          .           .       SUBR5
            .           .          V
            .           .          V
84          .           .        RR6
            .           .          .
            .           .          .
87          .           .          .      SUBR6
            .           .          .          .
            .           .          .          .
92          .           .       HCR6............
            .           .          V
            .           .          V
95          .           .        RR7
            .           .          .
            .           .          .
98          .           .          .      SUBR7
            .           .          .          .
            .           .          .          .
103         .           .       HCR7............
            .           .          V
            .           .          V
106         .           .      RR8-1
            .           .          V
            .           .          V
109         .           .      RR8-2
            .           .          .
            .           .          .
112         .           .          .      SUBR8
            .           .          .          .
            .           .          .          .
117         .           .       HCR8............
            .           .          V
            .           .          V
120         .           .       RR9a
            .           .          V
            .           .          V
127         .           .        RR9
            .           .          .
            .           .          .
130         .           .          .      SUBR9
            .           .          .          .
            .           .          .          .
135         .           .       HCR9............
            .           .          .
            .           .          .
138         .           .          .     SUBR10
            .           .          .          .
            .           .          .          .
143         .           .          .          .     SUBR11
            .           .          .          .          .
            .           .          .          .          .
148         .           .          .      HCR11............
            .           .          .          V
            .           .          .          V
151         .           .          .       RR12
            .           .          .          .
            .           .          .          .
154         .           .          .          .     SUBR12
            .           .          .          .          .
            .           .          .          .          .
```

```
159          .           .           .      HCR12............
             .           .           .          V
             .           .           .          V
162          .           .           .      RR13a
             .           .           .          V
             .           .           .          V
169          .           .           .       RR13
             .           .           .          .
             .           .           .          .
172          .           .           .          .      SUBR13
             .           .           .          .           .
             .           .           .          .           .
177          .           .           .     HCR13a............
             .           .           .          .
             .           .           .          .
180          .           .     HCR13b............
             .           .           V
             .           .           V
183          .           .       RR14
             .           .           .
             .           .           .
186          .           .           .     SUBR14
             .           .           .          .
             .           .           .          .
191          .           .     HCR14a............
             .           .           .
             .           .           .
194          .     HCR14b............
             .           V
             .           V
197          .     RR15-1
             .           V
             .           V
200          .     RR15-2
             .           .
             .           .
203          .           .     SUBR15
             .           .           .
             .           .           .
208          .     HCRI5a............
             .           .
             .           .
211     HCR15b............
             .
             .
216          .-------> OVR16
214      HDR16
             V
             V
219       RESR
             .
             .
228          .      SUBV1
             .           .
             .           .
233          .           .      SUBV2
             .           .           V
             .           .           V
238          .           .       RV3
             .           .           .
```

```
241          .          .          .
             .          .          .      SUBV3
             .          .          .          .
             .          .          .          .
246          .      HCV3.......................
             .        V
             .        V
249          .       RV4
             .        .
             .        .
252          .        .      SUBV4
             .        .          .
             .        .          .
257          .      HCV4............
             .        V
             .        V
260          .       RV5
             .        .
             .        .
263          .        .      SUBV5
             .        .          .
             .        .          .
268          .      HCV5............
             .        V
             .        V
271          .      RV6a
             .        V
             .        V
278          .     RV6-1
             .        V
             .        V
281          .     RV6-2
             .        .
             .        .
284          .        .      SUBV6
             .        .          .
             .        .          .
289          .      HCV6............
             .        .
             .        .
292          .        .      SUBV7
             .        .          .
             .        .          .
297          .        .          .      SUBV8
             .        .          .          .
             .        .          .          .
302          .        .       HCV8............
             .        .          V
             .        .          V
305          .        .       RV9
             .        .          .
             .        .          .
308          .        .          .      SUBV9
             .        .          .          .
             .        .          .          .
313          .        .       HCV9............
             .        .          V
             .        .          V
316          .        .      RV10a
             .        .          V
```

```
                .         .         V
323             .         .     RV10-1
                .         .         V
                .         .         V
326             .         .     RV10-2
                .         .         V
                .         .         V
329             .         .     RV10-3
                .         .         .
                .         .         .
332             .         .         .     SUBV10
                .         .         .         .
                .         .         .         .
337             .         .     HCV10............
                .         .         .
                .         .         .
340             .         .         .     SUBV11
                .         .         .         V
                .         .         .         V
345             .         .         .      RV12a
                .         .         .         V
                .         .         .         V
352             .         .         .     RV12-1
                .         .         .         V
                .         .         .         V
355             .         .         .     RV12-2
                .         .         .         .
                .         .         .         .
358             .         .         .         .     SUBV12
                .         .         .         .         .
                .         .         .         .         .
363             .         .         .      HCV12............
                .         .         .         .
                .         .         .         .
366             .         .         .         .     SUBV13
                .         .         .         .         V
                .         .         .         .         V
371             .         .         .         .      RV14a
                .         .         .         .         V
                .         .         .         .         V
378             .         .         .         .     RV14-1
                .         .         .         .         V
                .         .         .         .         V
381             .         .         .         .     RV14-2
                .         .         .         .         V
                .         .         .         .         V
384             .         .         .         .     RV14-3
                .         .         .         .         .
                .         .         .         .         .
387             .         .         .         .         .     SUBV14
                .         .         .         .         .         .
                .         .         .         .         .         .
392             .         .         .         .      HCV14............
                .         .         .         .         .
                .         .         .         .         .
395             .         .         .         .         .     SUBV15
                .         .         .         .         .         V
                .         .         .         .         .         V
400             .         .         .         .         .      RV16a
                .         .         .         .         .         V
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                                                  V
407                                             RV16
                                                   .
                                                   .
410                                                .     SUBV16
                                                   .          .
                                                   .          .
415                                             HCV16............
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                                                   .
418                                                .     SUBV17
                                                   .          V
                                                   .          V
423                                                .        RV18
                                                   .          .
                                                   .          .
426                                                .          .      SUBV18
                                                   .          .          .
                                                   .          .          .
431                                                .      HCV18............
                                                   .          V
                                                   .          V
434                                                .        RV19
                                                   .          .
                                                   .          .
437                                                .          .      SUBV19
                                                   .          .          .
                                                   .          .          .
442                                                .      HCV19............
                                                   .          V
                                                   .          V
445                                                .      RV20a
                                                   .          V
                                                   .          V
452                                                .        RV20
                                                   .          .
                                                   .          .
455                                                .          .      SUBV20
                                                   .          .          .
                                                   .          .          .
460                                                .     HCV20a............
                                                   .          .
                                                   .          .
463                                             HCV20b............
                                                   V
                                                   V
466                                             RV21
                                                   .
                                                   .
469                                                .     SUBV21
                                                   .          .
                                                   .          .
474                                             HCV21a............
                                                   .
                                                   .
477                 HCV21b.............................................
                       .
                       .
482                    .          .<-------   DVR16
480                    .       HCV22a
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483          .      HCV22b............
             .          V
             .          V
486          .        RESV

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION
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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

****

VINEYARD AND RITTENHOUSE F.R.S. ANALYSIS
25-YEAR, 24-HOUR STORM: SCS EXCESS & HYDROGRAPH DEVELOPMENT,
MUSKINGUM ROUTING
TIME INCREMENT = 5 MINUTES
FILENAME = DM3IN, DM3OUT

```
  7 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     1    0  STARTING DATE
                   ITIME       0000  STARTING TIME
                      NQ        300  NUMBER OF HYDROGRAPH ORDINATES
                  NDDATE     2    0  ENDING DATE
                  NDTIME       0055  ENDING TIME

              COMPUTATION INTERVAL     .08 HOURS
                   TOTAL TIME BASE   24.92 HOURS

        ENGLISH UNITS

  9 JD        INDEX STORM NO. 1
                    STRM       3.29  PRECIPITATION DEPTH
                    TRDA        .25  TRANSPOSITION DRAINAGE AREA

 10 PI          PRECIPITATION PATTERN
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
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                   .01      .01      .01      .01      .01      .01      .01      .01      .03      .03
                   .03      .09      .09      .09      .01      .01      .01      .01      .01      .01
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20 JD INDEX STORM NO. 2

STRM 3.22 PRECIPITATION DEPTH

TRDA 5.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

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.01	.01	.01	.01	.01	.01	.01	.01	.03	.03
.03	.09	.09	.09	.01	.01	.01	.01	.01	.01
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21 JD INDEX STORM NO. 3

STRM 3.06 PRECIPITATION DEPTH

TRDA 15.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
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.03	.09	.09	.09	.01	.01	.01	.01	.01	.01
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22 JD INDEX STORM NO. 4

STRM 2.96 PRECIPITATION DEPTH

TRDA 30.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

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.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
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.01	.01	.01	.01	.01	.01	.01	.01	.03	.03
.03	.09	.09	.09	.01	.01	.01	.01	.01	.01
.01	.01	.01	.00	.00	.00	.01	.01	.01	.00
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 23 JD          INDEX STORM NO. 5
                      STRM      2.86  PRECIPITATION DEPTH
                      TRDA     53.00  TRANSPOSITION DRAINAGE AREA

  0 PI            PRECIPITATION PATTERN
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
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                     .03       .09       .09       .09       .01       .01       .01       .01       .01       .01
                     .01       .01       .01       .00       .00       .00       .01       .01       .01       .00
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*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN     6601. TO    34714.
               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     9597. TO   301830.
               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 *** TIME INTERVAL IS GREATER THAN .29*LAG

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN        0. TO     2071.
               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.)


*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***


            **************
            *            *
 219 KK     *      RESR  *
            *            *
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221 KO        OUTPUT CONTROL VARIABLES
                   IPRNT          1  PRINT CONTROL
                   IPLOT          2  PLOT CONTROL
                   QSCAL         0.  HYDROGRAPH PLOT SCALE

           HYDROGRAPH ROUTING DATA

222 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

223 SA            AREA         .0     118.0     200.0     400.0     600.0     800.0

224 SE        ELEVATION     1585.00   1587.50   1589.10   1592.90   1596.50   1600.50

225 SL        LOW-LEVEL OUTLET
                   ELEVL     1577.70  ELEVATION AT CENTER OF OUTLET
                   CAREA        5.94  CROSS-SECTIONAL AREA
                    COQL         .62  COEFFICIENT
                    EXPL        1.50  EXPONENT OF HEAD

226 SS        SPILLWAY
                    CREL     1597.60  SPILLWAY CREST ELEVATION
                   SPWID      600.00  SPILLWAY WIDTH
                    COQW        3.00  WEIR COEFFICIENT
                    EXPW        1.50  EXPONENT OF HEAD

227 ST        TOP OF DAM
                   TOPEL     1602.30  ELEVATION AT TOP OF DAM
                  DAMWID    19000.00  DAM WIDTH
                    COQD        3.30  WEIR COEFFICIENT
                    EXPD        1.50  EXPONENT OF HEAD
```

***

COMPUTED STORAGE-ELEVATION DATA

STORAGE	.00	98.33	349.86	1468.14	3256.01	6046.44
ELEVATION	1585.00	1587.50	1589.10	1592.90	1596.50	1600.50

COMPUTED OUTFLOW-ELEVATION DATA

(EXCLUDING FLOW OVER DAM)

OUTFLOW	.00	718.35	873.76	1050.11	1248.72	1470.92	1718.01	1991.35	2292.22	2622.00
ELEVATION	1585.00	1586.09	1587.27	1588.51	1589.84	1591.24	1592.71	1594.27	1595.89	1597.60
OUTFLOW	2656.75	2768.00	3004.52	3412.79	4040.19	4933.41	6139.43	7705.24	9677.88	12105.01
ELEVATION	1597.66	1597.76	1597.92	1598.13	1598.39	1598.70	1599.07	1599.50	1599.97	1600.50

COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

(INCLUDING FLOW OVER DAM)

STORAGE	.00	8.25	73.14	98.33	242.06	349.86	509.18	884.24	1394.13	1468.14
OUTFLOW	582.56	718.35	873.76	906.14	1050.11	1136.87	1248.72	1470.92	1718.01	1750.33
ELEVATION	1585.00	1586.09	1587.27	1587.50	1588.51	1589.10	1589.84	1591.24	1592.71	1592.90

STORAGE	2062.05	2903.69	3256.01	3944.47	3980.93	4048.97	4153.00	4294.06	4474.00	4694.84
OUTFLOW	1991.35	2292.22	2407.64	2622.00	2656.75	2768.00	3004.52	3412.79	4040.19	4933.41
ELEVATION	1594.27	1595.89	1596.50	1597.60	1597.66	1597.76	1597.92	1598.13	1598.39	1598.70

STORAGE	4959.15	5270.01	5631.03	6046.44
OUTFLOW	6139.43	7705.24	9677.88	12105.01
ELEVATION	1599.07	1599.50	1599.97	1600.50

****

HYDROGRAPH AT RESR
TRANSPOSITION AREA .3 SQ MI

****

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1		0000	1	583.	.0	1585.0	*	1		0820	101	0.	.0	1585.0	*	1		1640	201	1739.	1442.0	1592.8
1		0005	2	0.	.0	1585.0	*	1		0825	102	0.	.0	1585.0	*	1		1645	202	1756.	1482.0	1592.9
1		0010	3	0.	.0	1585.0	*	1		0830	103	0.	.0	1585.0	*	1		1650	203	1773.	1521.0	1593.0
1		0015	4	0.	.0	1585.0	*	1		0835	104	0.	.0	1585.0	*	1		1655	204	1789.	1559.1	1593.1
1		0020	5	0.	.0	1585.0	*	1		0840	105	0.	.0	1585.0	*	1		1700	205	1805.	1596.3	1593.2
1		0025	6	0.	.0	1585.0	*	1		0845	106	0.	.0	1585.0	*	1		1705	206	1820.	1632.7	1593.3
1		0030	7	0.	.0	1585.0	*	1		0850	107	0.	.0	1585.0	*	1		1710	207	1835.	1668.6	1593.4
1		0035	8	0.	.0	1585.0	*	1		0855	108	583.	.0	1585.0	*	1		1715	208	1849.	1703.8	1593.5
1		0040	9	0.	.0	1585.0	*	1		0900	109	0.	.0	1585.0	*	1		1720	209	1864.	1738.4	1593.5
1		0045	10	0.	.0	1585.0	*	1		0905	110	583.	.0	1585.0	*	1		1725	210	1877.	1772.4	1593.6
1		0050	11	0.	.0	1585.0	*	1		0910	111	0.	.0	1585.0	*	1		1730	211	1891.	1805.7	1593.7
1		0055	12	0.	.0	1585.0	*	1		0915	112	583.	.0	1585.0	*	1		1735	212	1904.	1838.0	1593.8
1		0100	13	0.	.0	1585.0	*	1		0920	113	0.	.0	1585.0	*	1		1740	213	1916.	1869.4	1593.8
1		0105	14	0.	.0	1585.0	*	1		0925	114	583.	.0	1585.0	*	1		1745	214	1928.	1899.5	1593.9
1		0110	15	0.	.0	1585.0	*	1		0930	115	0.	.0	1585.0	*	1		1750	215	1940.	1928.3	1594.0
1		0115	16	0.	.0	1585.0	*	1		0935	116	583.	.0	1585.0	*	1		1755	216	1950.	1955.5	1594.0
1		0120	17	0.	.0	1585.0	*	1		0940	117	0.	.0	1585.0	*	1		1800	217	1960.	1981.0	1594.1
1		0125	18	0.	.0	1585.0	*	1		0945	118	583.	.0	1585.0	*	1		1805	218	1969.	2004.7	1594.1
1		0130	19	0.	.0	1585.0	*	1		0950	119	0.	.0	1585.0	*	1		1810	219	1978.	2026.6	1594.2
1		0135	20	0.	.0	1585.0	*	1		0955	120	583.	.0	1585.0	*	1		1815	220	1985.	2046.6	1594.2
1		0140	21	0.	.0	1585.0	*	1		1000	121	0.	.0	1585.0	*	1		1820	221	1992.	2064.7	1594.3
1		0145	22	0.	.0	1585.0	*	1		1005	122	583.	.0	1585.0	*	1		1825	222	1999.	2081.0	1594.3
1		0150	23	0.	.0	1585.0	*	1		1010	123	0.	.0	1585.0	*	1		1830	223	2004.	2095.5	1594.3
1		0155	24	0.	.0	1585.0	*	1		1015	124	583.	.0	1585.0	*	1		1835	224	2009.	2108.3	1594.4
1		0200	25	0.	.0	1585.0	*	1		1020	125	0.	.0	1585.0	*	1		1840	225	2013.	2119.6	1594.4
1		0205	26	0.	.0	1585.0	*	1		1025	126	583.	.0	1585.0	*	1		1845	226	2017.	2129.4	1594.4
1		0210	27	0.	.0	1585.0	*	1		1030	127	0.	.0	1585.0	*	1		1850	227	2020.	2137.9	1594.4
1		0215	28	0.	.0	1585.0	*	1		1035	128	583.	.0	1585.0	*	1		1855	228	2023.	2145.2	1594.4
1		0220	29	0.	.0	1585.0	*	1		1040	129	0.	.0	1585.0	*	1		1900	229	2025.	2151.4	1594.5
1		0225	30	0.	.0	1585.0	*	1		1045	130	583.	.0	1585.0	*	1		1905	230	2027.	2156.6	1594.5
1		0230	31	0.	.0	1585.0	*	1		1050	131	0.	.0	1585.0	*	1		1910	231	2029.	2160.9	1594.5
1		0235	32	0.	.0	1585.0	*	1		1055	132	583.	.0	1585.0	*	1		1915	232	2030.	2164.4	1594.5
1		0240	33	0.	.0	1585.0	*	1		1100	133	0.	.0	1585.0	*	1		1920	233	2031.	2167.2	1594.5
1		0245	34	0.	.0	1585.0	*	1		1105	134	583.	.0	1585.0	*	1		1925	234	2032.	2169.3	1594.5
1		0250	35	0.	.0	1585.0	*	1		1110	135	0.	.0	1585.0	*	1		1930	235	2033.	2170.9	1594.5
1		0255	36	0.	.0	1585.0	*	1		1115	136	583.	.0	1585.0	*	1		1935	236	2033.	2171.9	1594.5
1		0300	37	0.	.0	1585.0	*	1		1120	137	0.	.0	1585.0	*	1		1940	237	2033.	2172.4	1594.5
1		0305	38	0.	.0	1585.0	*	1		1125	138	583.	.0	1585.0	*	1		1945	238	2033.	2172.5	1594.5
1		0310	39	0.	.0	1585.0	*	1		1130	139	0.	.0	1585.0	*	1		1950	239	2033.	2172.2	1594.5
1		0315	40	0.	.0	1585.0	*	1		1135	140	583.	.0	1585.0	*	1		1955	240	2033.	2171.6	1594.5
1		0320	41	0.	.0	1585.0	*	1		1140	141	0.	.0	1585.0	*	1		2000	241	2033.	2170.6	1594.5
1		0325	42	0.	.0	1585.0	*	1		1145	142	583.	.0	1585.0	*	1		2005	242	2032.	2169.4	1594.5

1	0330	43	0.	.0	1585.0	*	1	1150	143	0.	.0	1585.0	*	1	2010	243	2031.	2167.9	1594.5
1	0335	44	0.	.0	1585.0	*	1	1155	144	583.	.0	1585.0	*	1	2015	244	2031.	2166.0	1594.5
1	0340	45	0.	.0	1585.0	*	1	1200	145	0.	.0	1585.0	*	1	2020	245	2030.	2164.0	1594.5
1	0345	46	0.	.0	1585.0	*	1	1205	146	583.	.0	1585.0	*	1	2025	246	2029.	2161.7	1594.5
1	0350	47	0.	.0	1585.0	*	1	1210	147	583.	.0	1585.0	*	1	2030	247	2028.	2159.2	1594.5
1	0355	48	0.	.0	1585.0	*	1	1215	148	583.	.0	1585.0	*	1	2035	248	2027.	2156.4	1594.5
1	0400	49	0.	.0	1585.0	*	1	1220	149	583.	.0	1585.0	*	1	2040	249	2026.	2153.6	1594.5
1	0405	50	0.	.0	1585.0	*	1	1225	150	638.	.6	1585.5	*	1	2045	250	2025.	2150.5	1594.5
1	0410	51	0.	.0	1585.0	*	1	1230	151	667.	2.1	1585.7	*	1	2050	251	2024.	2147.3	1594.4
1	0415	52	0.	.0	1585.0	*	1	1235	152	695.	4.8	1585.9	*	1	2055	252	2022.	2143.9	1594.4
1	0420	53	0.	.0	1585.0	*	1	1240	153	721.	8.8	1586.1	*	1	2100	253	2021.	2140.4	1594.4
1	0425	54	0.	.0	1585.0	*	1	1245	154	747.	14.2	1586.3	*	1	2105	254	2020.	2136.7	1594.4
1	0430	55	0.	.0	1585.0	*	1	1250	155	771.	21.1	1586.5	*	1	2110	255	2018.	2132.9	1594.4
1	0435	56	0.	.0	1585.0	*	1	1255	156	794.	29.6	1586.7	*	1	2115	256	2017.	2128.9	1594.4
1	0440	57	0.	.0	1585.0	*	1	1300	157	817.	39.7	1586.8	*	1	2120	257	2015.	2124.9	1594.4
1	0445	58	0.	.0	1585.0	*	1	1305	158	839.	51.3	1587.0	*	1	2125	258	2014.	2120.7	1594.4
1	0450	59	0.	.0	1585.0	*	1	1310	159	861.	64.5	1587.2	*	1	2130	259	2012.	2116.3	1594.4
1	0455	60	0.	.0	1585.0	*	1	1315	160	882.	79.4	1587.3	*	1	2135	260	2010.	2111.9	1594.4
1	0500	61	0.	.0	1585.0	*	1	1320	161	903.	95.9	1587.5	*	1	2140	261	2009.	2107.4	1594.4
1	0505	62	0.	.0	1585.0	*	1	1325	162	924.	113.9	1587.6	*	1	2145	262	2007.	2102.7	1594.4
1	0510	63	0.	.0	1585.0	*	1	1330	163	946.	133.6	1587.8	*	1	2150	263	2005.	2098.0	1594.3
1	0515	64	0.	.0	1585.0	*	1	1335	164	968.	154.7	1587.9	*	1	2155	264	2003.	2093.1	1594.3
1	0520	65	0.	.0	1585.0	*	1	1340	165	990.	177.2	1588.1	*	1	2200	265	2001.	2088.1	1594.3
1	0525	66	0.	.0	1585.0	*	1	1345	166	1013.	200.9	1588.3	*	1	2205	266	1999.	2083.0	1594.3
1	0530	67	0.	.0	1585.0	*	1	1350	167	1035.	225.4	1588.4	*	1	2210	267	1997.	2077.8	1594.3
1	0535	68	0.	.0	1585.0	*	1	1355	168	1058.	250.8	1588.6	*	1	2215	268	1995.	2072.6	1594.3
1	0540	69	0.	.0	1585.0	*	1	1400	169	1079.	276.5	1588.7	*	1	2220	269	1993.	2067.2	1594.3
1	0545	70	0.	.0	1585.0	*	1	1405	170	1100.	302.6	1588.9	*	1	2225	270	1991.	2061.8	1594.3
1	0550	71	0.	.0	1585.0	*	1	1410	171	1121.	328.6	1589.0	*	1	2230	271	1989.	2056.3	1594.3
1	0555	72	0.	.0	1585.0	*	1	1415	172	1140.	354.5	1589.1	*	1	2235	272	1987.	2050.7	1594.2
1	0600	73	0.	.0	1585.0	*	1	1420	173	1159.	380.3	1589.2	*	1	2240	273	1985.	2045.1	1594.2
1	0605	74	0.	.0	1585.0	*	1	1425	174	1178.	405.9	1589.4	*	1	2245	274	1983.	2039.4	1594.2
1	0610	75	0.	.0	1585.0	*	1	1430	175	1196.	431.4	1589.5	*	1	2250	275	1980.	2033.6	1594.2
1	0615	76	0.	.0	1585.0	*	1	1435	176	1214.	457.1	1589.6	*	1	2255	276	1978.	2027.8	1594.2
1	0620	77	0.	.0	1585.0	*	1	1440	177	1231.	483.0	1589.7	*	1	2300	277	1976.	2021.9	1594.2
1	0625	78	0.	.0	1585.0	*	1	1445	178	1249.	509.6	1589.8	*	1	2305	278	1974.	2016.0	1594.2
1	0630	79	0.	.0	1585.0	*	1	1450	179	1267.	536.9	1590.0	*	1	2310	279	1971.	2010.1	1594.2
1	0635	80	0.	.0	1585.0	*	1	1455	180	1285.	565.4	1590.1	*	1	2315	280	1969.	2004.0	1594.1
1	0640	81	0.	.0	1585.0	*	1	1500	181	1304.	595.2	1590.2	*	1	2320	281	1967.	1998.0	1594.1
1	0645	82	0.	.0	1585.0	*	1	1505	182	1323.	626.6	1590.3	*	1	2325	282	1964.	1991.9	1594.
1	0650	83	0.	.0	1585.0	*	1	1510	183	1344.	659.9	1590.4	*	1	2330	283	1962.	1985.7	1594.1
1	0655	84	0.	.0	1585.0	*	1	1515	184	1365.	695.0	1590.6	*	1	2335	284	1960.	1979.5	1594.1
1	0700	85	0.	.0	1585.0	*	1	1520	185	1386.	732.1	1590.7	*	1	2340	285	1957.	1973.3	1594.1
1	0705	86	0.	.0	1585.0	*	1	1525	186	1409.	771.2	1590.9	*	1	2345	286	1955.	1967.1	1594.1
1	0710	87	0.	.0	1585.0	*	1	1530	187	1432.	812.2	1591.0	*	1	2350	287	1952.	1960.8	1594.0
1	0715	88	0.	.0	1585.0	*	1	1535	188	1455.	854.8	1591.1	*	1	2355	288	1950.	1954.5	1594.
1	0720	89	0.	.0	1585.0	*	1	1540	189	1479.	898.8	1591.3	*	2	0000	289	1947.	1948.1	1594.
1	0725	90	0.	.0	1585.0	*	1	1545	190	1503.	944.1	1591.4	*	2	0005	290	1945.	1941.7	1594.0
1	0730	91	0.	.0	1585.0	*	1	1550	191	1526.	990.4	1591.6	*	2	0010	291	1942.	1935.2	1594.
1	0735	92	0.	.0	1585.0	*	1	1555	192	1550.	1037.2	1591.7	*	2	0015	292	1940.	1928.8	1594.
1	0740	93	0.	.0	1585.0	*	1	1600	193	1574.	1084.4	1591.9	*	2	0020	293	1937.	1922.3	1594.0
1	0745	94	0.	.0	1585.0	*	1	1605	194	1597.	1131.6	1592.0	*	2	0025	294	1935.	1915.7	1593.9
1	0750	95	0.	.0	1585.0	*	1	1610	195	1619.	1178.5	1592.1	*	2	0030	295	1932.	1909.2	1593.
1	0755	96	0.	.0	1585.0	*	1	1615	196	1641.	1224.8	1592.3	*	2	0035	296	1929.	1902.5	1593.
1	0800	97	0.	.0	1585.0	*	1	1620	197	1662.	1270.4	1592.4	*	2	0040	297	1927.	1895.8	1593.9
1	0805	98	0.	.0	1585.0	*	1	1625	198	1683.	1315.0	1592.5	*	2	0045	298	1924.	1889.1	1593.
1	0810	99	0.	.0	1585.0	*	1	1630	199	1702.	1358.5	1592.6	*	2	0050	299	1921.	1882.4	1593.
1	0815	100	0.	.0	1585.0	*	1	1635	200	1721.	1400.8	1592.7	*	2	0055	300	1919.	1875.5	1593.9
						*							*						

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PEAK OUTFLOW IS 2033. AT TIME 19.75 HOURS

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
		(CFS)				
+ 2033.	19.75		2004.	939.	905.	905.
		(INCHES)	.391	.732	.733	.733
		(AC-FT)	994.	1862.	1864.	1864.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
2173.	19.75	2095.	787.	758.	758.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)				
1594.50	19.75	1594.33	1588.94	1588.79	1588.79

CUMULATIVE AREA = 47.69 SQ MI

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HYDROGRAPH AT RESR
TRANSPOSITION AREA 5.0 SQ MI

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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
1		0000	1	583.	.0	1585.0	*	1		0820	101	0.	.0	1585.0	*	1		1640	201	1708.	1370.7	1592.7
1		0005	2	0.	.0	1585.0	*	1		0825	102	0.	.0	1585.0	*	1		1645	202	1725.	1409.2	1592.8
1		0010	3	0.	.0	1585.0	*	1		0830	103	0.	.0	1585.0	*	1		1650	203	1741.	1446.7	1592.8
1		0015	4	0.	.0	1585.0	*	1		0835	104	0.	.0	1585.0	*	1		1655	204	1757.	1483.3	1592.9
1		0020	5	0.	.0	1585.0	*	1		0840	105	0.	.0	1585.0	*	1		1700	205	1772.	1519.0	1593.0
1		0025	6	0.	.0	1585.0	*	1		0845	106	0.	.0	1585.0	*	1		1705	206	1787.	1554.1	1593.1
1		0030	7	0.	.0	1585.0	*	1		0850	107	0.	.0	1585.0	*	1		1710	207	1802.	1588.6	1593.2
1		0035	8	0.	.0	1585.0	*	1		0855	108	0.	.0	1585.0	*	1		1715	208	1816.	1622.4	1593.3
1		0040	9	0.	.0	1585.0	*	1		0900	109	583.	.0	1585.0	*	1		1720	209	1830.	1655.8	1593.4
1		0045	10	0.	.0	1585.0	*	1		0905	110	0.	.0	1585.0	*	1		1725	210	1843.	1688.4	1593.4
1		0050	11	0.	.0	1585.0	*	1		0910	111	583.	.0	1585.0	*	1		1730	211	1856.	1720.4	1593.5
1		0055	12	0.	.0	1585.0	*	1		0915	112	0.	.0	1585.0	*	1		1735	212	1869.	1751.6	1593.6
1		0100	13	0.	.0	1585.0	*	1		0920	113	583.	.0	1585.0	*	1		1740	213	1881.	1781.8	1593.6
1		0105	14	0.	.0	1585.0	*	1		0925	114	0.	.0	1585.0	*	1		1745	214	1893.	1810.8	1593.7
1		0110	15	0.	.0	1585.0	*	1		0930	115	583.	.0	1585.0	*	1		1750	215	1904.	1838.4	1593.8
1		0115	16	0.	.0	1585.0	*	1		0935	116	0.	.0	1585.0	*	1		1755	216	1914.	1864.6	1593.8
1		0120	17	0.	.0	1585.0	*	1		0940	117	583.	.0	1585.0	*	1		1800	217	1924.	1889.1	1593.9
1		0125	18	0.	.0	1585.0	*	1		0945	118	0.	.0	1585.0	*	1		1805	218	1933.	1911.9	1593.9
1		0130	19	0.	.0	1585.0	*	1		0950	119	583.	.0	1585.0	*	1		1810	219	1941.	1933.0	1594.0
1		0135	20	0.	.0	1585.0	*	1		0955	120	0.	.0	1585.0	*	1		1815	220	1949.	1952.2	1594.0
1		0140	21	0.	.0	1585.0	*	1		1000	121	583.	.0	1585.0	*	1		1820	221	1956.	1969.5	1594.1
1		0145	22	0.	.0	1585.0	*	1		1005	122	0.	.0	1585.0	*	1		1825	222	1962.	1985.1	1594.1
1		0150	23	0.	.0	1585.0	*	1		1010	123	583.	.0	1585.0	*	1		1830	223	1967.	1999.1	1594.1
1		0155	24	0.	.0	1585.0	*	1		1015	124	0.	.0	1585.0	*	1		1835	224	1972.	2011.3	1594.2
1		0200	25	0.	.0	1585.0	*	1		1020	125	583.	.0	1585.0	*	1		1840	225	1976.	2022.0	1594.2
1		0205	26	0.	.0	1585.0	*	1		1025	126	0.	.0	1585.0	*	1		1845	226	1980.	2031.4	1594.2

1	0210	27	0.	.0	1585.0	*	1	1030	127	583.	.0	1585.0	*	1	1850	227	1985.	2039.5	1594.2
1	0215	28	0.	.0	1585.0	*	1	1035	128	0.	.0	1585.0	*	1	1855	228	1985.	2046.4	1594.2
1	0220	29	0.	.0	1585.0	*	1	1040	129	583.	.0	1585.0	*	1	1900	229	1988.	2052.2	1594.2
1	0225	30	0.	.0	1585.0	*	1	1045	130	0.	.0	1585.0	*	1	1905	230	1989.	2057.1	1594.3
1	0230	31	0.	.0	1585.0	*	1	1050	131	583.	.0	1585.0	*	1	1910	231	1991.	2061.1	1594.3
1	0235	32	0.	.0	1585.0	*	1	1055	132	0.	.0	1585.0	*	1	1915	232	1992.	2064.4	1594.3
1	0240	33	0.	.0	1585.0	*	1	1100	133	583.	.0	1585.0	*	1	1920	233	1993.	2066.9	1594.3
1	0245	34	0.	.0	1585.0	*	1	1105	134	0.	.0	1585.0	*	1	1925	234	1994.	2068.8	1594.3
1	0250	35	0.	.0	1585.0	*	1	1110	135	583.	.0	1585.0	*	1	1930	235	1994.	2070.2	1594.3
1	0255	36	0.	.0	1585.0	*	1	1115	136	0.	.0	1585.0	*	1	1935	236	1995.	2071.0	1594.3
1	0300	37	0.	.0	1585.0	*	1	1120	137	583.	.0	1585.0	*	1	1940	237	1995.	2071.3	1594.3
1	0305	38	0.	.0	1585.0	*	1	1125	138	0.	.0	1585.0	*	1	1945	238	1995.	2071.3	1594.3
1	0310	39	0.	.0	1585.0	*	1	1130	139	583.	.0	1585.0	*	1	1950	239	1995.	2070.9	1594.3
1	0315	40	0.	.0	1585.0	*	1	1135	140	0.	.0	1585.0	*	1	1955	240	1994.	2070.1	1594.3
1	0320	41	0.	.0	1585.0	*	1	1140	141	583.	.0	1585.0	*	1	2000	241	1994.	2069.0	1594.3
1	0325	42	0.	.0	1585.0	*	1	1145	142	0.	.0	1585.0	*	1	2005	242	1993.	2067.6	1594.3
1	0330	43	0.	.0	1585.0	*	1	1150	143	583.	.0	1585.0	*	1	2010	243	1993.	2066.0	1594.3
1	0335	44	0.	.0	1585.0	*	1	1155	144	0.	.0	1585.0	*	1	2015	244	1992.	2064.1	1594.3
1	0340	45	0.	.0	1585.0	*	1	1200	145	583.	.0	1585.0	*	1	2020	245	1991.	2061.9	1594.3
1	0345	46	0.	.0	1585.0	*	1	1205	146	0.	.0	1585.0	*	1	2025	246	1990.	2059.5	1594.3
1	0350	47	0.	.0	1585.0	*	1	1210	147	583.	.0	1585.0	*	1	2030	247	1989.	2056.9	1594.3
1	0355	48	0.	.0	1585.0	*	1	1215	148	583.	.0	1585.0	*	1	2035	248	1988.	2054.2	1594.2
1	0400	49	0.	.0	1585.0	*	1	1220	149	583.	.0	1585.0	*	1	2040	249	1987.	2051.2	1594.2
1	0405	50	0.	.0	1585.0	*	1	1225	150	628.	.3	1585.4	*	1	2045	250	1986.	2048.0	1594.2
1	0410	51	0.	.0	1585.0	*	1	1230	151	659.	1.5	1585.6	*	1	2050	251	1985.	2044.8	1594.2
1	0415	52	0.	.0	1585.0	*	1	1235	152	687.	3.8	1585.8	*	1	2055	252	1983.	2041.3	1594.2
1	0420	53	0.	.0	1585.0	*	1	1240	153	713.	7.4	1586.1	*	1	2100	253	1982.	2037.7	1594.2
1	0425	54	0.	.0	1585.0	*	1	1245	154	739.	12.3	1586.3	*	1	2105	254	1981.	2034.0	1594.2
1	0430	55	0.	.0	1585.0	*	1	1250	155	763.	18.7	1586.4	*	1	2110	255	1979.	2030.2	1594.2
1	0435	56	0.	.0	1585.0	*	1	1255	156	786.	26.5	1586.6	*	1	2115	256	1978.	2026.2	1594.2
1	0440	57	0.	.0	1585.0	*	1	1300	157	809.	35.9	1586.8	*	1	2120	257	1976.	2022.1	1594.2
1	0445	58	0.	.0	1585.0	*	1	1305	158	831.	46.7	1587.0	*	1	2125	258	1974.	2017.9	1594.2
1	0450	59	0.	.0	1585.0	*	1	1310	159	853.	59.1	1587.1	*	1	2130	259	1973.	2013.6	1594.2
1	0455	60	0.	.0	1585.0	*	1	1315	160	874.	73.0	1587.3	*	1	2135	260	1971.	2009.1	1594.2
1	0500	61	0.	.0	1585.0	*	1	1320	161	894.	88.5	1587.4	*	1	2140	261	1969.	2004.5	1594.1
1	0505	62	0.	.0	1585.0	*	1	1325	162	914.	105.4	1587.6	*	1	2145	262	1967.	1999.8	1594.1
1	0510	63	0.	.0	1585.0	*	1	1330	163	935.	123.9	1587.7	*	1	2150	263	1966.	1995.0	1594.1
1	0515	64	0.	.0	1585.0	*	1	1335	164	957.	143.8	1587.9	*	1	2155	264	1964.	1990.1	1594.1
1	0520	65	0.	.0	1585.0	*	1	1340	165	978.	164.9	1588.0	*	1	2200	265	1962.	1985.1	1594.1
1	0525	66	0.	.0	1585.0	*	1	1345	166	1000.	187.1	1588.2	*	1	2205	266	1960.	1980.1	1594.1
1	0530	67	0.	.0	1585.0	*	1	1350	167	1022.	210.3	1588.3	*	1	2210	267	1958.	1974.9	1594.1
1	0535	68	0.	.0	1585.0	*	1	1355	168	1043.	234.1	1588.5	*	1	2215	268	1956.	1969.7	1594.1
1	0540	69	0.	.0	1585.0	*	1	1400	169	1064.	258.4	1588.6	*	1	2220	269	1954.	1964.3	1594.1
1	0545	70	0.	.0	1585.0	*	1	1405	170	1085.	282.9	1588.7	*	1	2225	270	1952.	1958.9	1594.1
1	0550	71	0.	.0	1585.0	*	1	1410	171	1104.	307.4	1588.9	*	1	2230	271	1949.	1953.5	1594.0
1	0555	72	0.	.0	1585.0	*	1	1415	172	1123.	331.9	1589.0	*	1	2235	272	1947.	1947.9	1594.0
1	0600	73	0.	.0	1585.0	*	1	1420	173	1142.	356.2	1589.1	*	1	2240	273	1945.	1942.3	1594.0
1	0605	74	0.	.0	1585.0	*	1	1425	174	1159.	380.3	1589.2	*	1	2245	274	1943.	1936.6	1594.0
1	0610	75	0.	.0	1585.0	*	1	1430	175	1177.	404.5	1589.4	*	1	2250	275	1941.	1930.9	1594.0
1	0615	76	0.	.0	1585.0	*	1	1435	176	1194.	428.8	1589.5	*	1	2255	276	1938.	1925.1	1594.0
1	0620	77	0.	.0	1585.0	*	1	1440	177	1211.	453.3	1589.6	*	1	2300	277	1936.	1919.3	1594.0
1	0625	78	0.	.0	1585.0	*	1	1445	178	1228.	478.5	1589.7	*	1	2305	278	1934.	1913.4	1593.9
1	0630	79	0.	.0	1585.0	*	1	1450	179	1246.	504.4	1589.8	*	1	2310	279	1931.	1907.5	1593.9
1	0635	80	0.	.0	1585.0	*	1	1455	180	1263.	531.4	1589.9	*	1	2315	280	1929.	1901.5	1593.9
1	0640	81	0.	.0	1585.0	*	1	1500	181	1282.	559.8	1590.0	*	1	2320	281	1927.	1895.5	1593.9
1	0645	82	0.	.0	1585.0	*	1	1505	182	1301.	589.7	1590.2	*	1	2325	282	1924.	1889.4	1593.9
1	0650	83	0.	.0	1585.0	*	1	1510	183	1320.	621.3	1590.3	*	1	2330	283	1922.	1883.3	1593.9
1	0655	84	0.	.0	1585.0	*	1	1515	184	1341.	654.8	1590.4	*	1	2335	284	1919.	1877.2	1593.9
1	0700	85	0.	.0	1585.0	*	1	1520	185	1362.	690.2	1590.6	*	1	2340	285	1917.	1871.0	1593.8
1	0705	86	0.	.0	1585.0	*	1	1525	186	1384.	727.5	1590.7	*	1	2345	286	1914.	1864.9	1593.8

1	0710	87	0.	.0	1585.0	*	1	1530	187	1406.	766.6	1590.8	*	1	2350	287	1912.	1858.6	1593.8
1	0715	88	0.	.0	1585.0	*	1	1535	188	1429.	807.4	1591.0	*	1	2355	288	1910.	1852.4	1593.8
1	0720	89	0.	.0	1585.0	*	1	1540	189	1452.	849.5	1591.1	*	2	0000	289	1907.	1846.0	1593.8
1	0725	90	0.	.0	1585.0	*	1	1545	190	1476.	892.9	1591.3	*	2	0005	290	1904.	1839.7	1593.8
1	0730	91	0.	.0	1585.0	*	1	1550	191	1499.	937.2	1591.4	*	2	0010	291	1902.	1833.4	1593.8
1	0735	92	0.	.0	1585.0	*	1	1555	192	1522.	982.1	1591.5	*	2	0015	292	1899.	1827.0	1593.8
1	0740	93	0.	.0	1585.0	*	1	1600	193	1545.	1027.4	1591.7	*	2	0020	293	1897.	1820.5	1593.7
1	0745	94	0.	.0	1585.0	*	1	1605	194	1568.	1072.6	1591.8	*	2	0025	294	1894.	1814.1	1593.7
1	0750	95	0.	.0	1585.0	*	1	1610	195	1590.	1117.7	1592.0	*	2	0030	295	1892.	1807.5	1593.7
1	0755	96	0.	.0	1585.0	*	1	1615	196	1611.	1162.1	1592.1	*	2	0035	296	1889.	1801.0	1593.7
1	0800	97	0.	.0	1585.0	*	1	1620	197	1632.	1205.9	1592.2	*	2	0040	297	1886.	1794.4	1593.7
1	0805	98	0.	.0	1585.0	*	1	1625	198	1652.	1248.7	1592.3	*	2	0045	298	1884.	1787.7	1593.7
1	0810	99	0.	.0	1585.0	*	1	1630	199	1671.	1290.5	1592.4	*	2	0050	299	1881.	1781.0	1593.6
1	0815	100	0.	.0	1585.0	*	1	1635	200	1690.	1331.2	1592.5	*	2	0055	300	1878.	1774.2	1593.6
						*							*						

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PEAK OUTFLOW IS 1995. AT TIME 19.67 HOURS

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
		(CFS)				
+ 1995.	19.67		1965.	920.	887.	887.
		(INCHES)	.383	.717	.718	.718
		(AC-FT)	974.	1825.	1827.	1827.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
2071.	19.67	1994.	748.	720.	720.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)				
1594.28	19.67	1594.12	1588.84	1588.70	1588.70

CUMULATIVE AREA = 47.69 SQ MI

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HYDROGRAPH AT RESR
TRANSPOSITION AREA 15.0 SQ MI

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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
							*								*							
1		0000	1	583.	.0	1585.0	*	1		0820	101	0.	.0	1585.0	*	1		1640	201	1635.	1211.4	1592.2
1		0005	2	0.	.0	1585.0	*	1		0825	102	0.	.0	1585.0	*	1		1645	202	1651.	1246.3	1592.3
1		0010	3	0.	.0	1585.0	*	1		0830	103	0.	.0	1585.0	*	1		1650	203	1667.	1280.4	1592.4
1		0015	4	0.	.0	1585.0	*	1		0835	104	0.	.0	1585.0	*	1		1655	204	1682.	1313.6	1592.5
1		0020	5	0.	.0	1585.0	*	1		0840	105	0.	.0	1585.0	*	1		1700	205	1697.	1346.1	1592.6
1		0025	6	0.	.0	1585.0	*	1		0845	106	0.	.0	1585.0	*	1		1705	206	1711.	1378.0	1592.7
1		0030	7	0.	.0	1585.0	*	1		0850	107	0.	.0	1585.0	*	1		1710	207	1725.	1409.3	1592.8
1		0035	8	0.	.0	1585.0	*	1		0855	108	0.	.0	1585.0	*	1		1715	208	1738.	1440.1	1592.8
1		0040	9	0.	.0	1585.0	*	1		0900	109	0.	.0	1585.0	*	1		1720	209	1751.	1470.5	1592.9
1		0045	10	0.	.0	1585.0	*	1		0905	110	0.	.0	1585.0	*	1		1725	210	1764.	1500.3	1593.0

1	0050	11	0.	.0	1585.0	*	1	0910	111	0.	.0	1585.0	*	1	1730	211	1777.	1529.5	1593.1
1	0055	12	0.	.0	1585.0	*	1	0915	112	583.	.0	1585.0	*	1	1735	212	1789.	1557.8	1593.1
1	0100	13	0.	.0	1585.0	*	1	0920	113	0.	.0	1585.0	*	1	1740	213	1800.	1585.4	1593.2
1	0105	14	0.	.0	1585.0	*	1	0925	114	583.	.0	1585.0	*	1	1745	214	1811.	1611.8	1593.3
1	0110	15	0.	.0	1585.0	*	1	0930	115	0.	.0	1585.0	*	1	1750	215	1822.	1637.0	1593.3
1	0115	16	0.	.0	1585.0	*	1	0935	116	583.	.0	1585.0	*	1	1755	216	1832.	1660.9	1593.4
1	0120	17	0.	.0	1585.0	*	1	0940	117	0.	.0	1585.0	*	1	1800	217	1841.	1683.2	1593.4
1	0125	18	0.	.0	1585.0	*	1	0945	118	583.	.0	1585.0	*	1	1805	218	1850.	1704.0	1593.5
1	0130	19	0.	.0	1585.0	*	1	0950	119	0.	.0	1585.0	*	1	1810	219	1857.	1723.1	1593.5
1	0135	20	0.	.0	1585.0	*	1	0955	120	583.	.0	1585.0	*	1	1815	220	1864.	1740.5	1593.6
1	0140	21	0.	.0	1585.0	*	1	1000	121	0.	.0	1585.0	*	1	1820	221	1871.	1756.2	1593.6
1	0145	22	0.	.0	1585.0	*	1	1005	122	583.	.0	1585.0	*	1	1825	222	1877.	1770.2	1593.6
1	0150	23	0.	.0	1585.0	*	1	1010	123	0.	.0	1585.0	*	1	1830	223	1882.	1782.7	1593.7
1	0155	24	0.	.0	1585.0	*	1	1015	124	583.	.0	1585.0	*	1	1835	224	1886.	1793.7	1593.7
1	0200	25	0.	.0	1585.0	*	1	1020	125	0.	.0	1585.0	*	1	1840	225	1890.	1803.3	1593.7
1	0205	26	0.	.0	1585.0	*	1	1025	126	583.	.0	1585.0	*	1	1845	226	1893.	1811.6	1593.7
1	0210	27	0.	.0	1585.0	*	1	1030	127	0.	.0	1585.0	*	1	1850	227	1896.	1818.7	1593.7
1	0215	28	0.	.0	1585.0	*	1	1035	128	583.	.0	1585.0	*	1	1855	228	1898.	1824.7	1593.7
1	0220	29	0.	.0	1585.0	*	1	1040	129	0.	.0	1585.0	*	1	1900	229	1900.	1829.7	1593.8
1	0225	30	0.	.0	1585.0	*	1	1045	130	583.	.0	1585.0	*	1	1905	230	1902.	1833.9	1593.8
1	0230	31	0.	.0	1585.0	*	1	1050	131	0.	.0	1585.0	*	1	1910	231	1903.	1837.3	1593.8
1	0235	32	0.	.0	1585.0	*	1	1055	132	583.	.0	1585.0	*	1	1915	232	1905.	1839.9	1593.8
1	0240	33	0.	.0	1585.0	*	1	1100	133	0.	.0	1585.0	*	1	1920	233	1905.	1841.9	1593.8
1	0245	34	0.	.0	1585.0	*	1	1105	134	583.	.0	1585.0	*	1	1925	234	1906.	1843.3	1593.8
1	0250	35	0.	.0	1585.0	*	1	1110	135	0.	.0	1585.0	*	1	1930	235	1906.	1844.1	1593.8
1	0255	36	0.	.0	1585.0	*	1	1115	136	583.	.0	1585.0	*	1	1935	236	1906.	1844.5	1593.8
1	0300	37	0.	.0	1585.0	*	1	1120	137	0.	.0	1585.0	*	1	1940	237	1906.	1844.5	1593.8
1	0305	38	0.	.0	1585.0	*	1	1125	138	583.	.0	1585.0	*	1	1945	238	1906.	1844.1	1593.8
1	0310	39	0.	.0	1585.0	*	1	1130	139	0.	.0	1585.0	*	1	1950	239	1906.	1843.4	1593.8
1	0315	40	0.	.0	1585.0	*	1	1135	140	583.	.0	1585.0	*	1	1955	240	1905.	1842.3	1593.8
1	0320	41	0.	.0	1585.0	*	1	1140	141	0.	.0	1585.0	*	1	2000	241	1905.	1840.9	1593.8
1	0325	42	0.	.0	1585.0	*	1	1145	142	583.	.0	1585.0	*	1	2005	242	1904.	1839.3	1593.8
1	0330	43	0.	.0	1585.0	*	1	1150	143	0.	.0	1585.0	*	1	2010	243	1904.	1837.3	1593.8
1	0335	44	0.	.0	1585.0	*	1	1155	144	583.	.0	1585.0	*	1	2015	244	1903.	1835.2	1593.8
1	0340	45	0.	.0	1585.0	*	1	1200	145	0.	.0	1585.0	*	1	2020	245	1902.	1832.9	1593.8
1	0345	46	0.	.0	1585.0	*	1	1205	146	583.	.0	1585.0	*	1	2025	246	1901.	1830.3	1593.8
1	0350	47	0.	.0	1585.0	*	1	1210	147	0.	.0	1585.0	*	1	2030	247	1900.	1827.5	1593.8
1	0355	48	0.	.0	1585.0	*	1	1215	148	610.	.1	1585.2	*	1	2035	248	1898.	1824.6	1593.7
1	0400	49	0.	.0	1585.0	*	1	1220	149	583.	.0	1585.0	*	1	2040	249	1897.	1821.5	1593.7
1	0405	50	0.	.0	1585.0	*	1	1225	150	583.	.0	1585.0	*	1	2045	250	1896.	1818.3	1593.7
1	0410	51	0.	.0	1585.0	*	1	1230	151	639.	.6	1585.5	*	1	2050	251	1895.	1814.9	1593.7
1	0415	52	0.	.0	1585.0	*	1	1235	152	668.	2.1	1585.7	*	1	2055	252	1893.	1811.3	1593.7
1	0420	53	0.	.0	1585.0	*	1	1240	153	695.	4.7	1585.9	*	1	2100	253	1892.	1807.6	1593.7
1	0425	54	0.	.0	1585.0	*	1	1245	154	720.	8.6	1586.1	*	1	2105	254	1890.	1803.8	1593.7
1	0430	55	0.	.0	1585.0	*	1	1250	155	744.	13.7	1586.3	*	1	2110	255	1889.	1799.9	1593.7
1	0435	56	0.	.0	1585.0	*	1	1255	156	767.	20.1	1586.5	*	1	2115	256	1887.	1795.9	1593.7
1	0440	57	0.	.0	1585.0	*	1	1300	157	790.	27.8	1586.6	*	1	2120	257	1885.	1791.7	1593.7
1	0445	58	0.	.0	1585.0	*	1	1305	158	811.	37.0	1586.8	*	1	2125	258	1883.	1787.4	1593.7
1	0450	59	0.	.0	1585.0	*	1	1310	159	832.	47.4	1587.0	*	1	2130	259	1882.	1783.0	1593.7
1	0455	60	0.	.0	1585.0	*	1	1315	160	853.	59.3	1587.1	*	1	2135	260	1880.	1778.5	1593.6
1	0500	61	0.	.0	1585.0	*	1	1320	161	873.	72.5	1587.3	*	1	2140	261	1878.	1773.9	1593.6
1	0505	62	0.	.0	1585.0	*	1	1325	162	893.	87.2	1587.4	*	1	2145	262	1876.	1769.2	1593.6
1	0510	63	0.	.0	1585.0	*	1	1330	163	912.	103.1	1587.5	*	1	2150	263	1874.	1764.4	1593.6
1	0515	64	0.	.0	1585.0	*	1	1335	164	931.	120.2	1587.7	*	1	2155	264	1872.	1759.5	1593.6
1	0520	65	0.	.0	1585.0	*	1	1340	165	951.	138.5	1587.8	*	1	2200	265	1870.	1754.5	1593.6
1	0525	66	0.	.0	1585.0	*	1	1345	166	971.	157.7	1588.0	*	1	2205	266	1868.	1749.5	1593.6
1	0530	67	0.	.0	1585.0	*	1	1350	167	991.	177.7	1588.1	*	1	2210	267	1866.	1744.4	1593.6
1	0535	68	0.	.0	1585.0	*	1	1355	168	1011.	198.2	1588.2	*	1	2215	268	1864.	1739.1	1593.6
1	0540	69	0.	.0	1585.0	*	1	1400	169	1030.	219.2	1588.4	*	1	2220	269	1862.	1733.8	1593.7
1	0545	70	0.	.0	1585.0	*	1	1405	170	1049.	240.3	1588.5	*	1	2225	270	1860.	1728.5	1593.

1	0550	71	0.	.0	1585.0	*	1	1410	171	1067.	261.5	1588.6	*	1	2230	271	1857.	1723.1	1593.5
1	0555	72	0.	.0	1585.0	*	1	1415	172	1084.	282.6	1588.7	*	1	2235	272	1855.	1717.6	1593.5
1	0600	73	0.	.0	1585.0	*	1	1420	173	1101.	303.6	1588.9	*	1	2240	273	1853.	1712.1	1593.5
1	0605	74	0.	.0	1585.0	*	1	1425	174	1118.	324.5	1589.0	*	1	2245	274	1851.	1706.5	1593.5
1	0610	75	0.	.0	1585.0	*	1	1430	175	1134.	345.4	1589.1	*	1	2250	275	1848.	1700.8	1593.5
1	0615	76	0.	.0	1585.0	*	1	1435	176	1149.	366.5	1589.2	*	1	2255	276	1846.	1695.1	1593.4
1	0620	77	0.	.0	1585.0	*	1	1440	177	1165.	388.0	1589.3	*	1	2300	277	1844.	1689.4	1593.4
1	0625	78	0.	.0	1585.0	*	1	1445	178	1181.	409.9	1589.4	*	1	2305	278	1841.	1683.6	1593.4
1	0630	79	0.	.0	1585.0	*	1	1450	179	1197.	432.7	1589.5	*	1	2310	279	1839.	1677.8	1593.4
1	0635	80	0.	.0	1585.0	*	1	1455	180	1213.	456.4	1589.6	*	1	2315	280	1836.	1671.9	1593.4
1	0640	81	0.	.0	1585.0	*	1	1500	181	1230.	481.4	1589.7	*	1	2320	281	1834.	1666.0	1593.4
1	0645	82	0.	.0	1585.0	*	1	1505	182	1248.	507.8	1589.8	*	1	2325	282	1831.	1660.0	1593.4
1	0650	83	0.	.0	1585.0	*	1	1510	183	1266.	535.9	1589.9	*	1	2330	283	1829.	1654.1	1593.4
1	0655	84	0.	.0	1585.0	*	1	1515	184	1285.	565.7	1590.1	*	1	2335	284	1826.	1648.1	1593.3
1	0700	85	0.	.0	1585.0	*	1	1520	185	1305.	597.2	1590.2	*	1	2340	285	1824.	1642.0	1593.3
1	0705	86	0.	.0	1585.0	*	1	1525	186	1326.	630.5	1590.3	*	1	2345	286	1821.	1636.0	1593.3
1	0710	87	0.	.0	1585.0	*	1	1530	187	1347.	665.5	1590.5	*	1	2350	287	1819.	1629.9	1593.3
1	0715	88	0.	.0	1585.0	*	1	1535	188	1369.	702.0	1590.6	*	1	2355	288	1816.	1623.7	1593.3
1	0720	89	0.	.0	1585.0	*	1	1540	189	1391.	739.9	1590.7	*	2	0000	289	1814.	1617.6	1593.3
1	0725	90	0.	.0	1585.0	*	1	1545	190	1413.	778.9	1590.9	*	2	0005	290	1811.	1611.4	1593.3
1	0730	91	0.	.0	1585.0	*	1	1550	191	1435.	818.8	1591.0	*	2	0010	291	1809.	1605.2	1593.2
1	0735	92	0.	.0	1585.0	*	1	1555	192	1457.	859.3	1591.2	*	2	0015	292	1806.	1598.9	1593.2
1	0740	93	0.	.0	1585.0	*	1	1600	193	1479.	900.2	1591.3	*	2	0020	293	1803.	1592.7	1593.2
1	0745	94	0.	.0	1585.0	*	1	1605	194	1501.	941.1	1591.4	*	2	0025	294	1801.	1586.3	1593.2
1	0750	95	0.	.0	1585.0	*	1	1610	195	1522.	981.8	1591.5	*	2	0030	295	1798.	1580.0	1593.2
1	0755	96	0.	.0	1585.0	*	1	1615	196	1543.	1022.1	1591.7	*	2	0035	296	1795.	1573.6	1593.2
1	0800	97	0.	.0	1585.0	*	1	1620	197	1563.	1061.8	1591.8	*	2	0040	297	1793.	1567.2	1593.1
1	0805	98	0.	.0	1585.0	*	1	1625	198	1582.	1100.6	1591.9	*	2	0045	298	1790.	1560.8	1593.1
1	0810	99	0.	.0	1585.0	*	1	1630	199	1600.	1138.5	1592.0	*	2	0050	299	1787.	1554.2	1593.1
1	0815	100	0.	.0	1585.0	*	1	1635	200	1618.	1175.5	1592.1	*	2	0055	300	1784.	1547.7	1593.1
						*							*						

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PEAK OUTFLOW IS 1906. AT TIME 19.58 HOURS

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
		(CFS)				
+ 1906.	19.58		1875.	878.	847.	847.
		(INCHES)	.366	.685	.685	.685
		(AC-FT)	930.	1741.	1743.	1743.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
1845.	19.58	1768.	660.	636.	636.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)				
1593.79	19.58	1593.62	1588.62	1588.49	1588.49

CUMULATIVE AREA = 47.69 SQ MI

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HYDROGRAPH AT RESR

TRANSPOSITION AREA 30.0 SQ MI

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1		0000	1	583.	.0	1585.0	1		0820	101	0.	.0	1585.0	1		1640	201	1588.	1114.3	1591.9
1		0005	2	0.	.0	1585.0	1		0825	102	0.	.0	1585.0	1		1645	202	1604.	1147.1	1592.0
1		0010	3	0.	.0	1585.0	1		0830	103	0.	.0	1585.0	1		1650	203	1620.	1179.0	1592.1
1		0015	4	0.	.0	1585.0	1		0835	104	0.	.0	1585.0	1		1655	204	1634.	1210.2	1592.2
1		0020	5	0.	.0	1585.0	1		0840	105	0.	.0	1585.0	1		1700	205	1648.	1240.7	1592.3
1		0025	6	0.	.0	1585.0	1		0845	106	0.	.0	1585.0	1		1705	206	1662.	1270.7	1592.4
1		0030	7	0.	.0	1585.0	1		0850	107	0.	.0	1585.0	1		1710	207	1676.	1300.1	1592.5
1		0035	8	0.	.0	1585.0	1		0855	108	0.	.0	1585.0	1		1715	208	1689.	1329.0	1592.5
1		0040	9	0.	.0	1585.0	1		0900	109	0.	.0	1585.0	1		1720	209	1702.	1357.5	1592.6
1		0045	10	0.	.0	1585.0	1		0905	110	0.	.0	1585.0	1		1725	210	1714.	1385.5	1592.7
1		0050	11	0.	.0	1585.0	1		0910	111	0.	.0	1585.0	1		1730	211	1726.	1412.9	1592.8
1		0055	12	0.	.0	1585.0	1		0915	112	0.	.0	1585.0	1		1735	212	1738.	1439.6	1592.8
1		0100	13	0.	.0	1585.0	1		0920	113	0.	.0	1585.0	1		1740	213	1749.	1465.5	1592.9
1		0105	14	0.	.0	1585.0	1		0925	114	583.	.0	1585.0	1		1745	214	1760.	1490.3	1593.0
1		0110	15	0.	.0	1585.0	1		0930	115	0.	.0	1585.0	1		1750	215	1770.	1514.0	1593.0
1		0115	16	0.	.0	1585.0	1		0935	116	583.	.0	1585.0	1		1755	216	1780.	1536.4	1593.1
1		0120	17	0.	.0	1585.0	1		0940	117	0.	.0	1585.0	1		1800	217	1788.	1557.4	1593.1
1		0125	18	0.	.0	1585.0	1		0945	118	583.	.0	1585.0	1		1805	218	1797.	1576.9	1593.2
1		0130	19	0.	.0	1585.0	1		0950	119	0.	.0	1585.0	1		1810	219	1804.	1594.7	1593.2
1		0135	20	0.	.0	1585.0	1		0955	120	583.	.0	1585.0	1		1815	220	1811.	1611.0	1593.2
1		0140	21	0.	.0	1585.0	1		1000	121	0.	.0	1585.0	1		1820	221	1817.	1625.7	1593.3
1		0145	22	0.	.0	1585.0	1		1005	122	583.	.0	1585.0	1		1825	222	1823.	1638.8	1593.3
1		0150	23	0.	.0	1585.0	1		1010	123	0.	.0	1585.0	1		1830	223	1827.	1650.4	1593.3
1		0155	24	0.	.0	1585.0	1		1015	124	583.	.0	1585.0	1		1835	224	1832.	1660.6	1593.4
1		0200	25	0.	.0	1585.0	1		1020	125	0.	.0	1585.0	1		1840	225	1835.	1669.5	1593.4
1		0205	26	0.	.0	1585.0	1		1025	126	583.	.0	1585.0	1		1845	226	1838.	1677.1	1593.4
1		0210	27	0.	.0	1585.0	1		1030	127	0.	.0	1585.0	1		1850	227	1841.	1683.6	1593.4
1		0215	28	0.	.0	1585.0	1		1035	128	583.	.0	1585.0	1		1855	228	1843.	1689.1	1593.4
1		0220	29	0.	.0	1585.0	1		1040	129	0.	.0	1585.0	1		1900	229	1845.	1693.6	1593.4
1		0225	30	0.	.0	1585.0	1		1045	130	583.	.0	1585.0	1		1905	230	1847.	1697.3	1593.5
1		0230	31	0.	.0	1585.0	1		1050	131	0.	.0	1585.0	1		1910	231	1848.	1700.3	1593.5
1		0235	32	0.	.0	1585.0	1		1055	132	583.	.0	1585.0	1		1915	232	1849.	1702.6	1593.5
1		0240	33	0.	.0	1585.0	1		1100	133	0.	.0	1585.0	1		1920	233	1850.	1704.2	1593.5
1		0245	34	0.	.0	1585.0	1		1105	134	583.	.0	1585.0	1		1925	234	1850.	1705.3	1593.5
1		0250	35	0.	.0	1585.0	1		1110	135	0.	.0	1585.0	1		1930	235	1850.	1705.9	1593.5
1		0255	36	0.	.0	1585.0	1		1115	136	583.	.0	1585.0	1		1935	236	1850.	1706.1	1593.5
1		0300	37	0.	.0	1585.0	1		1120	137	0.	.0	1585.0	1		1940	237	1850.	1705.8	1593.5
1		0305	38	0.	.0	1585.0	1		1125	138	583.	.0	1585.0	1		1945	238	1850.	1705.2	1593.5
1		0310	39	0.	.0	1585.0	1		1130	139	0.	.0	1585.0	1		1950	239	1850.	1704.2	1593.5
1		0315	40	0.	.0	1585.0	1		1135	140	583.	.0	1585.0	1		1955	240	1849.	1703.0	1593.5
1		0320	41	0.	.0	1585.0	1		1140	141	0.	.0	1585.0	1		2000	241	1849.	1701.5	1593.5
1		0325	42	0.	.0	1585.0	1		1145	142	583.	.0	1585.0	1		2005	242	1848.	1699.6	1593.5
1		0330	43	0.	.0	1585.0	1		1150	143	0.	.0	1585.0	1		2010	243	1847.	1697.6	1593.5
1		0335	44	0.	.0	1585.0	1		1155	144	583.	.0	1585.0	1		2015	244	1846.	1695.3	1593.4
1		0340	45	0.	.0	1585.0	1		1200	145	0.	.0	1585.0	1		2020	245	1845.	1692.9	1593.4
1		0345	46	0.	.0	1585.0	1		1205	146	583.	.0	1585.0	1		2025	246	1844.	1690.2	1593.4
1		0350	47	0.	.0	1585.0	1		1210	147	0.	.0	1585.0	1		2030	247	1843.	1687.3	1593.4
1		0355	48	0.	.0	1585.0	1		1215	148	583.	.0	1585.0	1		2035	248	1841.	1684.3	1593.4
1		0400	49	0.	.0	1585.0	1		1220	149	583.	.0	1585.0	1		2040	249	1840.	1681.1	1593.4
1		0405	50	0.	.0	1585.0	1		1225	150	583.	.0	1585.0	1		2045	250	1839.	1677.8	1593.4
1		0410	51	0.	.0	1585.0	1		1230	151	621.	.2	1585.3	1		2050	251	1837.	1674.3	1593.4
1		0415	52	0.	.0	1585.0	1		1235	152	654.	1.3	1585.6	1		2055	252	1836.	1670.7	1593.4
1		0420	53	0.	.0	1585.0	1		1240	153	682.	3.3	1585.8	1		2100	253	1834.	1666.9	1593.4
1		0425	54	0.	.0	1585.0	1		1245	154	708.	6.5	1586.0	1		2105	254	1833.	1663.1	1593.

1	0430	55	0.	.0	1585.0	*	1	1250	155	732.	10.8	1586.2	*	1	2110	255	1831.	1659.1	1593.4
1	0435	56	0.	.0	1585.0	*	1	1255	156	755.	16.4	1586.4	*	1	2115	256	1829.	1655.0	1593.4
1	0440	57	0.	.0	1585.0	*	1	1300	157	777.	23.2	1586.5	*	1	2120	257	1828.	1650.9	1593.3
1	0445	58	0.	.0	1585.0	*	1	1305	158	798.	31.3	1586.7	*	1	2125	258	1826.	1646.6	1593.3
1	0450	59	0.	.0	1585.0	*	1	1310	159	819.	40.6	1586.9	*	1	2130	259	1824.	1642.2	1593.3
1	0455	60	0.	.0	1585.0	*	1	1315	160	839.	51.3	1587.0	*	1	2135	260	1822.	1637.7	1593.3
1	0500	61	0.	.0	1585.0	*	1	1320	161	859.	63.2	1587.2	*	1	2140	261	1820.	1633.1	1593.3
1	0505	62	0.	.0	1585.0	*	1	1325	162	878.	76.4	1587.3	*	1	2145	262	1818.	1628.4	1593.3
1	0510	63	0.	.0	1585.0	*	1	1330	163	897.	90.8	1587.4	*	1	2150	263	1816.	1623.6	1593.3
1	0515	64	0.	.0	1585.0	*	1	1335	164	916.	106.4	1587.6	*	1	2155	264	1814.	1618.8	1593.3
1	0520	65	0.	.0	1585.0	*	1	1340	165	934.	123.0	1587.7	*	1	2200	265	1812.	1613.8	1593.3
1	0525	66	0.	.0	1585.0	*	1	1345	166	953.	140.4	1587.8	*	1	2205	266	1810.	1608.8	1593.2
1	0530	67	0.	.0	1585.0	*	1	1350	167	972.	158.5	1588.0	*	1	2210	267	1808.	1603.7	1593.2
1	0535	68	0.	.0	1585.0	*	1	1355	168	990.	177.1	1588.1	*	1	2215	268	1806.	1598.5	1593.2
1	0540	69	0.	.0	1585.0	*	1	1400	169	1009.	196.1	1588.2	*	1	2220	269	1804.	1593.3	1593.2
1	0545	70	0.	.0	1585.0	*	1	1405	170	1026.	215.2	1588.3	*	1	2225	270	1801.	1587.9	1593.2
1	0550	71	0.	.0	1585.0	*	1	1410	171	1043.	234.4	1588.5	*	1	2230	271	1799.	1582.6	1593.2
1	0555	72	0.	.0	1585.0	*	1	1415	172	1060.	253.5	1588.6	*	1	2235	272	1797.	1577.2	1593.2
1	0600	73	0.	.0	1585.0	*	1	1420	173	1076.	272.4	1588.7	*	1	2240	273	1795.	1571.7	1593.2
1	0605	74	0.	.0	1585.0	*	1	1425	174	1091.	291.3	1588.8	*	1	2245	274	1792.	1566.1	1593.1
1	0610	75	0.	.0	1585.0	*	1	1430	175	1106.	310.2	1588.9	*	1	2250	275	1790.	1560.6	1593.1
1	0615	76	0.	.0	1585.0	*	1	1435	176	1121.	329.3	1589.0	*	1	2255	276	1787.	1554.9	1593.1
1	0620	77	0.	.0	1585.0	*	1	1440	177	1136.	348.8	1589.1	*	1	2300	277	1785.	1549.3	1593.1
1	0625	78	0.	.0	1585.0	*	1	1445	178	1151.	368.9	1589.2	*	1	2305	278	1783.	1543.6	1593.1
1	0630	79	0.	.0	1585.0	*	1	1450	179	1166.	389.6	1589.3	*	1	2310	279	1780.	1537.8	1593.1
1	0635	80	0.	.0	1585.0	*	1	1455	180	1182.	411.3	1589.4	*	1	2315	280	1778.	1532.1	1593.1
1	0640	81	0.	.0	1585.0	*	1	1500	181	1198.	434.2	1589.5	*	1	2320	281	1775.	1526.2	1593.0
1	0645	82	0.	.0	1585.0	*	1	1505	182	1215.	458.5	1589.6	*	1	2325	282	1773.	1520.4	1593.0
1	0650	83	0.	.0	1585.0	*	1	1510	183	1232.	484.3	1589.7	*	1	2330	283	1770.	1514.5	1593.0
1	0655	84	0.	.0	1585.0	*	1	1515	184	1250.	511.8	1589.8	*	1	2335	284	1768.	1508.5	1593.0
1	0700	85	0.	.0	1585.0	*	1	1520	185	1270.	541.0	1590.0	*	1	2340	285	1765.	1502.6	1593.0
1	0705	86	0.	.0	1585.0	*	1	1525	186	1289.	571.8	1590.1	*	1	2345	286	1763.	1496.6	1593.0
1	0710	87	0.	.0	1585.0	*	1	1530	187	1310.	604.3	1590.2	*	1	2350	287	1760.	1490.6	1593.0
1	0715	88	0.	.0	1585.0	*	1	1535	188	1331.	638.2	1590.4	*	1	2355	288	1757.	1484.6	1592.9
1	0720	89	0.	.0	1585.0	*	1	1540	189	1352.	673.4	1590.5	*	2	0000	289	1755.	1478.5	1592.9
1	0725	90	0.	.0	1585.0	*	1	1545	190	1373.	709.8	1590.6	*	2	0005	290	1752.	1472.4	1592.9
1	0730	91	0.	.0	1585.0	*	1	1550	191	1395.	747.0	1590.8	*	2	0010	291	1750.	1466.3	1592.9
1	0735	92	0.	.0	1585.0	*	1	1555	192	1416.	784.8	1590.9	*	2	0015	292	1747.	1460.2	1592.9
1	0740	93	0.	.0	1585.0	*	1	1600	193	1438.	823.0	1591.0	*	2	0020	293	1744.	1454.0	1592.9
1	0745	94	0.	.0	1585.0	*	1	1605	194	1459.	861.2	1591.2	*	2	0025	294	1742.	1447.8	1592.8
1	0750	95	0.	.0	1585.0	*	1	1610	195	1479.	899.3	1591.3	*	2	0030	295	1739.	1441.6	1592.8
1	0755	96	0.	.0	1585.0	*	1	1615	196	1499.	937.0	1591.4	*	2	0035	296	1736.	1435.3	1592.8
1	0800	97	0.	.0	1585.0	*	1	1620	197	1518.	974.1	1591.5	*	2	0040	297	1733.	1429.0	1592.8
1	0805	98	0.	.0	1585.0	*	1	1625	198	1537.	1010.5	1591.6	*	2	0045	298	1731.	1422.6	1592.8
1	0810	99	0.	.0	1585.0	*	1	1630	199	1555.	1046.0	1591.7	*	2	0050	299	1728.	1416.2	1592.8
1	0815	100	0.	.0	1585.0	*	1	1635	200	1572.	1080.7	1591.8	*	2	0055	300	1725.	1409.8	1592.8
						*							*						

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PEAK OUTFLOW IS 1850. AT TIME 19.58 HOURS

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
		(CFS)				
+ 1850.	19.58		1819.	852.	821.	821.
		(INCHES)	.355	.664	.665	.665
		(AC-FT)	902.	1689.	1691.	1691.

PEAK STORAGE (AC-FT)	TIME (HR)	MAXIMUM AVERAGE STORAGE 6-HR	24-HR	72-HR	24.92-HR
1706.	19.58	1630.	607.	585.	585.

PEAK STAGE (FEET)	TIME (HR)	MAXIMUM AVERAGE STAGE 6-HR	24-HR	72-HR	24.92-HR
1593.47	19.58	1593.29	1588.48	1588.35	1588.35

CUMULATIVE AREA = 47.69 SQ MI

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HYDROGRAPH AT RESR
TRANSPOSITION AREA 53.0 SQ MI

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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
1		0000	1	583.	.0	1585.0	1		0820	101	0.	.0	1585.0	1		1640	201	1541.	1019.5	1591.7
1		0005	2	0.	.0	1585.0	1		0825	102	0.	.0	1585.0	1		1645	202	1557.	1050.1	1591.8
1		0010	3	0.	.0	1585.0	1		0830	103	0.	.0	1585.0	1		1650	203	1571.	1079.9	1591.8
1		0015	4	0.	.0	1585.0	1		0835	104	0.	.0	1585.0	1		1655	204	1586.	1109.1	1591.9
1		0020	5	0.	.0	1585.0	1		0840	105	0.	.0	1585.0	1		1700	205	1600.	1137.6	1592.0
1		0025	6	0.	.0	1585.0	1		0845	106	0.	.0	1585.0	1		1705	206	1613.	1165.6	1592.1
1		0030	7	0.	.0	1585.0	1		0850	107	0.	.0	1585.0	1		1710	207	1626.	1193.1	1592.2
1		0035	8	0.	.0	1585.0	1		0855	108	0.	.0	1585.0	1		1715	208	1639.	1220.2	1592.2
1		0040	9	0.	.0	1585.0	1		0900	109	0.	.0	1585.0	1		1720	209	1651.	1246.9	1592.3
1		0045	10	0.	.0	1585.0	1		0905	110	0.	.0	1585.0	1		1725	210	1663.	1273.1	1592.4
1		0050	11	0.	.0	1585.0	1		0910	111	0.	.0	1585.0	1		1730	211	1675.	1298.8	1592.5
1		0055	12	0.	.0	1585.0	1		0915	112	0.	.0	1585.0	1		1735	212	1687.	1323.8	1592.5
1		0100	13	0.	.0	1585.0	1		0920	113	0.	.0	1585.0	1		1740	213	1697.	1348.0	1592.6
1		0105	14	0.	.0	1585.0	1		0925	114	0.	.0	1585.0	1		1745	214	1708.	1371.3	1592.7
1		0110	15	0.	.0	1585.0	1		0930	115	0.	.0	1585.0	1		1750	215	1718.	1393.5	1592.7
1		0115	16	0.	.0	1585.0	1		0935	116	583.	.0	1585.0	1		1755	216	1727.	1414.4	1592.8
1		0120	17	0.	.0	1585.0	1		0940	117	0.	.0	1585.0	1		1800	217	1736.	1434.0	1592.8
1		0125	18	0.	.0	1585.0	1		0945	118	583.	.0	1585.0	1		1805	218	1743.	1452.2	1592.9
1		0130	19	0.	.0	1585.0	1		0950	119	0.	.0	1585.0	1		1810	219	1751.	1468.9	1592.9
1		0135	20	0.	.0	1585.0	1		0955	120	583.	.0	1585.0	1		1815	220	1757.	1484.1	1592.9
1		0140	21	0.	.0	1585.0	1		1000	121	0.	.0	1585.0	1		1820	221	1763.	1497.8	1593.0
1		0145	22	0.	.0	1585.0	1		1005	122	583.	.0	1585.0	1		1825	222	1768.	1510.0	1593.0
1		0150	23	0.	.0	1585.0	1		1010	123	0.	.0	1585.0	1		1830	223	1773.	1520.7	1593.0
1		0155	24	0.	.0	1585.0	1		1015	124	583.	.0	1585.0	1		1835	224	1777.	1530.1	1593.1
1		0200	25	0.	.0	1585.0	1		1020	125	0.	.0	1585.0	1		1840	225	1780.	1538.3	1593.1
1		0205	26	0.	.0	1585.0	1		1025	126	583.	.0	1585.0	1		1845	226	1783.	1545.3	1593.1
1		0210	27	0.	.0	1585.0	1		1030	127	0.	.0	1585.0	1		1850	227	1786.	1551.2	1593.1
1		0215	28	0.	.0	1585.0	1		1035	128	583.	.0	1585.0	1		1855	228	1788.	1556.1	1593.1
1		0220	29	0.	.0	1585.0	1		1040	129	0.	.0	1585.0	1		1900	229	1790.	1560.2	1593.1
1		0225	30	0.	.0	1585.0	1		1045	130	583.	.0	1585.0	1		1905	230	1791.	1563.5	1593.1
1		0230	31	0.	.0	1585.0	1		1050	131	0.	.0	1585.0	1		1910	231	1792.	1566.0	1593.1
1		0235	32	0.	.0	1585.0	1		1055	132	583.	.0	1585.0	1		1915	232	1793.	1567.8	1593.1
1		0240	33	0.	.0	1585.0	1		1100	133	0.	.0	1585.0	1		1920	233	1793.	1569.2	1593.1
1		0245	34	0.	.0	1585.0	1		1105	134	583.	.0	1585.0	1		1925	234	1794.	1570.0	1593.2
1		0250	35	0.	.0	1585.0	1		1110	135	0.	.0	1585.0	1		1930	235	1794.	1570.3	1593.2
1		0255	36	0.	.0	1585.0	1		1115	136	583.	.0	1585.0	1		1935	236	1794.	1570.2	1593.1
1		0300	37	0.	.0	1585.0	1		1120	137	0.	.0	1585.0	1		1940	237	1794.	1569.7	1593.1
1		0305	38	0.	.0	1585.0	1		1125	138	583.	.0	1585.0	1		1945	238	1793.	1568.9	1593.1

1	0310	39	0.	.0	1585.0	*	1	1130	139	0.	.0	1585.0	*	1	1950	239	1793.	1567.7	1593.1
1	0315	40	0.	.0	1585.0	*	1	1135	140	583.	.0	1585.0	*	1	1955	240	1792.	1566.3	1593.1
1	0320	41	0.	.0	1585.0	*	1	1140	141	0.	.0	1585.0	*	1	2000	241	1792.	1564.5	1593.1
1	0325	42	0.	.0	1585.0	*	1	1145	142	583.	.0	1585.0	*	1	2005	242	1791.	1562.5	1593.1
1	0330	43	0.	.0	1585.0	*	1	1150	143	0.	.0	1585.0	*	1	2010	243	1790.	1560.3	1593.1
1	0335	44	0.	.0	1585.0	*	1	1155	144	583.	.0	1585.0	*	1	2015	244	1789.	1557.9	1593.1
1	0340	45	0.	.0	1585.0	*	1	1200	145	0.	.0	1585.0	*	1	2020	245	1788.	1555.3	1593.1
1	0345	46	0.	.0	1585.0	*	1	1205	146	583.	.0	1585.0	*	1	2025	246	1786.	1552.5	1593.1
1	0350	47	0.	.0	1585.0	*	1	1210	147	0.	.0	1585.0	*	1	2030	247	1785.	1549.5	1593.1
1	0355	48	0.	.0	1585.0	*	1	1215	148	583.	.0	1585.0	*	1	2035	248	1784.	1546.4	1593.1
1	0400	49	0.	.0	1585.0	*	1	1220	149	583.	.0	1585.0	*	1	2040	249	1782.	1543.2	1593.1
1	0405	50	0.	.0	1585.0	*	1	1225	150	583.	.0	1585.0	*	1	2045	250	1781.	1539.8	1593.1
1	0410	51	0.	.0	1585.0	*	1	1230	151	583.	.0	1585.0	*	1	2050	251	1780.	1536.2	1593.1
1	0415	52	0.	.0	1585.0	*	1	1235	152	641.	.7	1585.5	*	1	2055	252	1778.	1532.5	1593.1
1	0420	53	0.	.0	1585.0	*	1	1240	153	669.	2.2	1585.7	*	1	2100	253	1776.	1528.8	1593.1
1	0425	54	0.	.0	1585.0	*	1	1245	154	695.	4.8	1585.9	*	1	2105	254	1775.	1524.9	1593.0
1	0430	55	0.	.0	1585.0	*	1	1250	155	719.	8.4	1586.1	*	1	2110	255	1773.	1520.9	1593.0
1	0435	56	0.	.0	1585.0	*	1	1255	156	742.	13.2	1586.3	*	1	2115	256	1771.	1516.7	1593.0
1	0440	57	0.	.0	1585.0	*	1	1300	157	764.	19.0	1586.4	*	1	2120	257	1769.	1512.5	1593.0
1	0445	58	0.	.0	1585.0	*	1	1305	158	785.	26.1	1586.6	*	1	2125	258	1768.	1508.2	1593.0
1	0450	59	0.	.0	1585.0	*	1	1310	159	805.	34.3	1586.8	*	1	2130	259	1766.	1503.8	1593.0
1	0455	60	0.	.0	1585.0	*	1	1315	160	825.	43.7	1586.9	*	1	2135	260	1764.	1499.3	1593.0
1	0500	61	0.	.0	1585.0	*	1	1320	161	845.	54.3	1587.1	*	1	2140	261	1762.	1494.8	1593.0
1	0505	62	0.	.0	1585.0	*	1	1325	162	864.	66.2	1587.2	*	1	2145	262	1760.	1490.1	1593.0
1	0510	63	0.	.0	1585.0	*	1	1330	163	882.	79.1	1587.3	*	1	2150	263	1758.	1485.3	1592.9
1	0515	64	0.	.0	1585.0	*	1	1335	164	900.	93.2	1587.5	*	1	2155	264	1756.	1480.5	1592.9
1	0520	65	0.	.0	1585.0	*	1	1340	165	918.	108.1	1587.6	*	1	2200	265	1754.	1475.5	1592.9
1	0525	66	0.	.0	1585.0	*	1	1345	166	935.	123.9	1587.7	*	1	2205	266	1751.	1470.5	1592.9
1	0530	67	0.	.0	1585.0	*	1	1350	167	953.	140.3	1587.8	*	1	2210	267	1749.	1465.5	1592.9
1	0535	68	0.	.0	1585.0	*	1	1355	168	970.	157.1	1588.0	*	1	2215	268	1747.	1460.3	1592.9
1	0540	69	0.	.0	1585.0	*	1	1400	169	987.	174.2	1588.1	*	1	2220	269	1745.	1455.1	1592.9
1	0545	70	0.	.0	1585.0	*	1	1405	170	1004.	191.5	1588.2	*	1	2225	270	1742.	1449.8	1592.9
1	0550	71	0.	.0	1585.0	*	1	1410	171	1020.	208.7	1588.3	*	1	2230	271	1740.	1444.5	1592.8
1	0555	72	0.	.0	1585.0	*	1	1415	172	1036.	225.8	1588.4	*	1	2235	272	1738.	1439.1	1592.8
1	0600	73	0.	.0	1585.0	*	1	1420	173	1051.	242.8	1588.5	*	1	2240	273	1735.	1433.7	1592.8
1	0605	74	0.	.0	1585.0	*	1	1425	174	1065.	259.7	1588.6	*	1	2245	274	1733.	1428.2	1592.8
1	0610	75	0.	.0	1585.0	*	1	1430	175	1079.	276.7	1588.7	*	1	2250	275	1731.	1422.6	1592.8
1	0615	76	0.	.0	1585.0	*	1	1435	176	1093.	293.8	1588.8	*	1	2255	276	1728.	1417.1	1592.8
1	0620	77	0.	.0	1585.0	*	1	1440	177	1107.	311.3	1588.9	*	1	2300	277	1726.	1411.5	1592.8
1	0625	78	0.	.0	1585.0	*	1	1445	178	1121.	329.3	1589.0	*	1	2305	278	1723.	1405.9	1592.7
1	0630	79	0.	.0	1585.0	*	1	1450	179	1136.	348.1	1589.1	*	1	2310	279	1721.	1400.2	1592.7
1	0635	80	0.	.0	1585.0	*	1	1455	180	1150.	367.8	1589.2	*	1	2315	280	1718.	1394.5	1592.7
1	0640	81	0.	.0	1585.0	*	1	1500	181	1165.	388.6	1589.3	*	1	2320	281	1716.	1388.8	1592.7
1	0645	82	0.	.0	1585.0	*	1	1505	182	1181.	410.8	1589.4	*	1	2325	282	1713.	1383.0	1592.7
1	0650	83	0.	.0	1585.0	*	1	1510	183	1198.	434.4	1589.5	*	1	2330	283	1711.	1377.2	1592.7
1	0655	84	0.	.0	1585.0	*	1	1515	184	1215.	459.6	1589.6	*	1	2335	284	1708.	1371.4	1592.7
1	0700	85	0.	.0	1585.0	*	1	1520	185	1234.	486.4	1589.7	*	1	2340	285	1705.	1365.5	1592.6
1	0705	86	0.	.0	1585.0	*	1	1525	186	1252.	514.9	1589.9	*	1	2345	286	1703.	1359.6	1592.6
1	0710	87	0.	.0	1585.0	*	1	1530	187	1272.	544.8	1590.0	*	1	2350	287	1700.	1353.7	1592.6
1	0715	88	0.	.0	1585.0	*	1	1535	188	1292.	576.2	1590.1	*	1	2355	288	1697.	1347.8	1592.6
1	0720	89	0.	.0	1585.0	*	1	1540	189	1313.	608.9	1590.2	*	2	0000	289	1695.	1341.8	1592.6
1	0725	90	0.	.0	1585.0	*	1	1545	190	1333.	642.6	1590.4	*	2	0005	290	1692.	1335.8	1592.6
1	0730	91	0.	.0	1585.0	*	1	1550	191	1354.	677.1	1590.5	*	2	0010	291	1689.	1329.8	1592.5
1	0735	92	0.	.0	1585.0	*	1	1555	192	1375.	712.2	1590.6	*	2	0015	292	1687.	1323.8	1592.5
1	0740	93	0.	.0	1585.0	*	1	1600	193	1395.	747.7	1590.8	*	2	0020	293	1684.	1317.7	1592.5
1	0745	94	0.	.0	1585.0	*	1	1605	194	1415.	783.3	1590.9	*	2	0025	294	1681.	1311.6	1592.5
1	0750	95	0.	.0	1585.0	*	1	1610	195	1435.	818.8	1591.0	*	2	0030	295	1678.	1305.5	1592.5
1	0755	96	0.	.0	1585.0	*	1	1615	196	1455.	853.9	1591.1	*	2	0035	296	1675.	1299.4	1592.5
1	0800	97	0.	.0	1585.0	*	1	1620	197	1473.	888.6	1591.3	*	2	0040	297	1673.	1293.2	1592.4
1	0805	98	0.	.0	1585.0	*	1	1625	198	1491.	922.5	1591.4	*	2	0045	298	1670.	1287.0	1592.4

1	0810	99	0.	.0	1585.0	*	1	1630	199	1509.	955.7	1591.5	*	2	0050	299	1667.	1280.7	1592.4
1	0815	100	0.	.0	1585.0	*	1	1635	200	1525.	988.0	1591.6	*	2	0055	300	1664.	1274.4	1592.4

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PEAK OUTFLOW IS 1794. AT TIME 19.50 HOURS

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	24.92-HR
		(CFS)				
1794.	19.50		1761.	825.	796.	796.
		(INCHES)	.343	.644	.644	.644
		(AC-FT)	873.	1637.	1639.	1639.

PEAK STORAGE (AC-FT)	TIME (HR)	MAXIMUM AVERAGE STORAGE 6-HR	24-HR	72-HR	24.92-HR
1570.	19.50	1494.	555.	534.	534.

PEAK STAGE (FEET)	TIME (HR)	MAXIMUM AVERAGE STAGE 6-HR	24-HR	72-HR	24.92-HR
1593.15	19.50	1592.96	1588.33	1588.21	1588.21

CUMULATIVE AREA = 47.69 SQ MI

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INTERPOLATED HYDROGRAPH AT RESR

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DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW
1		0000	1	583.	*	1		0615	76	0.	*	1		1230	151	590.	*	1		1845	226	1794.
1		0005	2	0.	*	1		0620	77	0.	*	1		1235	152	644.	*	1		1850	227	1796.
1		0010	3	0.	*	1		0625	78	0.	*	1		1240	153	671.	*	1		1855	228	1798.
1		0015	4	0.	*	1		0630	79	0.	*	1		1245	154	697.	*	1		1900	229	1800.
1		0020	5	0.	*	1		0635	80	0.	*	1		1250	155	721.	*	1		1905	230	1801.
1		0025	6	0.	*	1		0640	81	0.	*	1		1255	156	745.	*	1		1910	231	1802.
1		0030	7	0.	*	1		0645	82	0.	*	1		1300	157	766.	*	1		1915	232	1803.
1		0035	8	0.	*	1		0650	83	0.	*	1		1305	158	788.	*	1		1920	233	1804.
1		0040	9	0.	*	1		0655	84	0.	*	1		1310	159	808.	*	1		1925	234	1804.
1		0045	10	0.	*	1		0700	85	0.	*	1		1315	160	828.	*	1		1930	235	1804.
1		0050	11	0.	*	1		0705	86	0.	*	1		1320	161	847.	*	1		1935	236	1804.
1		0055	12	0.	*	1		0710	87	0.	*	1		1325	162	866.	*	1		1940	237	1804.
1		0100	13	0.	*	1		0715	88	0.	*	1		1330	163	885.	*	1		1945	238	1804.
1		0105	14	0.	*	1		0720	89	0.	*	1		1335	164	903.	*	1		1950	239	1803.
1		0110	15	0.	*	1		0725	90	0.	*	1		1340	165	921.	*	1		1955	240	1803.
1		0115	16	0.	*	1		0730	91	0.	*	1		1345	166	938.	*	1		2000	241	1802.
1		0120	17	0.	*	1		0735	92	0.	*	1		1350	167	956.	*	1		2005	242	1801.
1		0125	18	0.	*	1		0740	93	0.	*	1		1355	168	974.	*	1		2010	243	1800.
1		0130	19	0.	*	1		0745	94	0.	*	1		1400	169	991.	*	1		2015	244	1799.
1		0135	20	0.	*	1		0750	95	0.	*	1		1405	170	1008.	*	1		2020	245	1798.
1		0140	21	0.	*	1		0755	96	0.	*	1		1410	171	1025.	*	1		2025	246	1797.
1		0145	22	0.	*	1		0800	97	0.	*	1		1415	172	1040.	*	1		2030	247	1796.
1		0150	23	0.	*	1		0805	98	0.	*	1		1420	173	1055.	*	1		2035	248	1795.

1	0155	24	0.	*	1	0810	99	0.	*	1	1425	174	1070.	*	1	2040	249	1793.
1	0200	25	0.	*	1	0815	100	0.	*	1	1430	175	1084.	*	1	2045	250	1792.
1	0205	26	0.	*	1	0820	101	0.	*	1	1435	176	1099.	*	1	2050	251	1790.
1	0210	27	0.	*	1	0825	102	0.	*	1	1440	177	1113.	*	1	2055	252	1789.
1	0215	28	0.	*	1	0830	103	0.	*	1	1445	178	1127.	*	1	2100	253	1787.
1	0220	29	0.	*	1	0835	104	0.	*	1	1450	179	1141.	*	1	2105	254	1785.
1	0225	30	0.	*	1	0840	105	0.	*	1	1455	180	1156.	*	1	2110	255	1784.
1	0230	31	0.	*	1	0845	106	0.	*	1	1500	181	1171.	*	1	2115	256	1782.
1	0235	32	0.	*	1	0850	107	0.	*	1	1505	182	1187.	*	1	2120	257	1780.
1	0240	33	0.	*	1	0855	108	0.	*	1	1510	183	1204.	*	1	2125	258	1778.
1	0245	34	0.	*	1	0900	109	0.	*	1	1515	184	1222.	*	1	2130	259	1777.
1	0250	35	0.	*	1	0905	110	0.	*	1	1520	185	1240.	*	1	2135	260	1775.
1	0255	36	0.	*	1	0910	111	0.	*	1	1525	186	1259.	*	1	2140	261	1773.
1	0300	37	0.	*	1	0915	112	0.	*	1	1530	187	1279.	*	1	2145	262	1771.
1	0305	38	0.	*	1	0920	113	0.	*	1	1535	188	1299.	*	1	2150	263	1769.
1	0310	39	0.	*	1	0925	114	108.	*	1	1540	189	1320.	*	1	2155	264	1767.
1	0315	40	0.	*	1	0930	115	0.	*	1	1545	190	1341.	*	1	2200	265	1764.
1	0320	41	0.	*	1	0935	116	583.	*	1	1550	191	1362.	*	1	2205	266	1762.
1	0325	42	0.	*	1	0940	117	0.	*	1	1555	192	1382.	*	1	2210	267	1760.
1	0330	43	0.	*	1	0945	118	583.	*	1	1600	193	1403.	*	1	2215	268	1758.
1	0335	44	0.	*	1	0950	119	0.	*	1	1605	194	1423.	*	1	2220	269	1756.
1	0340	45	0.	*	1	0955	120	583.	*	1	1610	195	1443.	*	1	2225	270	1753.
1	0345	46	0.	*	1	1000	121	0.	*	1	1615	196	1463.	*	1	2230	271	1751.
1	0350	47	0.	*	1	1005	122	583.	*	1	1620	197	1482.	*	1	2235	272	1749.
1	0355	48	0.	*	1	1010	123	0.	*	1	1625	198	1500.	*	1	2240	273	1746.
1	0400	49	0.	*	1	1015	124	583.	*	1	1630	199	1517.	*	1	2245	274	1744.
1	0405	50	0.	*	1	1020	125	0.	*	1	1635	200	1534.	*	1	2250	275	1742.
1	0410	51	0.	*	1	1025	126	583.	*	1	1640	201	1550.	*	1	2255	276	1739.
1	0415	52	0.	*	1	1030	127	0.	*	1	1645	202	1566.	*	1	2300	277	1737.
1	0420	53	0.	*	1	1035	128	583.	*	1	1650	203	1580.	*	1	2305	278	1734.
1	0425	54	0.	*	1	1040	129	0.	*	1	1655	204	1595.	*	1	2310	279	1732.
1	0430	55	0.	*	1	1045	130	583.	*	1	1700	205	1609.	*	1	2315	280	1729.
1	0435	56	0.	*	1	1050	131	0.	*	1	1705	206	1622.	*	1	2320	281	1727.
1	0440	57	0.	*	1	1055	132	583.	*	1	1710	207	1635.	*	1	2325	282	1724.
1	0445	58	0.	*	1	1100	133	0.	*	1	1715	208	1648.	*	1	2330	283	1722.
1	0450	59	0.	*	1	1105	134	583.	*	1	1720	209	1661.	*	1	2335	284	1719.
1	0455	60	0.	*	1	1110	135	0.	*	1	1725	210	1673.	*	1	2340	285	1716.
1	0500	61	0.	*	1	1115	136	583.	*	1	1730	211	1685.	*	1	2345	286	1714.
1	0505	62	0.	*	1	1120	137	0.	*	1	1735	212	1696.	*	1	2350	287	1711.
1	0510	63	0.	*	1	1125	138	583.	*	1	1740	213	1707.	*	1	2355	288	1709.
1	0515	64	0.	*	1	1130	139	0.	*	1	1745	214	1718.	*	2	0000	289	1706.
1	0520	65	0.	*	1	1135	140	583.	*	1	1750	215	1727.	*	2	0005	290	1703.
1	0525	66	0.	*	1	1140	141	0.	*	1	1755	216	1737.	*	2	0010	291	1700.
1	0530	67	0.	*	1	1145	142	583.	*	1	1800	217	1745.	*	2	0015	292	1698.
1	0535	68	0.	*	1	1150	143	0.	*	1	1805	218	1753.	*	2	0020	293	1695.
1	0540	69	0.	*	1	1155	144	583.	*	1	1810	219	1761.	*	2	0025	294	1692.
1	0545	70	0.	*	1	1200	145	0.	*	1	1815	220	1767.	*	2	0030	295	1690.
1	0550	71	0.	*	1	1205	146	583.	*	1	1820	221	1773.	*	2	0035	296	1687.
1	0555	72	0.	*	1	1210	147	0.	*	1	1825	222	1778.	*	2	0040	297	1684.
1	0600	73	0.	*	1	1215	148	583.	*	1	1830	223	1783.	*	2	0045	298	1681.
1	0605	74	0.	*	1	1220	149	583.	*	1	1835	224	1787.	*	2	0050	299	1678.
1	0610	75	0.	*	1	1225	150	583.	*	1	1840	225	1791.	*	2	0055	300	1675.
				*					*					*				

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PEAK FLOW (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW (CFS) 6-HR	24-HR	72-HR	24.92-HR
+ 1804.	19.50	1772.	830.	801.	801.

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                    (INCHES)     .345        .647        .648        .648
                    (AC-FT)      879.        1646.       1648.       1648.

 PEAK STORAGE   TIME                     MAXIMUM AVERAGE STORAGE
                                 6-HR        24-HR       72-HR     24.92-HR
+  (AC-FT)      (HR)
    1570.      19.50             1494.        555.        534.        534.

  PEAK STAGE    TIME                     MAXIMUM AVERAGE STAGE
                                 6-HR        24-HR       72-HR     24.92-HR
+   (FEET)      (HR)
   1593.15     19.50           1592.96     1588.33     1588.21     1588.21

                    CUMULATIVE AREA =   47.69 SQ MI

1                                              STATION     RESR

                     (O) OUTFLOW
         0.     200.      400.      600.      800.     1000.     1200.     1400.     1600.     1800.     2000.        0.        0.
DAHRMN PER
 10000   1.---------.---------.---------O.---------.---------.---------.---------.---------.---------.---------.---------.---------.
 10005  20         .         .         .         .         .         .         .         .         .         .         .         .
 10010  30         .         .         .         .         .         .         .         .         .         .         .         .
 10015  40         .         .         .         .         .         .         .         .         .         .         .         .
 10020  50         .         .         .         .         .         .         .         .         .         .         .         .
 10025  60         .         .         .         .         .         .         .         .         .         .         .         .
 10030  70         .         .         .         .         .         .         .         .         .         .         .         .
 10035  80         .         .         .         .         .         .         .         .         .         .         .         .
 10040  90         .         .         .         .         .         .         .         .         .         .         .         .
 10045 100         .         .         .         .         .         .         .         .         .         .         .         .
 10050 110 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10055 120         .         .         .         .         .         .         .         .         .         .         .         .
 10100 130         .         .         .         .         .         .         .         .         .         .         .         .
 10105 140         .         .         .         .         .         .         .         .         .         .         .         .
 10110 150         .         .         .         .         .         .         .         .         .         .         .         .
 10115 160         .         .         .         .         .         .         .         .         .         .         .         .
 10120 170         .         .         .         .         .         .         .         .         .         .         .         .
 10125 180         .         .         .         .         .         .         .         .         .         .         .         .
 10130 190         .         .         .         .         .         .         .         .         .         .         .         .
 10135 200         .         .         .         .         .         .         .         .         .         .         .         .
 10140 210 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10145 220         .         .         .         .         .         .         .         .         .         .         .         .
 10150 230         .         .         .         .         .         .         .         .         .         .         .         .
 10155 240         .         .         .         .         .         .         .         .         .         .         .         .
 10200 250         .         .         .         .         .         .         .         .         .         .         .         .
 10205 260         .         .         .         .         .         .         .         .         .         .         .         .
 10210 270         .         .         .         .         .         .         .         .         .         .         .         .
 10215 280         .         .         .         .         .         .         .         .         .         .         .         .
 10220 290         .         .         .         .         .         .         .         .         .         .         .         .
 10225 300         .         .         .         .         .         .         .         .         .         .         .         .
 10230 310 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10235 320         .         .         .         .         .         .         .         .         .         .         .         .
 10240 330         .         .         .         .         .         .         .         .         .         .         .         .
 10245 340         .         .         .         .         .         .         .         .         .         .         .         .
 10250 350         .         .         .         .         .         .         .         .         .         .         .         .
 10255 360         .         .         .         .         .         .         .         .         .         .         .         .
 10300 370         .         .         .         .         .         .         .         .         .         .         .         .
 10305 380         .         .         .         .         .         .         .         .         .         .         .         .
 10310 390         .         .         .         .         .         .         .         .         .         .         .         .
 10315 400         .         .         .         .         .         .         .         .         .         .         .         .
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10320	410
10325	420
10330	430
10335	440
10340	450
10345	460
10350	470
10355	480
10400	490
10405	500
10410	510
10415	520
10420	530
10425	540
10430	550
10435	560
10440	570
10445	580
10450	590
10455	600
10500	610
10505	620
10510	630
10515	640
10520	650
10525	660
10530	670
10535	680
10540	690
10545	700
10550	710
10555	720
10600	730
10605	740
10610	750
10615	760
10620	770
10625	780
10630	790
10635	800
10640	810
10645	820
10650	830
10655	840
10700	850
10705	860
10710	870
10715	880
10720	890
10725	900
10730	910
10735	920
10740	930
10745	940
10750	950
10755	960
10800	970
10805	980
10810	990
10815	1000

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10820 1010 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10825 1020         .         .         .         .         .         .         .         .         .         .         .         .
10830 1030         .         .         .         .         .         .         .         .         .         .         .         .
10835 1040         .         .         .         .         .         .         .         .         .         .         .         .
10840 1050         .         .         .         .         .         .         .         .         .         .         .         .
10845 1060         .         .         .         .         .         .         .         .         .         .         .         .
10850 1070         .         .         .         .         .         .         .         .         .         .         .         .
10855 1080         .         .         .         .         .         .         .         .         .         .         .         .
10900 1090         .         .         .         .         .         .         .         .         .         .         .         .
10905 1100         .         .         .         .         .         .         .         .         .         .         .         .
10910 1110 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10915 1120         .         .         .         .         .         .         .         .         .         .         .         .
10920 1130         .         .         .         .         .         .         .         .         .         .         .         .
10925 114.    0    .         .         .         .         .         .         .         .         .         .         .         .
10930 1150         .         .         .         .         .         .         .         .         .         .         .         .
10935 116.         .         .        0.         .         .         .         .         .         .         .         .         .
10940 1170         .         .         .         .         .         .         .         .         .         .         .         .
10945 118.         .         .        0.         .         .         .         .         .         .         .         .         .
10950 1190         .         .         .         .         .         .         .         .         .         .         .         .
10955 120.         .         .        0.         .         .         .         .         .         .         .         .         .
11000 1210 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
11005 122.         .         .        0.         .         .         .         .         .         .         .         .         .
11010 1230         .         .         .         .         .         .         .         .         .         .         .         .
11015 124.         .         .        0.         .         .         .         .         .         .         .         .         .
11020 1250         .         .         .         .         .         .         .         .         .         .         .         .
11025 126.         .         .        0.         .         .         .         .         .         .         .         .         .
11030 1270         .         .         .         .         .         .         .         .         .         .         .         .
11035 128.         .         .        0.         .         .         .         .         .         .         .         .         .
11040 1290         .         .         .         .         .         .         .         .         .         .         .         .
11045 130.         .         .        0.         .         .         .         .         .         .         .         .         .
11050 1310 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
11055 132.         .         .        0.         .         .         .         .         .         .         .         .         .
11100 1330         .         .         .         .         .         .         .         .         .         .         .         .
11105 134.         .         .        0.         .         .         .         .         .         .         .         .         .
11110 1350         .         .         .         .         .         .         .         .         .         .         .         .
11115 136.         .         .        0.         .         .         .         .         .         .         .         .         .
11120 1370         .         .         .         .         .         .         .         .         .         .         .         .
11125 138.         .         .        0.         .         .         .         .         .         .         .         .         .
11130 1390         .         .         .         .         .         .         .         .         .         .         .         .
11135 140.         .         .        0.         .         .         .         .         .         .         .         .         .
11140 1410 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
11145 142.         .         .        0.         .         .         .         .         .         .         .         .         .
11150 1430         .         .         .         .         .         .         .         .         .         .         .         .
11155 144.         .         .        0.         .         .         .         .         .         .         .         .         .
11200 1450         .         .         .         .         .         .         .         .         .         .         .         .
11205 146.         .         .        0.         .         .         .         .         .         .         .         .         .
11210 1470         .         .         .         .         .         .         .         .         .         .         .         .
11215 148.         .         .        0.         .         .         .         .         .         .         .         .         .
11220 149.         .         .        0.         .         .         .         .         .         .         .         .         .
11225 150.         .         .        0.         .         .         .         .         .         .         .         .         .
11230 151. . . . . . . . . . . . . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
11235 152.         .         .         . 0       .         .         .         .         .         .         .         .         .
11240 153.         .         .         .   0     .         .         .         .         .         .         .         .         .
11245 154.         .         .         .    0    .         .         .         .         .         .         .         .         .
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11305 158.         .         .         .        0.         .         .         .         .         .         .         .         .
11310 159.         .         .         .         0         .         .         .         .         .         .         .         .
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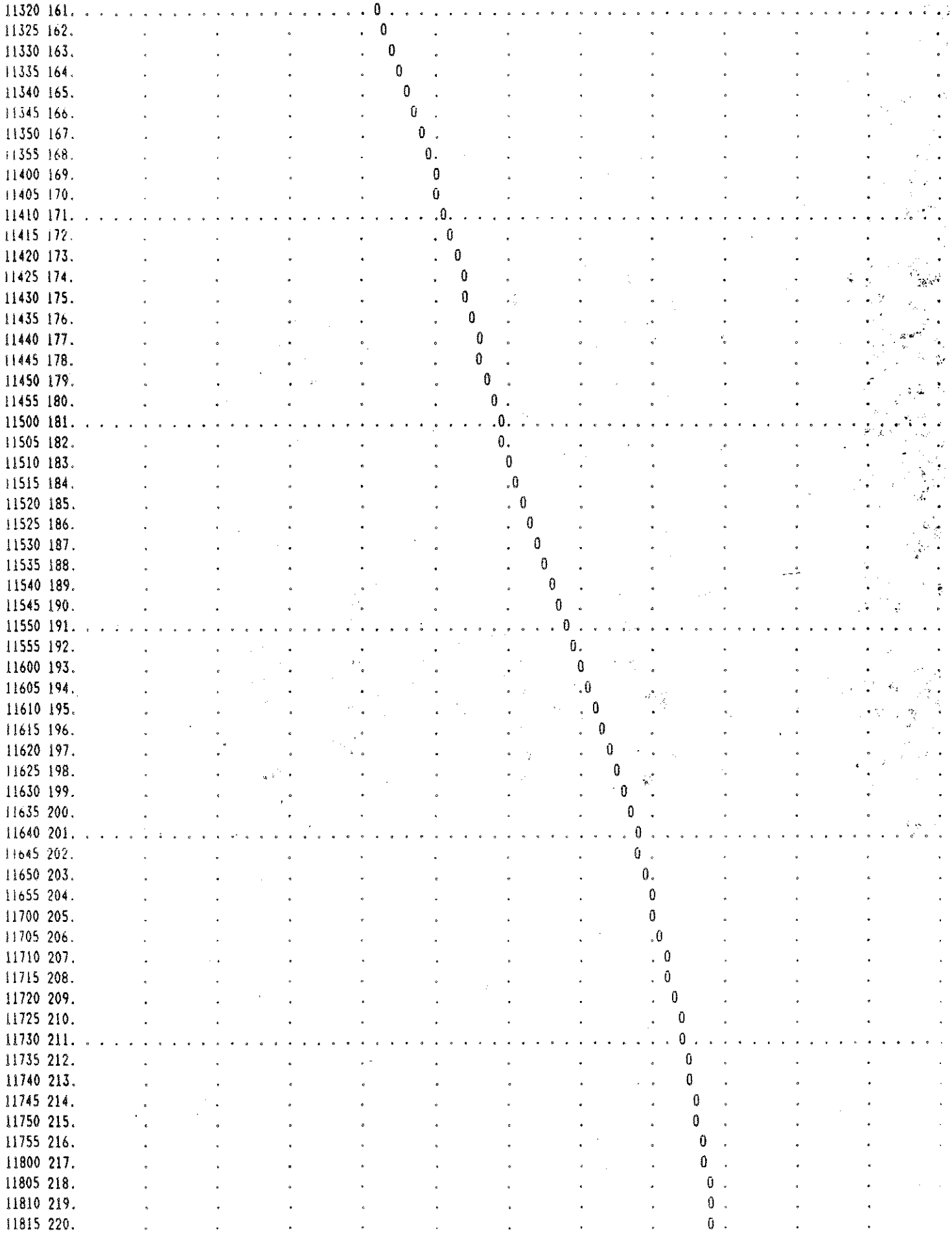
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12015 244.	0
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 20015 292.          .         .         .         .         .         .         .         .     0   .         .         .         .
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 20025 294.          .         .         .         .         .         .         .         .     0   .         .         .         .
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 20035 296.          .         .         .         .         .         .         .         .    0    .         .         .         .
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 20055 300.---------.---------.---------.---------.---------.---------.---------.---------.---0-----.---------.---------.---------.
1

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN    19775. TO    36999.
                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    70561.
                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     1925. TO   337747.
                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     9058. TO    77382.
                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     1226.
                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.)


*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***


          **************
          *            *
 486 KK   *     RESV   *
          *            *
          **************

 488 KO        OUTPUT CONTROL VARIABLES
                     IPRNT          1  PRINT CONTROL
                     IPLOT          2  PLOT CONTROL
                     QSCAL          0.  HYDROGRAPH PLOT SCALE

             HYDROGRAPH ROUTING DATA
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489 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

490 SA            AREA         .0     65.0    200.0    400.0    600.0    800.0   1000.0   1200.0

491 SE        ELEVATION    1564.20  1565.00  1566.60  1569.50  1571.80  1574.20  1576.10  1579.20

492 SL        LOW-LEVEL OUTLET
                   ELEVL    1561.50  ELEVATION AT CENTER OF OUTLET
                   CAREA      15.90  CROSS-SECTIONAL AREA
                    COQL        .70  COEFFICIENT
                    EXPL       1.50  EXPONENT OF HEAD

493 SS        SPILLWAY
                    CREL    1574.80  SPILLWAY CREST ELEVATION
                   SPWID     600.00  SPILLWAY WIDTH
                    COQW       3.00  WEIR COEFFICIENT
                    EXPW       1.50  EXPONENT OF HEAD

494 ST        TOP OF DAM
                   TOPEL    1579.50  ELEVATION AT TOP OF DAM
                  DAMWID   28829.00  DAM WIDTH
                    COQD       3.30  WEIR COEFFICIENT
                    EXPD       1.50  EXPONENT OF HEAD
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COMPUTED STORAGE-ELEVATION DATA

STORAGE	.00	17.33	219.47	1072.90	2215.18	3889.36	5595.86	9001.12
ELEVATION	1564.20	1565.00	1566.60	1569.50	1571.80	1574.20	1576.10	1579.20

COMPUTED OUTFLOW-ELEVATION DATA

(EXCLUDING FLOW OVER DAM)

OUTFLOW	.00	579.78	813.08	1101.82	1451.91	1869.30	2359.81	2929.45	3584.08	4329.62
ELEVATION	1564.20	1564.98	1565.86	1566.84	1567.92	1569.10	1570.37	1571.75	1573.23	1574.80
OUTFLOW	4490.64	4809.33	5388.79	6306.65	7639.98	9465.85	11863.04	14908.50	18681.66	23259.61
ELEVATION	1574.94	1575.12	1575.37	1575.70	1576.10	1576.57	1577.12	1577.74	1578.43	1579.20

COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

(INCLUDING FLOW OVER DAM)

STORAGE	.00	16.14	17.33	99.16	219.47	269.37	536.29	918.36	1072.90	1453.39
OUTFLOW	396.01	579.78	584.48	813.08	1028.07	1101.82	1451.91	1869.30	2019.78	2359.81
ELEVATION	1564.20	1564.98	1565.00	1565.86	1566.60	1566.84	1567.92	1569.10	1569.50	1570.37
STORAGE	2185.56	2215.18	3151.59	3889.36	4387.56	4508.02	4666.85	4896.32	5202.67	5593.78
OUTFLOW	2929.45	2950.72	3584.08	4039.92	4329.62	4490.64	4809.33	5388.79	6306.65	7639.98
ELEVATION	1571.75	1571.80	1573.23	1574.20	1574.80	1574.94	1575.12	1575.37	1575.70	1576.10
STORAGE	6074.04	6646.43	7318.59	8100.04	9001.12					
OUTFLOW	9465.85	11863.04	14908.50	18681.66	23259.61					

ELEVATION 1576.57 1577.12 1577.74 1578.43 1579.20

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HYDROGRAPH AT RESV
TRANSPOSITION AREA .3 SQ MI

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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
1		0000	1	396.	.0	1564.2	1		0820	101	0.	.0	1564.2	1		1640	201	2933.	2190.2	1571.8
1		0005	2	0.	.0	1564.2	1		0825	102	396.	.0	1564.2	1		1645	202	2948.	2211.4	1571.8
1		0010	3	0.	.0	1564.2	1		0830	103	0.	.0	1564.2	1		1650	203	2962.	2230.3	1571.8
1		0015	4	0.	.0	1564.2	1		0835	104	396.	.0	1564.2	1		1655	204	2974.	2247.1	1571.9
1		0020	5	0.	.0	1564.2	1		0840	105	0.	.0	1564.2	1		1700	205	2984.	2261.9	1571.9
1		0025	6	0.	.0	1564.2	1		0845	106	396.	.0	1564.2	1		1705	206	2993.	2275.0	1571.9
1		0030	7	0.	.0	1564.2	1		0850	107	0.	.0	1564.2	1		1710	207	3001.	2286.3	1571.9
1		0035	8	0.	.0	1564.2	1		0855	108	396.	.0	1564.2	1		1715	208	3008.	2296.1	1571.9
1		0040	9	0.	.0	1564.2	1		0900	109	0.	.0	1564.2	1		1720	209	3014.	2304.6	1571.9
1		0045	10	0.	.0	1564.2	1		0905	110	396.	.0	1564.2	1		1725	210	3019.	2311.7	1572.0
1		0050	11	0.	.0	1564.2	1		0910	111	0.	.0	1564.2	1		1730	211	3024.	2317.5	1572.0
1		0055	12	0.	.0	1564.2	1		0915	112	396.	.0	1564.2	1		1735	212	3027.	2322.1	1572.0
1		0100	13	0.	.0	1564.2	1		0920	113	0.	.0	1564.2	1		1740	213	3029.	2325.9	1572.0
1		0105	14	0.	.0	1564.2	1		0925	114	396.	.0	1564.2	1		1745	214	3031.	2328.6	1572.0
1		0110	15	0.	.0	1564.2	1		0930	115	0.	.0	1564.2	1		1750	215	3033.	2330.5	1572.0
1		0115	16	0.	.0	1564.2	1		0935	116	396.	.0	1564.2	1		1755	216	3033.	2331.6	1572.0
1		0120	17	0.	.0	1564.2	1		0940	117	0.	.0	1564.2	1		1800	217	3034.	2332.0	1572.0
1		0125	18	0.	.0	1564.2	1		0945	118	396.	.0	1564.2	1		1805	218	3034.	2331.8	1572.0
1		0130	19	0.	.0	1564.2	1		0950	119	0.	.0	1564.2	1		1810	219	3033.	2331.0	1572.0
1		0135	20	0.	.0	1564.2	1		0955	120	396.	.0	1564.2	1		1815	220	3032.	2329.6	1572.0
1		0140	21	0.	.0	1564.2	1		1000	121	0.	.0	1564.2	1		1820	221	3031.	2327.8	1572.0
1		0145	22	0.	.0	1564.2	1		1005	122	396.	.0	1564.2	1		1825	222	3029.	2325.5	1572.0
1		0150	23	0.	.0	1564.2	1		1010	123	0.	.0	1564.2	1		1830	223	3027.	2322.7	1572.0
1		0155	24	0.	.0	1564.2	1		1015	124	396.	.0	1564.2	1		1835	224	3025.	2319.5	1572.0
1		0200	25	0.	.0	1564.2	1		1020	125	0.	.0	1564.2	1		1840	225	3022.	2315.9	1572.0
1		0205	26	0.	.0	1564.2	1		1025	126	396.	.0	1564.2	1		1845	226	3020.	2312.0	1572.0
1		0210	27	0.	.0	1564.2	1		1030	127	0.	.0	1564.2	1		1850	227	3017.	2307.8	1572.0
1		0215	28	0.	.0	1564.2	1		1035	128	396.	.0	1564.2	1		1855	228	3013.	2303.2	1571.9
1		0220	29	0.	.0	1564.2	1		1040	129	0.	.0	1564.2	1		1900	229	3010.	2298.4	1571.9
1		0225	30	0.	.0	1564.2	1		1045	130	396.	.0	1564.2	1		1905	230	3006.	2293.3	1571.9
1		0230	31	0.	.0	1564.2	1		1050	131	0.	.0	1564.2	1		1910	231	3003.	2288.0	1571.9
1		0235	32	0.	.0	1564.2	1		1055	132	396.	.0	1564.2	1		1915	232	2999.	2282.4	1571.9
1		0240	33	0.	.0	1564.2	1		1100	133	0.	.0	1564.2	1		1920	233	2995.	2276.6	1571.9
1		0245	34	0.	.0	1564.2	1		1105	134	396.	.0	1564.2	1		1925	234	2990.	2270.7	1571.9
1		0250	35	0.	.0	1564.2	1		1110	135	0.	.0	1564.2	1		1930	235	2986.	2264.5	1571.9
1		0255	36	0.	.0	1564.2	1		1115	136	396.	.0	1564.2	1		1935	236	2981.	2258.2	1571.9
1		0300	37	0.	.0	1564.2	1		1120	137	0.	.0	1564.2	1		1940	237	2977.	2251.7	1571.9
1		0305	38	0.	.0	1564.2	1		1125	138	396.	.0	1564.2	1		1945	238	2972.	2245.1	1571.8
1		0310	39	0.	.0	1564.2	1		1130	139	396.	.0	1564.2	1		1950	239	2967.	2238.3	1571.8
1		0315	40	0.	.0	1564.2	1		1135	140	396.	.0	1564.2	1		1955	240	2962.	2231.4	1571.8
1		0320	41	0.	.0	1564.2	1		1140	141	396.	.0	1564.2	1		2000	241	2957.	2224.3	1571.8
1		0325	42	0.	.0	1564.2	1		1145	142	396.	.0	1564.2	1		2005	242	2952.	2217.2	1571.8
1		0330	43	0.	.0	1564.2	1		1150	143	396.	.0	1564.2	1		2010	243	2947.	2210.0	1571.8
1		0335	44	0.	.0	1564.2	1		1155	144	445.	.4	1564.4	1		2015	244	2942.	2202.6	1571.8
1		0340	45	0.	.0	1564.2	1		1200	145	473.	1.3	1564.5	1		2020	245	2936.	2195.1	1571.8
1		0345	46	0.	.0	1564.2	1		1205	146	501.	3.3	1564.7	1		2025	246	2931.	2187.5	1571.8
1		0350	47	0.	.0	1564.2	1		1210	147	530.	6.5	1564.8	1		2030	247	2925.	2179.8	1571.7
1		0355	48	0.	.0	1564.2	1		1215	148	558.	11.4	1564.9	1		2035	248	2920.	2172.0	1571.7
1		0400	49	0.	.0	1564.2	1		1220	149	587.	18.0	1565.0	1		2040	249	2914.	2164.1	1571.7

1	0405	50	0.	.0	1564.2	*	1	1225	150	619.	26.8	1565.1	*	1	2045	250	2908.	2156.1	1571.7
1	0410	51	0.	.0	1564.2	*	1	1230	151	656.	37.9	1565.3	*	1	2050	251	2902.	2148.0	1571.7
1	0415	52	0.	.0	1564.2	*	1	1235	152	696.	51.6	1565.4	*	1	2055	252	2896.	2139.8	1571.7
1	0420	53	0.	.0	1564.2	*	1	1240	153	740.	68.0	1565.6	*	1	2100	253	2890.	2131.5	1571.7
1	0425	54	0.	.0	1564.2	*	1	1245	154	787.	87.3	1565.8	*	1	2105	254	2884.	2123.0	1571.6
1	0430	55	0.	.0	1564.2	*	1	1250	155	835.	109.3	1565.9	*	1	2110	255	2878.	2114.5	1571.6
1	0435	56	0.	.0	1564.2	*	1	1255	156	884.	134.2	1566.1	*	1	2115	256	2872.	2105.9	1571.6
1	0440	57	0.	.0	1564.2	*	1	1300	157	935.	161.8	1566.3	*	1	2120	257	2865.	2097.3	1571.6
1	0445	58	0.	.0	1564.2	*	1	1305	158	985.	191.9	1566.5	*	1	2125	258	2859.	2088.5	1571.6
1	0450	59	0.	.0	1564.2	*	1	1310	159	1035.	224.2	1566.6	*	1	2130	259	2852.	2079.6	1571.6
1	0455	60	0.	.0	1564.2	*	1	1315	160	1086.	258.5	1566.8	*	1	2135	260	2846.	2070.8	1571.6
1	0500	61	0.	.0	1564.2	*	1	1320	161	1138.	294.4	1567.0	*	1	2140	261	2839.	2061.8	1571.5
1	0505	62	0.	.0	1564.2	*	1	1325	162	1190.	331.7	1567.1	*	1	2145	262	2833.	2052.7	1571.5
1	0510	63	0.	.0	1564.2	*	1	1330	163	1242.	370.0	1567.3	*	1	2150	263	2826.	2043.6	1571.5
1	0515	64	0.	.0	1564.2	*	1	1335	164	1293.	409.3	1567.4	*	1	2155	264	2819.	2034.5	1571.5
1	0520	65	0.	.0	1564.2	*	1	1340	165	1345.	449.5	1567.6	*	1	2200	265	2812.	2025.3	1571.5
1	0525	66	0.	.0	1564.2	*	1	1345	166	1396.	490.7	1567.8	*	1	2205	266	2805.	2016.1	1571.5
1	0530	67	0.	.0	1564.2	*	1	1350	167	1448.	533.1	1567.9	*	1	2210	267	2798.	2006.8	1571.4
1	0535	68	0.	.0	1564.2	*	1	1355	168	1500.	576.6	1568.1	*	1	2215	268	2792.	1997.5	1571.4
1	0540	69	0.	.0	1564.2	*	1	1400	169	1552.	621.3	1568.2	*	1	2220	269	2785.	1988.1	1571.4
1	0545	70	0.	.0	1564.2	*	1	1405	170	1604.	667.2	1568.4	*	1	2225	270	2777.	1978.7	1571.4
1	0550	71	0.	.0	1564.2	*	1	1410	171	1656.	714.2	1568.5	*	1	2230	271	2770.	1969.2	1571.4
1	0555	72	0.	.0	1564.2	*	1	1415	172	1708.	762.2	1568.7	*	1	2235	272	2763.	1959.8	1571.4
1	0600	73	0.	.0	1564.2	*	1	1420	173	1760.	811.3	1568.8	*	1	2240	273	2756.	1950.4	1571.3
1	0605	74	0.	.0	1564.2	*	1	1425	174	1812.	861.5	1568.9	*	1	2245	274	2749.	1940.9	1571.3
1	0610	75	0.	.0	1564.2	*	1	1430	175	1864.	912.7	1569.1	*	1	2250	275	2742.	1931.3	1571.3
1	0615	76	0.	.0	1564.2	*	1	1435	176	1916.	965.1	1569.2	*	1	2255	276	2735.	1921.8	1571.3
1	0620	77	0.	.0	1564.2	*	1	1440	177	1968.	1018.6	1569.4	*	1	2300	277	2727.	1912.2	1571.3
1	0625	78	0.	.0	1564.2	*	1	1445	178	2020.	1073.2	1569.5	*	1	2305	278	2720.	1902.6	1571.3
1	0630	79	0.	.0	1564.2	*	1	1450	179	2072.	1129.0	1569.6	*	1	2310	279	2713.	1893.1	1571.2
1	0635	80	0.	.0	1564.2	*	1	1455	180	2125.	1185.8	1569.8	*	1	2315	280	2705.	1883.5	1571.2
1	0640	81	0.	.0	1564.2	*	1	1500	181	2177.	1243.8	1569.9	*	1	2320	281	2698.	1873.9	1571.2
1	0645	82	0.	.0	1564.2	*	1	1505	182	2230.	1302.6	1570.0	*	1	2325	282	2691.	1864.3	1571.2
1	0650	83	0.	.0	1564.2	*	1	1510	183	2282.	1362.2	1570.2	*	1	2330	283	2683.	1854.7	1571.2
1	0655	84	0.	.0	1564.2	*	1	1515	184	2333.	1422.3	1570.3	*	1	2335	284	2676.	1845.2	1571.2
1	0700	85	0.	.0	1564.2	*	1	1520	185	2384.	1482.6	1570.4	*	1	2340	285	2669.	1835.6	1571.1
1	0705	86	0.	.0	1564.2	*	1	1525	186	2434.	1542.6	1570.6	*	1	2345	286	2661.	1826.1	1571.1
1	0710	87	0.	.0	1564.2	*	1	1530	187	2483.	1602.0	1570.7	*	1	2350	287	2654.	1816.7	1571.1
1	0715	88	0.	.0	1564.2	*	1	1535	188	2530.	1660.3	1570.8	*	1	2355	288	2647.	1807.2	1571.1
1	0720	89	0.	.0	1564.2	*	1	1540	189	2576.	1717.0	1570.9	*	2	0000	289	2639.	1797.8	1571.1
1	0725	90	396.	.0	1564.2	*	1	1545	190	2619.	1771.9	1571.0	*	2	0005	290	2632.	1788.3	1571.0
1	0730	91	0.	.0	1564.2	*	1	1550	191	2660.	1824.5	1571.1	*	2	0010	291	2624.	1778.9	1571.0
1	0735	92	396.	.0	1564.2	*	1	1555	192	2698.	1874.5	1571.2	*	2	0015	292	2617.	1769.5	1571.0
1	0740	93	0.	.0	1564.2	*	1	1600	193	2734.	1921.7	1571.3	*	2	0020	293	2610.	1760.1	1571.0
1	0745	94	396.	.0	1564.2	*	1	1605	194	2768.	1965.8	1571.4	*	2	0025	294	2602.	1750.6	1571.0
1	0750	95	0.	.0	1564.2	*	1	1610	195	2799.	2006.9	1571.4	*	2	0030	295	2595.	1741.1	1571.0
1	0755	96	396.	.0	1564.2	*	1	1615	196	2827.	2044.9	1571.5	*	2	0035	296	2587.	1731.6	1570.9
1	0800	97	0.	.0	1564.2	*	1	1620	197	2852.	2079.7	1571.6	*	2	0040	297	2580.	1722.0	1570.9
1	0805	98	396.	.0	1564.2	*	1	1625	198	2876.	2111.5	1571.6	*	2	0045	298	2572.	1712.4	1570.9
1	0810	99	0.	.0	1564.2	*	1	1630	199	2897.	2140.5	1571.7	*	2	0050	299	2564.	1702.7	1570.9
1	0815	100	396.	.0	1564.2	*	1	1635	200	2916.	2166.6	1571.7	*	2	0055	300	2557.	1692.9	1570.9
						*							*						

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PEAK OUTFLOW IS 3034. AT TIME 18.00 HOURS

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)				

		(CFS)				
+ 3034.	18.00		2949.	1368.	1318.	1318.
		(INCHES)	.526	.976	.976	.976
		(AC-FT)	1463.	2713.	2714.	2714.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
2332.	18.00	2214.	902.	869.	869.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)				
1571.99	18.00	1571.79	1567.60	1567.47	1567.47

CUMULATIVE AREA = 52.12 SQ MI

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HYDROGRAPH AT RESV
TRANSPOSITION AREA 5.0 SQ MI

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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
1		0000	1	396.	.0	1564.2	*	1		0820	101	396.	.0	1564.2	*	1		1640	201	2867.	2099.4	1571.6
1		0005	2	0.	.0	1564.2	*	1		0825	102	0.	.0	1564.2	*	1		1645	202	2881.	2119.4	1571.6
1		0010	3	0.	.0	1564.2	*	1		0830	103	396.	.0	1564.2	*	1		1650	203	2894.	2137.2	1571.7
1		0015	4	0.	.0	1564.2	*	1		0835	104	0.	.0	1564.2	*	1		1655	204	2906.	2152.9	1571.7
1		0020	5	0.	.0	1564.2	*	1		0840	105	396.	.0	1564.2	*	1		1700	205	2916.	2166.8	1571.7
1		0025	6	0.	.0	1564.2	*	1		0845	106	0.	.0	1564.2	*	1		1705	206	2925.	2178.9	1571.7
1		0030	7	0.	.0	1564.2	*	1		0850	107	396.	.0	1564.2	*	1		1710	207	2932.	2189.3	1571.8
1		0035	8	0.	.0	1564.2	*	1		0855	108	0.	.0	1564.2	*	1		1715	208	2939.	2198.4	1571.8
1		0040	9	0.	.0	1564.2	*	1		0900	109	396.	.0	1564.2	*	1		1720	209	2944.	2206.0	1571.8
1		0045	10	0.	.0	1564.2	*	1		0905	110	0.	.0	1564.2	*	1		1725	210	2949.	2212.5	1571.8
1		0050	11	0.	.0	1564.2	*	1		0910	111	396.	.0	1564.2	*	1		1730	211	2953.	2217.7	1571.8
1		0055	12	0.	.0	1564.2	*	1		0915	112	0.	.0	1564.2	*	1		1735	212	2956.	2222.0	1571.8
1		0100	13	0.	.0	1564.2	*	1		0920	113	396.	.0	1564.2	*	1		1740	213	2958.	2225.1	1571.8
1		0105	14	0.	.0	1564.2	*	1		0925	114	0.	.0	1564.2	*	1		1745	214	2960.	2227.5	1571.8
1		0110	15	0.	.0	1564.2	*	1		0930	115	396.	.0	1564.2	*	1		1750	215	2961.	2229.0	1571.8
1		0115	16	0.	.0	1564.2	*	1		0935	116	0.	.0	1564.2	*	1		1755	216	2961.	2229.8	1571.8
1		0120	17	0.	.0	1564.2	*	1		0940	117	396.	.0	1564.2	*	1		1800	217	2961.	2230.0	1571.8
1		0125	18	0.	.0	1564.2	*	1		0945	118	0.	.0	1564.2	*	1		1805	218	2961.	2229.6	1571.8
1		0130	19	0.	.0	1564.2	*	1		0950	119	396.	.0	1564.2	*	1		1810	219	2960.	2228.6	1571.8
1		0135	20	0.	.0	1564.2	*	1		0955	120	0.	.0	1564.2	*	1		1815	220	2959.	2227.1	1571.8
1		0140	21	0.	.0	1564.2	*	1		1000	121	396.	.0	1564.2	*	1		1820	221	2958.	2225.1	1571.8
1		0145	22	0.	.0	1564.2	*	1		1005	122	0.	.0	1564.2	*	1		1825	222	2956.	2222.7	1571.8
1		0150	23	0.	.0	1564.2	*	1		1010	123	396.	.0	1564.2	*	1		1830	223	2954.	2219.9	1571.8
1		0155	24	0.	.0	1564.2	*	1		1015	124	0.	.0	1564.2	*	1		1835	224	2952.	2216.7	1571.8
1		0200	25	0.	.0	1564.2	*	1		1020	125	396.	.0	1564.2	*	1		1840	225	2949.	2213.1	1571.8
1		0205	26	0.	.0	1564.2	*	1		1025	126	0.	.0	1564.2	*	1		1845	226	2946.	2209.2	1571.8
1		0210	27	0.	.0	1564.2	*	1		1030	127	396.	.0	1564.2	*	1		1850	227	2943.	2204.9	1571.8
1		0215	28	0.	.0	1564.2	*	1		1035	128	0.	.0	1564.2	*	1		1855	228	2940.	2200.4	1571.8
1		0220	29	0.	.0	1564.2	*	1		1040	129	396.	.0	1564.2	*	1		1900	229	2937.	2195.6	1571.8
1		0225	30	0.	.0	1564.2	*	1		1045	130	0.	.0	1564.2	*	1		1905	230	2933.	2190.6	1571.8
1		0230	31	0.	.0	1564.2	*	1		1050	131	396.	.0	1564.2	*	1		1910	231	2929.	2185.3	1571.8
1		0235	32	0.	.0	1564.2	*	1		1055	132	0.	.0	1564.2	*	1		1915	232	2925.	2179.7	1571.7
1		0240	33	0.	.0	1564.2	*	1		1100	133	396.	.0	1564.2	*	1		1920	233	2921.	2174.1	1571.7

1	0245	34	0.	.0	1564.2	*	1	1105	134	0.	.0	1564.2	*	1	1925	234	2917.	2168.2	1571.7
1	0250	35	0.	.0	1564.2	*	1	1110	135	396.	.0	1564.2	*	1	1930	235	2913.	2162.2	1571.7
1	0255	36	0.	.0	1564.2	*	1	1115	136	0.	.0	1564.2	*	1	1935	236	2908.	2156.0	1571.7
1	0300	37	0.	.0	1564.2	*	1	1120	137	396.	.0	1564.2	*	1	1940	237	2903.	2149.6	1571.7
1	0305	38	0.	.0	1564.2	*	1	1125	138	0.	.0	1564.2	*	1	1945	238	2899.	2143.1	1571.7
1	0310	39	0.	.0	1564.2	*	1	1130	139	396.	.0	1564.2	*	1	1950	239	2894.	2136.5	1571.7
1	0315	40	0.	.0	1564.2	*	1	1135	140	396.	.0	1564.2	*	1	1955	240	2889.	2129.8	1571.7
1	0320	41	0.	.0	1564.2	*	1	1140	141	396.	.0	1564.2	*	1	2000	241	2884.	2122.9	1571.6
1	0325	42	0.	.0	1564.2	*	1	1145	142	396.	.0	1564.2	*	1	2005	242	2879.	2116.0	1571.6
1	0330	43	0.	.0	1564.2	*	1	1150	143	396.	.0	1564.2	*	1	2010	243	2874.	2108.8	1571.6
1	0335	44	0.	.0	1564.2	*	1	1155	144	434.	.2	1564.4	*	1	2015	244	2868.	2101.6	1571.6
1	0340	45	0.	.0	1564.2	*	1	1200	145	464.	.9	1564.5	*	1	2020	245	2863.	2094.3	1571.6
1	0345	46	0.	.0	1564.2	*	1	1205	146	493.	2.6	1564.6	*	1	2025	246	2858.	2086.8	1571.6
1	0350	47	0.	.0	1564.2	*	1	1210	147	522.	5.5	1564.7	*	1	2030	247	2852.	2079.3	1571.6
1	0355	48	0.	.0	1564.2	*	1	1215	148	550.	9.8	1564.9	*	1	2035	248	2847.	2071.7	1571.6
1	0400	49	0.	.0	1564.2	*	1	1220	149	579.	16.0	1565.0	*	1	2040	249	2841.	2063.9	1571.5
1	0405	50	0.	.0	1564.2	*	1	1225	150	609.	24.1	1565.1	*	1	2045	250	2835.	2056.1	1571.5
1	0410	51	0.	.0	1564.2	*	1	1230	151	644.	34.4	1565.2	*	1	2050	251	2829.	2048.2	1571.5
1	0415	52	0.	.0	1564.2	*	1	1235	152	684.	47.2	1565.4	*	1	2055	252	2823.	2040.1	1571.5
1	0420	53	0.	.0	1564.2	*	1	1240	153	726.	62.6	1565.5	*	1	2100	253	2817.	2032.0	1571.5
1	0425	54	0.	.0	1564.2	*	1	1245	154	771.	80.6	1565.7	*	1	2105	254	2811.	2023.8	1571.5
1	0430	55	0.	.0	1564.2	*	1	1250	155	818.	101.4	1565.9	*	1	2110	255	2805.	2015.5	1571.5
1	0435	56	0.	.0	1564.2	*	1	1255	156	866.	125.0	1566.1	*	1	2115	256	2799.	2007.1	1571.4
1	0440	57	0.	.0	1564.2	*	1	1300	157	916.	151.1	1566.2	*	1	2120	257	2792.	1998.6	1571.4
1	0445	58	0.	.0	1564.2	*	1	1305	158	965.	179.7	1566.4	*	1	2125	258	2786.	1990.1	1571.4
1	0450	59	0.	.0	1564.2	*	1	1310	159	1014.	210.4	1566.6	*	1	2130	259	2780.	1981.5	1571.4
1	0455	60	0.	.0	1564.2	*	1	1315	160	1063.	243.1	1566.7	*	1	2135	260	2773.	1972.8	1571.4
1	0500	61	0.	.0	1564.2	*	1	1320	161	1113.	277.3	1566.9	*	1	2140	261	2766.	1964.1	1571.4
1	0505	62	0.	.0	1564.2	*	1	1325	162	1164.	312.9	1567.0	*	1	2145	262	2760.	1955.3	1571.4
1	0510	63	0.	.0	1564.2	*	1	1330	163	1214.	349.5	1567.2	*	1	2150	263	2753.	1946.4	1571.3
1	0515	64	0.	.0	1564.2	*	1	1335	164	1264.	387.0	1567.4	*	1	2155	264	2746.	1937.5	1571.3
1	0520	65	0.	.0	1564.2	*	1	1340	165	1314.	425.5	1567.5	*	1	2200	265	2740.	1928.5	1571.3
1	0525	66	0.	.0	1564.2	*	1	1345	166	1364.	465.0	1567.7	*	1	2205	266	2733.	1919.4	1571.
1	0530	67	0.	.0	1564.2	*	1	1350	167	1415.	505.6	1567.8	*	1	2210	267	2726.	1910.3	1571.
1	0535	68	0.	.0	1564.2	*	1	1355	168	1465.	547.3	1568.0	*	1	2215	268	2719.	1901.3	1571.3
1	0540	69	0.	.0	1564.2	*	1	1400	169	1516.	590.1	1568.1	*	1	2220	269	2712.	1892.2	1571.2
1	0545	70	0.	.0	1564.2	*	1	1405	170	1566.	634.1	1568.3	*	1	2225	270	2705.	1883.1	1571.2
1	0550	71	0.	.0	1564.2	*	1	1410	171	1617.	679.2	1568.4	*	1	2230	271	2698.	1873.9	1571.2
1	0555	72	0.	.0	1564.2	*	1	1415	172	1668.	725.3	1568.5	*	1	2235	272	2691.	1864.7	1571.2
1	0600	73	0.	.0	1564.2	*	1	1420	173	1719.	772.5	1568.7	*	1	2240	273	2684.	1855.5	1571.2
1	0605	74	0.	.0	1564.2	*	1	1425	174	1769.	820.7	1568.8	*	1	2245	274	2677.	1846.2	1571.2
1	0610	75	0.	.0	1564.2	*	1	1430	175	1820.	869.9	1569.0	*	1	2250	275	2670.	1836.9	1571.1
1	0615	76	0.	.0	1564.2	*	1	1435	176	1871.	920.3	1569.1	*	1	2255	276	2662.	1827.6	1571.
1	0620	77	0.	.0	1564.2	*	1	1440	177	1922.	971.7	1569.2	*	1	2300	277	2655.	1818.4	1571.
1	0625	78	0.	.0	1564.2	*	1	1445	178	1973.	1024.3	1569.4	*	1	2305	278	2648.	1809.0	1571.1
1	0630	79	0.	.0	1564.2	*	1	1450	179	2025.	1078.0	1569.5	*	1	2310	279	2641.	1799.7	1571.
1	0635	80	0.	.0	1564.2	*	1	1455	180	2076.	1132.7	1569.6	*	1	2315	280	2633.	1790.4	1571.
1	0640	81	0.	.0	1564.2	*	1	1500	181	2127.	1188.5	1569.8	*	1	2320	281	2626.	1781.1	1571.0
1	0645	82	0.	.0	1564.2	*	1	1505	182	2179.	1245.2	1569.9	*	1	2325	282	2619.	1771.8	1571.0
1	0650	83	0.	.0	1564.2	*	1	1510	183	2230.	1302.6	1570.0	*	1	2330	283	2612.	1762.5	1571.
1	0655	84	0.	.0	1564.2	*	1	1515	184	2280.	1360.5	1570.2	*	1	2335	284	2604.	1753.2	1571.
1	0700	85	0.	.0	1564.2	*	1	1520	185	2330.	1418.5	1570.3	*	1	2340	285	2597.	1744.0	1571.0
1	0705	86	0.	.0	1564.2	*	1	1525	186	2379.	1476.4	1570.4	*	1	2345	286	2590.	1734.7	1570.
1	0710	87	0.	.0	1564.2	*	1	1530	187	2427.	1533.6	1570.5	*	1	2350	287	2582.	1725.5	1570.
1	0715	88	0.	.0	1564.2	*	1	1535	188	2473.	1589.8	1570.7	*	1	2355	288	2575.	1716.4	1570.9
1	0720	89	0.	.0	1564.2	*	1	1540	189	2518.	1644.5	1570.8	*	2	0000	289	2568.	1707.1	1570.9
1	0725	90	0.	.0	1564.2	*	1	1545	190	2560.	1697.4	1570.9	*	2	0005	290	2561.	1698.0	1570.
1	0730	91	396.	.0	1564.2	*	1	1550	191	2600.	1748.1	1571.0	*	2	0010	291	2553.	1688.8	1570.
1	0735	92	0.	.0	1564.2	*	1	1555	192	2638.	1796.3	1571.1	*	2	0015	292	2546.	1679.6	1570.8
1	0740	93	396.	.0	1564.2	*	1	1600	193	2673.	1841.7	1571.1	*	2	0020	293	2539.	1670.5	1570.

1	0745	94	0.	.0	1564.2	*	1	1605	194	2706.	1884.3	1571.2	*	2	0025	294	2521.	1661.3	1570.8
1	0750	95	396.	.0	1564.2	*	1	1610	195	2736.	1923.9	1571.3	*	2	0030	295	2524.	1652.1	1570.8
1	0755	96	0.	.0	1564.2	*	1	1615	196	2764.	1960.4	1571.4	*	2	0035	296	2516.	1642.8	1570.8
1	0800	97	396.	.0	1564.2	*	1	1620	197	2789.	1993.8	1571.4	*	2	0040	297	2509.	1633.5	1570.7
1	0805	98	0.	.0	1564.2	*	1	1625	198	2812.	2024.3	1571.5	*	2	0045	298	2501.	1624.2	1570.7
1	0810	99	396.	.0	1564.2	*	1	1630	199	2832.	2052.0	1571.5	*	2	0050	299	2494.	1614.8	1570.7
1	0815	100	0.	.0	1564.2	*	1	1635	200	2850.	2077.0	1571.6	*	2	0055	300	2486.	1605.3	1570.7
						*							*						

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PEAK OUTFLOW IS 2961. AT TIME 18.00 HOURS

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
		(CFS)				
+ 2961.	18.00		2878.	1334.	1286.	1286.
		(INCHES)	.513	.952	.952	.952
		(AC-FT)	1427.	2646.	2647.	2647.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
2230.	18.00	2115.	860.	829.	829.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)				
1571.82	18.00	1571.63	1567.52	1567.39	1567.39

CUMULATIVE AREA = 52.12 SQ MI

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HYDROGRAPH AT RESV
TRANSPOSITION AREA 15.0 SQ MI

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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
1		0000	1	396.	.0	1564.2	*	1		0820	101	396.	.0	1564.2	*	1		1640	201	2716.	1897.3	1571.2
1		0005	2	0.	.0	1564.2	*	1		0825	102	0.	.0	1564.2	*	1		1645	202	2730.	1915.3	1571.3
1		0010	3	0.	.0	1564.2	*	1		0830	103	396.	.0	1564.2	*	1		1650	203	2742.	1931.1	1571.3
1		0015	4	0.	.0	1564.2	*	1		0835	104	0.	.0	1564.2	*	1		1655	204	2752.	1944.9	1571.3
1		0020	5	0.	.0	1564.2	*	1		0840	105	396.	.0	1564.2	*	1		1700	205	2761.	1956.9	1571.4
1		0025	6	0.	.0	1564.2	*	1		0845	106	0.	.0	1564.2	*	1		1705	206	2769.	1967.2	1571.4
1		0030	7	0.	.0	1564.2	*	1		0850	107	396.	.0	1564.2	*	1		1710	207	2775.	1975.9	1571.4
1		0035	8	0.	.0	1564.2	*	1		0855	108	0.	.0	1564.2	*	1		1715	208	2781.	1983.2	1571.4
1		0040	9	0.	.0	1564.2	*	1		0900	109	396.	.0	1564.2	*	1		1720	209	2785.	1989.1	1571.4
1		0045	10	0.	.0	1564.2	*	1		0905	110	0.	.0	1564.2	*	1		1725	210	2789.	1993.9	1571.4
1		0050	11	0.	.0	1564.2	*	1		0910	111	396.	.0	1564.2	*	1		1730	211	2792.	1997.6	1571.4
1		0055	12	0.	.0	1564.2	*	1		0915	112	0.	.0	1564.2	*	1		1735	212	2794.	2000.4	1571.4
1		0100	13	0.	.0	1564.2	*	1		0920	113	396.	.0	1564.2	*	1		1740	213	2795.	2002.2	1571.4
1		0105	14	0.	.0	1564.2	*	1		0925	114	0.	.0	1564.2	*	1		1745	214	2796.	2003.3	1571.4
1		0110	15	0.	.0	1564.2	*	1		0930	115	396.	.0	1564.2	*	1		1750	215	2796.	2003.7	1571.4
1		0115	16	0.	.0	1564.2	*	1		0935	116	0.	.0	1564.2	*	1		1755	216	2796.	2003.5	1571.4
1		0120	17	0.	.0	1564.2	*	1		0940	117	396.	.0	1564.2	*	1		1800	217	2796.	2002.8	1571.4

1	0125	18	0.	.0	1564.2	*	1	0945	118	0.	.0	1564.2	*	1	1805	218	2795.	2001.7	1571.4
1	0130	19	0.	.0	1564.2	*	1	0950	119	396.	.0	1564.2	*	1	1810	219	2793.	2000.0	1571.4
1	0135	20	0.	.0	1564.2	*	1	0955	120	0.	.0	1564.2	*	1	1815	220	2792.	1997.9	1571.4
1	0140	21	0.	.0	1564.2	*	1	1000	121	396.	.0	1564.2	*	1	1820	221	2790.	1995.5	1571.4
1	0145	22	0.	.0	1564.2	*	1	1005	122	0.	.0	1564.2	*	1	1825	222	2788.	1992.6	1571.4
1	0150	23	0.	.0	1564.2	*	1	1010	123	396.	.0	1564.2	*	1	1830	223	2785.	1989.3	1571.4
1	0155	24	0.	.0	1564.2	*	1	1015	124	0.	.0	1564.2	*	1	1835	224	2783.	1985.8	1571.4
1	0200	25	0.	.0	1564.2	*	1	1020	125	396.	.0	1564.2	*	1	1840	225	2780.	1982.0	1571.4
1	0205	26	0.	.0	1564.2	*	1	1025	126	0.	.0	1564.2	*	1	1845	226	2777.	1977.9	1571.4
1	0210	27	0.	.0	1564.2	*	1	1030	127	396.	.0	1564.2	*	1	1850	227	2774.	1973.6	1571.4
1	0215	28	0.	.0	1564.2	*	1	1035	128	0.	.0	1564.2	*	1	1855	228	2770.	1969.0	1571.4
1	0220	29	0.	.0	1564.2	*	1	1040	129	396.	.0	1564.2	*	1	1900	229	2767.	1964.2	1571.4
1	0225	30	0.	.0	1564.2	*	1	1045	130	0.	.0	1564.2	*	1	1905	230	2763.	1959.1	1571.4
1	0230	31	0.	.0	1564.2	*	1	1050	131	396.	.0	1564.2	*	1	1910	231	2759.	1954.0	1571.3
1	0235	32	0.	.0	1564.2	*	1	1055	132	0.	.0	1564.2	*	1	1915	232	2755.	1948.6	1571.3
1	0240	33	0.	.0	1564.2	*	1	1100	133	396.	.0	1564.2	*	1	1920	233	2751.	1943.0	1571.3
1	0245	34	0.	.0	1564.2	*	1	1105	134	0.	.0	1564.2	*	1	1925	234	2746.	1937.3	1571.3
1	0250	35	0.	.0	1564.2	*	1	1110	135	396.	.0	1564.2	*	1	1930	235	2742.	1931.5	1571.3
1	0255	36	0.	.0	1564.2	*	1	1115	136	0.	.0	1564.2	*	1	1935	236	2737.	1925.5	1571.3
1	0300	37	0.	.0	1564.2	*	1	1120	137	396.	.0	1564.2	*	1	1940	237	2733.	1919.4	1571.3
1	0305	38	0.	.0	1564.2	*	1	1125	138	0.	.0	1564.2	*	1	1945	238	2728.	1913.1	1571.3
1	0310	39	0.	.0	1564.2	*	1	1130	139	396.	.0	1564.2	*	1	1950	239	2723.	1906.7	1571.3
1	0315	40	0.	.0	1564.2	*	1	1135	140	0.	.0	1564.2	*	1	1955	240	2718.	1900.3	1571.3
1	0320	41	0.	.0	1564.2	*	1	1140	141	396.	.0	1564.2	*	1	2000	241	2713.	1893.7	1571.2
1	0325	42	0.	.0	1564.2	*	1	1145	142	396.	.0	1564.2	*	1	2005	242	2708.	1887.1	1571.2
1	0330	43	0.	.0	1564.2	*	1	1150	143	396.	.0	1564.2	*	1	2010	243	2703.	1880.3	1571.2
1	0335	44	0.	.0	1564.2	*	1	1155	144	396.	.0	1564.2	*	1	2015	244	2698.	1873.4	1571.2
1	0340	45	0.	.0	1564.2	*	1	1200	145	444.	.3	1564.4	*	1	2020	245	2692.	1866.4	1571.2
1	0345	46	0.	.0	1564.2	*	1	1205	146	474.	1.4	1564.5	*	1	2025	246	2687.	1859.4	1571.2
1	0350	47	0.	.0	1564.2	*	1	1210	147	504.	3.5	1564.7	*	1	2030	247	2681.	1852.3	1571.2
1	0355	48	0.	.0	1564.2	*	1	1215	148	533.	6.9	1564.8	*	1	2035	248	2676.	1845.0	1571.2
1	0400	49	0.	.0	1564.2	*	1	1220	149	561.	11.9	1564.9	*	1	2040	249	2670.	1837.7	1571.1
1	0405	50	0.	.0	1564.2	*	1	1225	150	589.	18.6	1565.0	*	1	2045	250	2664.	1830.3	1571.1
1	0410	51	0.	.0	1564.2	*	1	1230	151	621.	27.3	1565.1	*	1	2050	251	2659.	1822.9	1571.1
1	0415	52	0.	.0	1564.2	*	1	1235	152	656.	38.1	1565.3	*	1	2055	252	2653.	1815.3	1571.1
1	0420	53	0.	.0	1564.2	*	1	1240	153	695.	51.2	1565.4	*	1	2100	253	2647.	1807.7	1571.1
1	0425	54	0.	.0	1564.2	*	1	1245	154	737.	66.8	1565.6	*	1	2105	254	2641.	1799.9	1571.
1	0430	55	0.	.0	1564.2	*	1	1250	155	781.	84.8	1565.7	*	1	2110	255	2635.	1792.1	1571.
1	0435	56	0.	.0	1564.2	*	1	1255	156	826.	105.3	1565.9	*	1	2115	256	2629.	1784.3	1571.0
1	0440	57	0.	.0	1564.2	*	1	1300	157	873.	128.1	1566.1	*	1	2120	257	2622.	1776.3	1571.
1	0445	58	0.	.0	1564.2	*	1	1305	158	920.	153.3	1566.2	*	1	2125	258	2616.	1768.3	1571.
1	0450	59	0.	.0	1564.2	*	1	1310	159	966.	180.5	1566.4	*	1	2130	259	2610.	1760.2	1571.0
1	0455	60	0.	.0	1564.2	*	1	1315	160	1013.	209.5	1566.5	*	1	2135	260	2603.	1752.1	1571.0
1	0500	61	0.	.0	1564.2	*	1	1320	161	1059.	240.0	1566.7	*	1	2140	261	2597.	1743.8	1571.
1	0505	62	0.	.0	1564.2	*	1	1325	162	1105.	271.7	1566.9	*	1	2145	262	2590.	1735.6	1570.
1	0510	63	0.	.0	1564.2	*	1	1330	163	1152.	304.5	1567.0	*	1	2150	263	2584.	1727.2	1570.9
1	0515	64	0.	.0	1564.2	*	1	1335	164	1198.	338.1	1567.1	*	1	2155	264	2577.	1718.9	1570.
1	0520	65	0.	.0	1564.2	*	1	1340	165	1245.	372.6	1567.3	*	1	2200	265	2571.	1710.5	1570.
1	0525	66	0.	.0	1564.2	*	1	1345	166	1292.	408.1	1567.4	*	1	2205	266	2564.	1702.0	1570.9
1	0530	67	0.	.0	1564.2	*	1	1350	167	1339.	444.6	1567.6	*	1	2210	267	2557.	1693.6	1570.
1	0535	68	0.	.0	1564.2	*	1	1355	168	1386.	482.2	1567.7	*	1	2215	268	2550.	1685.1	1570.
1	0540	69	0.	.0	1564.2	*	1	1400	169	1433.	520.9	1567.9	*	1	2220	269	2543.	1676.5	1570.8
1	0545	70	0.	.0	1564.2	*	1	1405	170	1481.	560.7	1568.0	*	1	2225	270	2537.	1667.9	1570.8
1	0550	71	0.	.0	1564.2	*	1	1410	171	1529.	601.5	1568.1	*	1	2230	271	2530.	1659.4	1570.
1	0555	72	0.	.0	1564.2	*	1	1415	172	1577.	643.2	1568.3	*	1	2235	272	2523.	1650.8	1570.
1	0600	73	0.	.0	1564.2	*	1	1420	173	1625.	686.0	1568.4	*	1	2240	273	2516.	1642.1	1570.8
1	0605	74	0.	.0	1564.2	*	1	1425	174	1673.	729.8	1568.6	*	1	2245	274	2509.	1633.4	1570.
1	0610	75	0.	.0	1564.2	*	1	1430	175	1721.	774.5	1568.7	*	1	2250	275	2502.	1624.8	1570.
1	0615	76	0.	.0	1564.2	*	1	1435	176	1769.	820.4	1568.8	*	1	2255	276	2495.	1616.1	1570.
1	0620	77	0.	.0	1564.2	*	1	1440	177	1818.	867.2	1569.0	*	1	2300	277	2488.	1607.4	1570.7

1	0625	78	0.	.0	1564.2	*	1	1445	178	1866.	915.1	1569.1	*	1	2305	278	2481.	1598.7	1570.7
1	0630	79	0.	.0	1564.2	*	1	1450	179	1915.	964.1	1569.2	*	1	2310	279	2473.	1590.0	1570.7
1	0635	80	0.	.0	1564.2	*	1	1455	180	1963.	1014.0	1569.4	*	1	2315	280	2466.	1581.3	1570.6
1	0640	81	0.	.0	1564.2	*	1	1500	181	2012.	1064.9	1569.5	*	1	2320	281	2459.	1572.6	1570.6
1	0645	82	0.	.0	1564.2	*	1	1505	182	2061.	1116.7	1569.6	*	1	2325	282	2452.	1563.9	1570.6
1	0650	83	0.	.0	1564.2	*	1	1510	183	2109.	1169.1	1569.7	*	1	2330	283	2445.	1555.2	1570.6
1	0655	84	0.	.0	1564.2	*	1	1515	184	2158.	1222.0	1569.9	*	1	2335	284	2438.	1546.6	1570.6
1	0700	85	0.	.0	1564.2	*	1	1520	185	2205.	1275.1	1570.0	*	1	2340	285	2431.	1538.0	1570.6
1	0705	86	0.	.0	1564.2	*	1	1525	186	2252.	1328.0	1570.1	*	1	2345	286	2423.	1529.4	1570.5
1	0710	87	0.	.0	1564.2	*	1	1530	187	2297.	1380.3	1570.2	*	1	2350	287	2416.	1520.8	1570.5
1	0715	88	0.	.0	1564.2	*	1	1535	188	2341.	1431.7	1570.3	*	1	2355	288	2409.	1512.3	1570.5
1	0720	89	0.	.0	1564.2	*	1	1540	189	2384.	1481.8	1570.4	*	2	0000	289	2402.	1503.7	1570.5
1	0725	90	0.	.0	1564.2	*	1	1545	190	2424.	1530.3	1570.5	*	2	0005	290	2395.	1495.1	1570.5
1	0730	91	0.	.0	1564.2	*	1	1550	191	2462.	1576.6	1570.6	*	2	0010	291	2388.	1486.6	1570.4
1	0735	92	0.	.0	1564.2	*	1	1555	192	2498.	1620.8	1570.7	*	2	0015	292	2381.	1478.1	1570.4
1	0740	93	0.	.0	1564.2	*	1	1600	193	2532.	1662.3	1570.8	*	2	0020	293	2373.	1469.5	1570.4
1	0745	94	0.	.0	1564.2	*	1	1605	194	2563.	1701.2	1570.9	*	2	0025	294	2366.	1461.0	1570.4
1	0750	95	396.	.0	1564.2	*	1	1610	195	2592.	1737.4	1570.9	*	2	0030	295	2359.	1452.4	1570.4
1	0755	96	0.	.0	1564.2	*	1	1615	196	2618.	1770.7	1571.0	*	2	0035	296	2352.	1443.8	1570.4
1	0800	97	396.	.0	1564.2	*	1	1620	197	2642.	1801.3	1571.1	*	2	0040	297	2344.	1435.2	1570.3
1	0805	98	0.	.0	1564.2	*	1	1625	198	2664.	1829.1	1571.1	*	2	0045	298	2337.	1426.5	1570.3
1	0810	99	396.	.0	1564.2	*	1	1630	199	2683.	1854.3	1571.2	*	2	0050	299	2330.	1417.8	1570.3
1	0815	100	0.	.0	1564.2	*	1	1635	200	2700.	1877.0	1571.2	*	2	0055	300	2322.	1409.0	1570.3

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PEAK OUTFLOW IS 2796. AT TIME 17.83 HOURS

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
		(CFS)				
+ 2796.	17.83		2713.	1255.	1210.	1210.
		(INCHES)	.484	.896	.896	.896
		(AC-FT)	1345.	2489.	2491.	2491.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
2004.	17.83	1894.	767.	739.	739.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)				
1571.44	17.83	1571.24	1567.33	1567.22	1567.22

CUMULATIVE AREA = 52.12 SQ MI

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HYDROGRAPH AT RESV
TRANSPOSITION AREA 30.0 SQ MI

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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
1		0000	1	396.	.0	1564.2	*	1		0820	101	396.	.0	1564.2	*	1		1640	201	2621.	1774.0	1571.0

1	0005	2	0.	.0	1564.2	*	1	0825	102	0.	.0	1564.2	*	1	1645	202	2634.	1790.9	1571.0
1	0010	3	0.	.0	1564.2	*	1	0830	103	396.	.0	1564.2	*	1	1650	203	2645.	1805.8	1571.1
1	0015	4	0.	.0	1564.2	*	1	0835	104	0.	.0	1564.2	*	1	1655	204	2656.	1818.7	1571.1
1	0020	5	0.	.0	1564.2	*	1	0840	105	396.	.0	1564.2	*	1	1700	205	2664.	1829.9	1571.1
1	0025	6	0.	.0	1564.2	*	1	0845	106	0.	.0	1564.2	*	1	1705	206	2672.	1839.5	1571.1
1	0030	7	0.	.0	1564.2	*	1	0850	107	396.	.0	1564.2	*	1	1710	207	2678.	1847.5	1571.2
1	0035	8	0.	.0	1564.2	*	1	0855	108	0.	.0	1564.2	*	1	1715	208	2683.	1854.2	1571.2
1	0040	9	0.	.0	1564.2	*	1	0900	109	396.	.0	1564.2	*	1	1720	209	2687.	1859.6	1571.2
1	0045	10	0.	.0	1564.2	*	1	0905	110	0.	.0	1564.2	*	1	1725	210	2690.	1863.9	1571.2
1	0050	11	0.	.0	1564.2	*	1	0910	111	396.	.0	1564.2	*	1	1730	211	2693.	1867.0	1571.2
1	0055	12	0.	.0	1564.2	*	1	0915	112	0.	.0	1564.2	*	1	1735	212	2694.	1869.2	1571.2
1	0100	13	0.	.0	1564.2	*	1	0920	113	396.	.0	1564.2	*	1	1740	213	2695.	1870.4	1571.2
1	0105	14	0.	.0	1564.2	*	1	0925	114	0.	.0	1564.2	*	1	1745	214	2696.	1871.0	1571.2
1	0110	15	0.	.0	1564.2	*	1	0930	115	396.	.0	1564.2	*	1	1750	215	2696.	1870.8	1571.2
1	0115	16	0.	.0	1564.2	*	1	0935	116	0.	.0	1564.2	*	1	1755	216	2695.	1870.0	1571.2
1	0120	17	0.	.0	1564.2	*	1	0940	117	396.	.0	1564.2	*	1	1800	217	2694.	1868.7	1571.2
1	0125	18	0.	.0	1564.2	*	1	0945	118	0.	.0	1564.2	*	1	1805	218	2693.	1866.8	1571.2
1	0130	19	0.	.0	1564.2	*	1	0950	119	396.	.0	1564.2	*	1	1810	219	2691.	1864.4	1571.2
1	0135	20	0.	.0	1564.2	*	1	0955	120	0.	.0	1564.2	*	1	1815	220	2689.	1861.6	1571.2
1	0140	21	0.	.0	1564.2	*	1	1000	121	396.	.0	1564.2	*	1	1820	221	2686.	1858.5	1571.2
1	0145	22	0.	.0	1564.2	*	1	1005	122	0.	.0	1564.2	*	1	1825	222	2684.	1855.1	1571.2
1	0150	23	0.	.0	1564.2	*	1	1010	123	396.	.0	1564.2	*	1	1830	223	2681.	1851.3	1571.2
1	0155	24	0.	.0	1564.2	*	1	1015	124	0.	.0	1564.2	*	1	1835	224	2678.	1847.3	1571.2
1	0200	25	0.	.0	1564.2	*	1	1020	125	396.	.0	1564.2	*	1	1840	225	2674.	1843.0	1571.1
1	0205	26	0.	.0	1564.2	*	1	1025	126	0.	.0	1564.2	*	1	1845	226	2671.	1838.5	1571.1
1	0210	27	0.	.0	1564.2	*	1	1030	127	396.	.0	1564.2	*	1	1850	227	2667.	1833.9	1571.1
1	0215	28	0.	.0	1564.2	*	1	1035	128	0.	.0	1564.2	*	1	1855	228	2663.	1829.0	1571.1
1	0220	29	0.	.0	1564.2	*	1	1040	129	396.	.0	1564.2	*	1	1900	229	2660.	1824.0	1571.1
1	0225	30	0.	.0	1564.2	*	1	1045	130	0.	.0	1564.2	*	1	1905	230	2656.	1818.8	1571.1
1	0230	31	0.	.0	1564.2	*	1	1050	131	396.	.0	1564.2	*	1	1910	231	2651.	1813.5	1571.1
1	0235	32	0.	.0	1564.2	*	1	1055	132	0.	.0	1564.2	*	1	1915	232	2647.	1808.0	1571.1
1	0240	33	0.	.0	1564.2	*	1	1100	133	396.	.0	1564.2	*	1	1920	233	2643.	1802.4	1571.1
1	0245	34	0.	.0	1564.2	*	1	1105	134	0.	.0	1564.2	*	1	1925	234	2638.	1796.7	1571.1
1	0250	35	0.	.0	1564.2	*	1	1110	135	396.	.0	1564.2	*	1	1930	235	2634.	1790.9	1571.0
1	0255	36	0.	.0	1564.2	*	1	1115	136	0.	.0	1564.2	*	1	1935	236	2629.	1784.9	1571.0
1	0300	37	0.	.0	1564.2	*	1	1120	137	396.	.0	1564.2	*	1	1940	237	2624.	1778.8	1571.0
1	0305	38	0.	.0	1564.2	*	1	1125	138	0.	.0	1564.2	*	1	1945	238	2620.	1772.7	1571.0
1	0310	39	0.	.0	1564.2	*	1	1130	139	396.	.0	1564.2	*	1	1950	239	2615.	1766.5	1571.0
1	0315	40	0.	.0	1564.2	*	1	1135	140	0.	.0	1564.2	*	1	1955	240	2610.	1760.1	1571.0
1	0320	41	0.	.0	1564.2	*	1	1140	141	396.	.0	1564.2	*	1	2000	241	2605.	1753.7	1571.0
1	0325	42	0.	.0	1564.2	*	1	1145	142	0.	.0	1564.2	*	1	2005	242	2600.	1747.2	1571.0
1	0330	43	0.	.0	1564.2	*	1	1150	143	431.	.1	1564.4	*	1	2010	243	2594.	1740.6	1571.0
1	0335	44	0.	.0	1564.2	*	1	1155	144	396.	.0	1564.2	*	1	2015	244	2589.	1734.0	1570.9
1	0340	45	0.	.0	1564.2	*	1	1200	145	420.	.0	1564.3	*	1	2020	245	2584.	1727.2	1570.9
1	0345	46	0.	.0	1564.2	*	1	1205	146	461.	.8	1564.5	*	1	2025	246	2578.	1720.4	1570.9
1	0350	47	0.	.0	1564.2	*	1	1210	147	491.	2.5	1564.6	*	1	2030	247	2573.	1713.5	1570.9
1	0355	48	0.	.0	1564.2	*	1	1215	148	521.	5.3	1564.7	*	1	2035	248	2567.	1706.5	1570.9
1	0400	49	0.	.0	1564.2	*	1	1220	149	549.	9.6	1564.9	*	1	2040	249	2562.	1699.5	1570.9
1	0405	50	0.	.0	1564.2	*	1	1225	150	577.	15.6	1565.0	*	1	2045	250	2556.	1692.3	1570.9
1	0410	51	0.	.0	1564.2	*	1	1230	151	607.	23.3	1565.1	*	1	2050	251	2550.	1685.1	1570.9
1	0415	52	0.	.0	1564.2	*	1	1235	152	640.	33.0	1565.2	*	1	2055	252	2544.	1677.8	1570.8
1	0420	53	0.	.0	1564.2	*	1	1240	153	677.	44.9	1565.4	*	1	2100	253	2539.	1670.5	1570.8
1	0425	54	0.	.0	1564.2	*	1	1245	154	716.	59.0	1565.5	*	1	2105	254	2533.	1663.0	1570.8
1	0430	55	0.	.0	1564.2	*	1	1250	155	758.	75.3	1565.7	*	1	2110	255	2527.	1655.5	1570.8
1	0435	56	0.	.0	1564.2	*	1	1255	156	802.	94.0	1565.8	*	1	2115	256	2520.	1647.9	1570.8
1	0440	57	0.	.0	1564.2	*	1	1300	157	846.	114.9	1566.0	*	1	2120	257	2514.	1640.3	1570.8
1	0445	58	0.	.0	1564.2	*	1	1305	158	891.	137.9	1566.1	*	1	2125	258	2508.	1632.6	1570.7
1	0450	59	0.	.0	1564.2	*	1	1310	159	937.	162.9	1566.3	*	1	2130	259	2502.	1624.8	1570.7
1	0455	60	0.	.0	1564.2	*	1	1315	160	981.	189.7	1566.4	*	1	2135	260	2495.	1617.0	1570.7
1	0500	61	0.	.0	1564.2	*	1	1320	161	1026.	217.8	1566.6	*	1	2140	261	2489.	1609.1	1570.7

1	0505	62	0.	.0	1564.2	*	1	1325	162	1069.	247.2	1566.7	*	1	2145	262	2483.	1601.2	1570.7
1	0510	63	0.	.0	1564.2	*	1	1330	163	1114.	277.5	1566.9	*	1	2150	263	2476.	1593.2	1570.7
1	0515	64	0.	.0	1564.2	*	1	1335	164	1158.	308.7	1567.0	*	1	2155	264	2470.	1585.3	1570.6
1	0520	65	0.	.0	1564.2	*	1	1340	165	1202.	340.8	1567.2	*	1	2200	265	2463.	1577.2	1570.6
1	0525	66	0.	.0	1564.2	*	1	1345	166	1247.	373.8	1567.3	*	1	2205	266	2456.	1569.2	1570.6
1	0530	67	0.	.0	1564.2	*	1	1350	167	1291.	407.8	1567.4	*	1	2210	267	2450.	1561.1	1570.6
1	0535	68	0.	.0	1564.2	*	1	1355	168	1337.	442.9	1567.6	*	1	2215	268	2443.	1553.0	1570.6
1	0540	69	0.	.0	1564.2	*	1	1400	169	1382.	479.0	1567.7	*	1	2220	269	2436.	1544.8	1570.6
1	0545	70	0.	.0	1564.2	*	1	1405	170	1428.	516.2	1567.8	*	1	2225	270	2429.	1536.6	1570.5
1	0550	71	0.	.0	1564.2	*	1	1410	171	1473.	554.3	1568.0	*	1	2230	271	2423.	1528.4	1570.5
1	0555	72	0.	.0	1564.2	*	1	1415	172	1519.	593.4	1568.1	*	1	2235	272	2416.	1520.1	1570.5
1	0600	73	0.	.0	1564.2	*	1	1420	173	1566.	633.5	1568.3	*	1	2240	273	2409.	1511.9	1570.5
1	0605	74	0.	.0	1564.2	*	1	1425	174	1612.	674.5	1568.4	*	1	2245	274	2402.	1503.6	1570.5
1	0610	75	0.	.0	1564.2	*	1	1430	175	1658.	716.5	1568.5	*	1	2250	275	2395.	1495.4	1570.5
1	0615	76	0.	.0	1564.2	*	1	1435	176	1705.	759.5	1568.6	*	1	2255	276	2388.	1487.1	1570.4
1	0620	77	0.	.0	1564.2	*	1	1440	177	1752.	803.6	1568.8	*	1	2300	277	2381.	1478.8	1570.4
1	0625	78	0.	.0	1564.2	*	1	1445	178	1798.	848.6	1568.9	*	1	2305	278	2374.	1470.5	1570.4
1	0630	79	0.	.0	1564.2	*	1	1450	179	1845.	894.7	1569.0	*	1	2310	279	2367.	1462.1	1570.4
1	0635	80	0.	.0	1564.2	*	1	1455	180	1893.	941.7	1569.2	*	1	2315	280	2360.	1453.8	1570.4
1	0640	81	0.	.0	1564.2	*	1	1500	181	1940.	989.6	1569.3	*	1	2320	281	2353.	1445.6	1570.4
1	0645	82	0.	.0	1564.2	*	1	1505	182	1987.	1038.3	1569.4	*	1	2325	282	2346.	1437.3	1570.3
1	0650	83	0.	.0	1564.2	*	1	1510	183	2034.	1087.6	1569.5	*	1	2330	283	2339.	1429.0	1570.3
1	0655	84	0.	.0	1564.2	*	1	1515	184	2080.	1137.5	1569.7	*	1	2335	284	2332.	1420.7	1570.3
1	0700	85	0.	.0	1564.2	*	1	1520	185	2126.	1187.4	1569.8	*	1	2340	285	2325.	1412.5	1570.3
1	0705	86	0.	.0	1564.2	*	1	1525	186	2171.	1237.3	1569.9	*	1	2345	286	2318.	1404.3	1570.3
1	0710	87	0.	.0	1564.2	*	1	1530	187	2215.	1286.6	1570.0	*	1	2350	287	2311.	1396.1	1570.3
1	0715	88	0.	.0	1564.2	*	1	1535	188	2258.	1335.1	1570.1	*	1	2355	288	2304.	1388.0	1570.2
1	0720	89	0.	.0	1564.2	*	1	1540	189	2299.	1382.4	1570.2	*	2	0000	289	2297.	1379.9	1570.2
1	0725	90	0.	.0	1564.2	*	1	1545	190	2338.	1428.1	1570.3	*	2	0005	290	2290.	1371.7	1570.2
1	0730	91	0.	.0	1564.2	*	1	1550	191	2375.	1471.9	1570.4	*	2	0010	291	2283.	1363.6	1570.2
1	0735	92	0.	.0	1564.2	*	1	1555	192	2410.	1513.4	1570.5	*	2	0015	292	2276.	1355.5	1570.2
1	0740	93	0.	.0	1564.2	*	1	1600	193	2443.	1552.7	1570.6	*	2	0020	293	2269.	1347.4	1570.1
1	0745	94	0.	.0	1564.2	*	1	1605	194	2473.	1589.3	1570.7	*	2	0025	294	2262.	1339.2	1570.1
1	0750	95	0.	.0	1564.2	*	1	1610	195	2501.	1623.4	1570.7	*	2	0030	295	2255.	1331.1	1570.1
1	0755	96	0.	.0	1564.2	*	1	1615	196	2526.	1654.8	1570.8	*	2	0035	296	2247.	1322.9	1570.1
1	0800	97	396.	.0	1564.2	*	1	1620	197	2549.	1683.6	1570.8	*	2	0040	297	2240.	1314.6	1570.1
1	0805	98	0.	.0	1564.2	*	1	1625	198	2570.	1709.9	1570.9	*	2	0045	298	2233.	1306.4	1570.1
1	0810	99	396.	.0	1564.2	*	1	1630	199	2589.	1733.6	1570.9	*	2	0050	299	2226.	1298.1	1570.0
1	0815	100	0.	.0	1564.2	*	1	1635	200	2606.	1754.9	1571.0	*	2	0055	300	2218.	1289.8	1570.0
						*							*						

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PEAK OUTFLOW IS 2696. AT TIME 17.75 HOURS

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
		(CFS)				
+ 2696.	17.75		2609.	1205.	1162.	1162.
		(INCHES)	.465	.860	.861	.861
		(AC-FT)	1294.	2391.	2392.	2392.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
1871.	17.75	1760.	711.	685.	685.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	24.92-HR

*	(FEET)	(HR)				
	1571.20	17.75	1570.98	1567.21	1567.10	1567.10

CUMULATIVE AREA = 52.12 SQ MI

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HYDROGRAPH AT RESV
TRANSPOSITION AREA 53.0 SQ MI

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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
1		0000	1	396.	.0	1564.2	*	1		0820	101	396.	.0	1564.2	*	1		1640	201	2524.	1652.4	1570.8
1		0005	2	0.	.0	1564.2	*	1		0825	102	0.	.0	1564.2	*	1		1645	202	2537.	1668.3	1570.8
1		0010	3	0.	.0	1564.2	*	1		0830	103	396.	.0	1564.2	*	1		1650	203	2548.	1682.2	1570.8
1		0015	4	0.	.0	1564.2	*	1		0835	104	0.	.0	1564.2	*	1		1655	204	2558.	1694.3	1570.9
1		0020	5	0.	.0	1564.2	*	1		0840	105	396.	.0	1564.2	*	1		1700	205	2566.	1704.8	1570.9
1		0025	6	0.	.0	1564.2	*	1		0845	106	0.	.0	1564.2	*	1		1705	206	2573.	1713.6	1570.9
1		0030	7	0.	.0	1564.2	*	1		0850	107	396.	.0	1564.2	*	1		1710	207	2579.	1721.1	1570.9
1		0035	8	0.	.0	1564.2	*	1		0855	108	0.	.0	1564.2	*	1		1715	208	2584.	1727.2	1570.9
1		0040	9	0.	.0	1564.2	*	1		0900	109	396.	.0	1564.2	*	1		1720	209	2588.	1732.2	1570.9
1		0045	10	0.	.0	1564.2	*	1		0905	110	0.	.0	1564.2	*	1		1725	210	2591.	1736.0	1570.9
1		0050	11	0.	.0	1564.2	*	1		0910	111	396.	.0	1564.2	*	1		1730	211	2593.	1738.7	1570.9
1		0055	12	0.	.0	1564.2	*	1		0915	112	0.	.0	1564.2	*	1		1735	212	2594.	1740.6	1571.0
1		0100	13	0.	.0	1564.2	*	1		0920	113	396.	.0	1564.2	*	1		1740	213	2595.	1741.7	1571.0
1		0105	14	0.	.0	1564.2	*	1		0925	114	0.	.0	1564.2	*	1		1745	214	2595.	1742.0	1571.0
1		0110	15	0.	.0	1564.2	*	1		0930	115	396.	.0	1564.2	*	1		1750	215	2595.	1741.7	1571.0
1		0115	16	0.	.0	1564.2	*	1		0935	116	0.	.0	1564.2	*	1		1755	216	2595.	1740.8	1571.0
1		0120	17	0.	.0	1564.2	*	1		0940	117	396.	.0	1564.2	*	1		1800	217	2593.	1739.3	1571.0
1		0125	18	0.	.0	1564.2	*	1		0945	118	0.	.0	1564.2	*	1		1805	218	2592.	1737.3	1570.9
1		0130	19	0.	.0	1564.2	*	1		0950	119	396.	.0	1564.2	*	1		1810	219	2590.	1734.8	1570.9
1		0135	20	0.	.0	1564.2	*	1		0955	120	0.	.0	1564.2	*	1		1815	220	2587.	1731.9	1570.9
1		0140	21	0.	.0	1564.2	*	1		1000	121	396.	.0	1564.2	*	1		1820	221	2585.	1728.6	1570.9
1		0145	22	0.	.0	1564.2	*	1		1005	122	0.	.0	1564.2	*	1		1825	222	2582.	1725.0	1570.9
1		0150	23	0.	.0	1564.2	*	1		1010	123	396.	.0	1564.2	*	1		1830	223	2579.	1721.0	1570.9
1		0155	24	0.	.0	1564.2	*	1		1015	124	0.	.0	1564.2	*	1		1835	224	2576.	1716.8	1570.9
1		0200	25	0.	.0	1564.2	*	1		1020	125	396.	.0	1564.2	*	1		1840	225	2572.	1712.3	1570.9
1		0205	26	0.	.0	1564.2	*	1		1025	126	0.	.0	1564.2	*	1		1845	226	2568.	1707.5	1570.9
1		0210	27	0.	.0	1564.2	*	1		1030	127	396.	.0	1564.2	*	1		1850	227	2564.	1702.4	1570.9
1		0215	28	0.	.0	1564.2	*	1		1035	128	0.	.0	1564.2	*	1		1855	228	2560.	1697.2	1570.9
1		0220	29	0.	.0	1564.2	*	1		1040	129	396.	.0	1564.2	*	1		1900	229	2556.	1691.8	1570.9
1		0225	30	0.	.0	1564.2	*	1		1045	130	0.	.0	1564.2	*	1		1905	230	2551.	1686.2	1570.8
1		0230	31	0.	.0	1564.2	*	1		1050	131	396.	.0	1564.2	*	1		1910	231	2547.	1680.5	1570.8
1		0235	32	0.	.0	1564.2	*	1		1055	132	0.	.0	1564.2	*	1		1915	232	2542.	1674.6	1570.8
1		0240	33	0.	.0	1564.2	*	1		1100	133	396.	.0	1564.2	*	1		1920	233	2537.	1668.7	1570.8
1		0245	34	0.	.0	1564.2	*	1		1105	134	0.	.0	1564.2	*	1		1925	234	2532.	1662.6	1570.8
1		0250	35	0.	.0	1564.2	*	1		1110	135	396.	.0	1564.2	*	1		1930	235	2527.	1656.4	1570.8
1		0255	36	0.	.0	1564.2	*	1		1115	136	0.	.0	1564.2	*	1		1935	236	2522.	1650.1	1570.8
1		0300	37	0.	.0	1564.2	*	1		1120	137	396.	.0	1564.2	*	1		1940	237	2517.	1643.8	1570.8
1		0305	38	0.	.0	1564.2	*	1		1125	138	0.	.0	1564.2	*	1		1945	238	2512.	1637.4	1570.8
1		0310	39	0.	.0	1564.2	*	1		1130	139	396.	.0	1564.2	*	1		1950	239	2507.	1631.0	1570.
1		0315	40	0.	.0	1564.2	*	1		1135	140	0.	.0	1564.2	*	1		1955	240	2502.	1624.5	1570.
1		0320	41	0.	.0	1564.2	*	1		1140	141	396.	.0	1564.2	*	1		2000	241	2496.	1617.9	1570.7
1		0325	42	0.	.0	1564.2	*	1		1145	142	0.	.0	1564.2	*	1		2005	242	2491.	1611.4	1570.
1		0330	43	0.	.0	1564.2	*	1		1150	143	396.	.0	1564.2	*	1		2010	243	2485.	1604.7	1570.
1		0335	44	0.	.0	1564.2	*	1		1155	144	396.	.0	1564.2	*	1		2015	244	2480.	1598.0	1570.7
1		0340	45	0.	.0	1564.2	*	1		1200	145	396.	.0	1564.2	*	1		2020	245	2475.	1591.3	1570.7

1	0345	46	0.	.0	1564.2	*	1	1205	146	449.	.4	1564.4	*	1	2025	246	2469.	1584.5	1570.6
1	0350	47	0.	.0	1564.2	*	1	1210	147	480.	1.7	1564.6	*	1	2030	247	2463.	1577.7	1570.6
1	0355	48	0.	.0	1564.2	*	1	1215	148	509.	4.0	1564.7	*	1	2035	248	2458.	1570.9	1570.6
1	0400	49	0.	.0	1564.2	*	1	1220	149	537.	7.7	1564.8	*	1	2040	249	2452.	1564.0	1570.6
1	0405	50	0.	.0	1564.2	*	1	1225	150	565.	12.8	1564.9	*	1	2045	250	2446.	1557.0	1570.6
1	0410	51	0.	.0	1564.2	*	1	1230	151	593.	19.6	1565.0	*	1	2050	251	2441.	1550.0	1570.6
1	0415	52	0.	.0	1564.2	*	1	1235	152	624.	28.3	1565.2	*	1	2055	252	2435.	1542.9	1570.6
1	0420	53	0.	.0	1564.2	*	1	1240	153	659.	39.0	1565.3	*	1	2100	253	2429.	1535.8	1570.5
1	0425	54	0.	.0	1564.2	*	1	1245	154	697.	51.7	1565.4	*	1	2105	254	2423.	1528.6	1570.5
1	0430	55	0.	.0	1564.2	*	1	1250	155	736.	66.5	1565.6	*	1	2110	255	2417.	1521.3	1570.5
1	0435	56	0.	.0	1564.2	*	1	1255	156	778.	83.5	1565.7	*	1	2115	256	2411.	1514.0	1570.5
1	0440	57	0.	.0	1564.2	*	1	1300	157	820.	102.5	1565.9	*	1	2120	257	2405.	1506.7	1570.5
1	0445	58	0.	.0	1564.2	*	1	1305	158	863.	123.5	1566.0	*	1	2125	258	2398.	1499.3	1570.5
1	0450	59	0.	.0	1564.2	*	1	1310	159	907.	146.3	1566.2	*	1	2130	259	2392.	1491.8	1570.5
1	0455	60	0.	.0	1564.2	*	1	1315	160	950.	170.8	1566.3	*	1	2135	260	2386.	1484.3	1570.4
1	0500	61	0.	.0	1564.2	*	1	1320	161	992.	196.5	1566.5	*	1	2140	261	2380.	1476.7	1570.4
1	0505	62	0.	.0	1564.2	*	1	1325	162	1034.	223.5	1566.6	*	1	2145	262	2373.	1469.1	1570.4
1	0510	63	0.	.0	1564.2	*	1	1330	163	1076.	251.4	1566.8	*	1	2150	263	2367.	1461.5	1570.4
1	0515	64	0.	.0	1564.2	*	1	1335	164	1117.	280.2	1566.9	*	1	2155	264	2360.	1453.8	1570.4
1	0520	65	0.	.0	1564.2	*	1	1340	165	1159.	309.9	1567.0	*	1	2200	265	2354.	1446.1	1570.4
1	0525	66	0.	.0	1564.2	*	1	1345	166	1202.	340.4	1567.2	*	1	2205	266	2347.	1438.4	1570.3
1	0530	67	0.	.0	1564.2	*	1	1350	167	1244.	372.0	1567.3	*	1	2210	267	2341.	1430.6	1570.3
1	0535	68	0.	.0	1564.2	*	1	1355	168	1287.	404.5	1567.4	*	1	2215	268	2334.	1422.9	1570.3
1	0540	69	0.	.0	1564.2	*	1	1400	169	1331.	438.1	1567.6	*	1	2220	269	2327.	1415.1	1570.3
1	0545	70	0.	.0	1564.2	*	1	1405	170	1374.	472.7	1567.7	*	1	2225	270	2321.	1407.3	1570.3
1	0550	71	0.	.0	1564.2	*	1	1410	171	1418.	508.3	1567.8	*	1	2230	271	2314.	1399.5	1570.3
1	0555	72	0.	.0	1564.2	*	1	1415	172	1462.	544.7	1567.9	*	1	2235	272	2307.	1391.7	1570.2
1	0600	73	0.	.0	1564.2	*	1	1420	173	1506.	582.1	1568.1	*	1	2240	273	2300.	1383.8	1570.2
1	0605	74	0.	.0	1564.2	*	1	1425	174	1551.	620.4	1568.2	*	1	2245	274	2294.	1375.9	1570.2
1	0610	75	0.	.0	1564.2	*	1	1430	175	1595.	659.7	1568.3	*	1	2250	275	2287.	1368.1	1570.2
1	0615	76	0.	.0	1564.2	*	1	1435	176	1640.	699.9	1568.5	*	1	2255	276	2280.	1360.2	1570.2
1	0620	77	0.	.0	1564.2	*	1	1440	177	1685.	741.1	1568.6	*	1	2300	277	2273.	1352.3	1570.2
1	0625	78	0.	.0	1564.2	*	1	1445	178	1730.	783.3	1568.7	*	1	2305	278	2266.	1344.4	1570.1
1	0630	79	0.	.0	1564.2	*	1	1450	179	1775.	826.4	1568.8	*	1	2310	279	2259.	1336.5	1570.1
1	0635	80	0.	.0	1564.2	*	1	1455	180	1821.	870.5	1569.0	*	1	2315	280	2252.	1328.6	1570.1
1	0640	81	0.	.0	1564.2	*	1	1500	181	1866.	915.4	1569.1	*	1	2320	281	2246.	1320.7	1570.1
1	0645	82	0.	.0	1564.2	*	1	1505	182	1912.	961.2	1569.2	*	1	2325	282	2239.	1312.9	1570.1
1	0650	83	0.	.0	1564.2	*	1	1510	183	1957.	1007.5	1569.3	*	1	2330	283	2232.	1305.0	1570.1
1	0655	84	0.	.0	1564.2	*	1	1515	184	2002.	1054.3	1569.5	*	1	2335	284	2225.	1297.2	1570.0
1	0700	85	0.	.0	1564.2	*	1	1520	185	2047.	1101.3	1569.6	*	1	2340	285	2218.	1289.3	1570.0
1	0705	86	0.	.0	1564.2	*	1	1525	186	2090.	1148.1	1569.7	*	1	2345	286	2211.	1281.5	1570.0
1	0710	87	0.	.0	1564.2	*	1	1530	187	2133.	1194.5	1569.8	*	1	2350	287	2204.	1273.8	1570.0
1	0715	88	0.	.0	1564.2	*	1	1535	188	2174.	1240.1	1569.9	*	1	2355	288	2197.	1266.0	1570.0
1	0720	89	0.	.0	1564.2	*	1	1540	189	2214.	1284.5	1570.0	*	2	0000	289	2190.	1258.3	1569.9
1	0725	90	0.	.0	1564.2	*	1	1545	190	2251.	1327.4	1570.1	*	2	0005	290	2183.	1250.6	1569.9
1	0730	91	0.	.0	1564.2	*	1	1550	191	2287.	1368.6	1570.2	*	2	0010	291	2176.	1242.9	1569.9
1	0735	92	0.	.0	1564.2	*	1	1555	192	2321.	1407.7	1570.3	*	2	0015	292	2170.	1235.2	1569.9
1	0740	93	0.	.0	1564.2	*	1	1600	193	2352.	1444.5	1570.4	*	2	0020	293	2163.	1227.5	1569.9
1	0745	94	0.	.0	1564.2	*	1	1605	194	2381.	1478.9	1570.4	*	2	0025	294	2156.	1219.8	1569.9
1	0750	95	0.	.0	1564.2	*	1	1610	195	2408.	1511.0	1570.5	*	2	0030	295	2149.	1212.1	1569.8
1	0755	96	0.	.0	1564.2	*	1	1615	196	2433.	1540.5	1570.6	*	2	0035	296	2142.	1204.3	1569.8
1	0800	97	0.	.0	1564.2	*	1	1620	197	2455.	1567.6	1570.6	*	2	0040	297	2135.	1196.6	1569.8
1	0805	98	0.	.0	1564.2	*	1	1625	198	2475.	1592.2	1570.7	*	2	0045	298	2127.	1188.8	1569.8
1	0810	99	396.	.0	1564.2	*	1	1630	199	2493.	1614.5	1570.7	*	2	0050	299	2120.	1180.9	1569.8
1	0815	100	0.	.0	1564.2	*	1	1635	200	2510.	1634.5	1570.7	*	2	0055	300	2113.	1173.0	1569.7

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PEAK OUTFLOW IS 2595. AT TIME 17.75 HOURS

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
		(CFS)				
+ 2595.	17.75		2505.	1156.	1115.	1115.
		(INCHES)	.447	.825	.826	.826
		(AC-FT)	1242.	2294.	2295.	2295.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
1742.	17.75	1630.	656.	632.	632.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)				
1570.96	17.75	1570.73	1567.09	1566.99	1566.99

CUMULATIVE AREA = 52.12 SQ MI

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INTERPOLATED HYDROGRAPH AT RESV

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0000	1	396.	1		0615	76	0.	1		1230	151	594.	1		1845	226	2571.
1		0005	2	0.	1		0620	77	0.	1		1235	152	625.	1		1850	227	2567.
1		0010	3	0.	1		0625	78	0.	1		1240	153	660.	1		1855	228	2563.
1		0015	4	0.	1		0630	79	0.	1		1245	154	697.	1		1900	229	2559.
1		0020	5	0.	1		0635	80	0.	1		1250	155	737.	1		1905	230	2554.
1		0025	6	0.	1		0640	81	0.	1		1255	156	778.	1		1910	231	2550.
1		0030	7	0.	1		0645	82	0.	1		1300	157	821.	1		1915	232	2545.
1		0035	8	0.	1		0650	83	0.	1		1305	158	864.	1		1920	233	2540.
1		0040	9	0.	1		0655	84	0.	1		1310	159	908.	1		1925	234	2535.
1		0045	10	0.	1		0700	85	0.	1		1315	160	951.	1		1930	235	2530.
1		0050	11	0.	1		0705	86	0.	1		1320	161	993.	1		1935	236	2525.
1		0055	12	0.	1		0710	87	0.	1		1325	162	1035.	1		1940	237	2520.
1		0100	13	0.	1		0715	88	0.	1		1330	163	1077.	1		1945	238	2515.
1		0105	14	0.	1		0720	89	0.	1		1335	164	1119.	1		1950	239	2510.
1		0110	15	0.	1		0725	90	0.	1		1340	165	1161.	1		1955	240	2505.
1		0115	16	0.	1		0730	91	0.	1		1345	166	1203.	1		2000	241	2499.
1		0120	17	0.	1		0735	92	0.	1		1350	167	1246.	1		2005	242	2494.
1		0125	18	0.	1		0740	93	0.	1		1355	168	1289.	1		2010	243	2489.
1		0130	19	0.	1		0745	94	0.	1		1400	169	1332.	1		2015	244	2483.
1		0135	20	0.	1		0750	95	0.	1		1405	170	1376.	1		2020	245	2478.
1		0140	21	0.	1		0755	96	0.	1		1410	171	1420.	1		2025	246	2472.
1		0145	22	0.	1		0800	97	12.	1		1415	172	1464.	1		2030	247	2467.
1		0150	23	0.	1		0805	98	0.	1		1420	173	1508.	1		2035	248	2461.
1		0155	24	0.	1		0810	99	396.	1		1425	174	1552.	1		2040	249	2455.
1		0200	25	0.	1		0815	100	0.	1		1430	175	1597.	1		2045	250	2450.
1		0205	26	0.	1		0820	101	396.	1		1435	176	1642.	1		2050	251	2444.
1		0210	27	0.	1		0825	102	0.	1		1440	177	1687.	1		2055	252	2438.
1		0215	28	0.	1		0830	103	396.	1		1445	178	1732.	1		2100	253	2432.
1		0220	29	0.	1		0835	104	0.	1		1450	179	1777.	1		2105	254	2426.
1		0225	30	0.	1		0840	105	396.	1		1455	180	1823.	1		2110	255	2420.

1	0230	31	0.	*	1	0845	106	0.	*	1	1500	181	1869.	*	1	2115	256	2414.
1	0235	32	0.	*	1	0850	107	396.	*	1	1505	182	1914.	*	1	2120	257	2408.
1	0240	33	0.	*	1	0855	108	0.	*	1	1510	183	1959.	*	1	2125	258	2402.
1	0245	34	0.	*	1	0900	109	396.	*	1	1515	184	2004.	*	1	2130	259	2395.
1	0250	35	0.	*	1	0905	110	0.	*	1	1520	185	2049.	*	1	2135	260	2389.
1	0255	36	0.	*	1	0910	111	396.	*	1	1525	186	2093.	*	1	2140	261	2383.
1	0300	37	0.	*	1	0915	112	0.	*	1	1530	187	2135.	*	1	2145	262	2376.
1	0305	38	0.	*	1	0920	113	396.	*	1	1535	188	2176.	*	1	2150	263	2370.
1	0310	39	0.	*	1	0925	114	0.	*	1	1540	189	2216.	*	1	2155	264	2363.
1	0315	40	0.	*	1	0930	115	396.	*	1	1545	190	2254.	*	1	2200	265	2357.
1	0320	41	0.	*	1	0935	116	0.	*	1	1550	191	2290.	*	1	2205	266	2350.
1	0325	42	0.	*	1	0940	117	396.	*	1	1555	192	2323.	*	1	2210	267	2344.
1	0330	43	0.	*	1	0945	118	0.	*	1	1600	193	2355.	*	1	2215	268	2337.
1	0335	44	0.	*	1	0950	119	396.	*	1	1605	194	2384.	*	1	2220	269	2330.
1	0340	45	0.	*	1	0955	120	0.	*	1	1610	195	2411.	*	1	2225	270	2324.
1	0345	46	0.	*	1	1000	121	396.	*	1	1615	196	2435.	*	1	2230	271	2317.
1	0350	47	0.	*	1	1005	122	0.	*	1	1620	197	2458.	*	1	2235	272	2310.
1	0355	48	0.	*	1	1010	123	396.	*	1	1625	198	2478.	*	1	2240	273	2304.
1	0400	49	0.	*	1	1015	124	0.	*	1	1630	199	2496.	*	1	2245	274	2297.
1	0405	50	0.	*	1	1020	125	396.	*	1	1635	200	2512.	*	1	2250	275	2290.
1	0410	51	0.	*	1	1025	126	0.	*	1	1640	201	2527.	*	1	2255	276	2283.
1	0415	52	0.	*	1	1030	127	396.	*	1	1645	202	2540.	*	1	2300	277	2276.
1	0420	53	0.	*	1	1035	128	0.	*	1	1650	203	2551.	*	1	2305	278	2269.
1	0425	54	0.	*	1	1040	129	396.	*	1	1655	204	2561.	*	1	2310	279	2262.
1	0430	55	0.	*	1	1045	130	0.	*	1	1700	205	2569.	*	1	2315	280	2256.
1	0435	56	0.	*	1	1050	131	396.	*	1	1705	206	2576.	*	1	2320	281	2249.
1	0440	57	0.	*	1	1055	132	0.	*	1	1710	207	2582.	*	1	2325	282	2242.
1	0445	58	0.	*	1	1100	133	396.	*	1	1715	208	2587.	*	1	2330	283	2235.
1	0450	59	0.	*	1	1105	134	0.	*	1	1720	209	2591.	*	1	2335	284	2228.
1	0455	60	0.	*	1	1110	135	396.	*	1	1725	210	2594.	*	1	2340	285	2221.
1	0500	61	0.	*	1	1115	136	0.	*	1	1730	211	2596.	*	1	2345	286	2214.
1	0505	62	0.	*	1	1120	137	396.	*	1	1735	212	2597.	*	1	2350	287	2207.
1	0510	63	0.	*	1	1125	138	0.	*	1	1740	213	2598.	*	1	2355	288	2200.
1	0515	64	0.	*	1	1130	139	396.	*	1	1745	214	2598.	*	2	0000	289	2193.
1	0520	65	0.	*	1	1135	140	0.	*	1	1750	215	2598.	*	2	0005	290	2186.
1	0525	66	0.	*	1	1140	141	396.	*	1	1755	216	2597.	*	2	0010	291	2180.
1	0530	67	0.	*	1	1145	142	0.	*	1	1800	217	2596.	*	2	0015	292	2173.
1	0535	68	0.	*	1	1150	143	397.	*	1	1805	218	2595.	*	2	0020	293	2166.
1	0540	69	0.	*	1	1155	144	396.	*	1	1810	219	2593.	*	2	0025	294	2159.
1	0545	70	0.	*	1	1200	145	397.	*	1	1815	220	2590.	*	2	0030	295	2152.
1	0550	71	0.	*	1	1205	146	449.	*	1	1820	221	2588.	*	2	0035	296	2145.
1	0555	72	0.	*	1	1210	147	480.	*	1	1825	222	2585.	*	2	0040	297	2138.
1	0600	73	0.	*	1	1215	148	509.	*	1	1830	223	2582.	*	2	0045	298	2131.
1	0605	74	0.	*	1	1220	149	538.	*	1	1835	224	2579.	*	2	0050	299	2123.
1	0610	75	0.	*	1	1225	150	566.	*	1	1840	225	2575.	*	2	0055	300	2116.
				*					*					*				

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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
		(CFS)				
+ 2598.	17.75		2508.	1158.	1116.	1116.
		(INCHES)	.447	.826	.827	.827
		(AC-FT)	1244.	2297.	2298.	2298.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
1742.	17.75	1630.	656.	632.	632.

PEAK STAGE (FEET)	TIME (HR)	MAXIMUM AVERAGE STAGE 6-HR	24-HR	72-HR	24.92-HR
1570.96	17.75	1570.73	1567.09	1566.99	1566.99

CUMULATIVE AREA = 52.12 SQ MI

STATION RESV

(O) OUTFLOW

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          0.     400.     800.    1200.    1600.    2000.    2400.    2800.       0.       0.       0.       0.       0.
DAHRMN PER
 10000   1.---------0---------.---------.---------.---------.---------.---------.---------.---------.---------.---------.
 10005  20         .         .         .         .         .         .         .         .         .         .         .
 10010  30         .         .         .         .         .         .         .         .         .         .         .
 10015  40         .         .         .         .         .         .         .         .         .         .         .
 10020  50         .         .         .         .         .         .         .         .         .         .         .
 10025  60         .         .         .         .         .         .         .         .         .         .         .
 10030  70         .         .         .         .         .         .         .         .         .         .         .
 10035  80         .         .         .         .         .         .         .         .         .         .         .
 10040  90         .         .         .         .         .         .         .         .         .         .         .
 10045 100         .         .         .         .         .         .         .         .         .         .         .
 10050 110 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10055 120         .         .         .         .         .         .         .         .         .         .         .
 10100 130         .         .         .         .         .         .         .         .         .         .         .
 10105 140         .         .         .         .         .         .         .         .         .         .         .
 10110 150         .         .         .         .         .         .         .         .         .         .         .
 10115 160         .         .         .         .         .         .         .         .         .         .         .
 10120 170         .         .         .         .         .         .         .         .         .         .         .
 10125 180         .         .         .         .         .         .         .         .         .         .         .
 10130 190         .         .         .         .         .         .         .         .         .         .         .
 10135 200         .         .         .         .         .         .         .         .         .         .         .
 10140 210 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10145 220         .         .         .         .         .         .         .         .         .         .         .
 10150 230         .         .         .         .         .         .         .         .         .         .         .
 10155 240         .         .         .         .         .         .         .         .         .         .         .
 10200 250         .         .         .         .         .         .         .         .         .         .         .
 10205 260         .         .         .         .         .         .         .         .         .         .         .
 10210 270         .         .         .         .         .         .         .         .         .         .         .
 10215 280         .         .         .         .         .         .         .         .         .         .         .
 10220 290         .         .         .         .         .         .         .         .         .         .         .
 10225 300         .         .         .         .         .         .         .         .         .         .         .
 10230 310 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10235 320         .         .         .         .         .         .         .         .         .         .         .
 10240 330         .         .         .         .         .         .         .         .         .         .         .
 10245 340         .         .         .         .         .         .         .         .         .         .         .
 10250 350         .         .         .         .         .         .         .         .         .         .         .
 10255 360         .         .         .         .         .         .         .         .         .         .         .
 10300 370         .         .         .         .         .         .         .         .         .         .         .
 10305 380         .         .         .         .         .         .         .         .         .         .         .
 10310 390         .         .         .         .         .         .         .         .         .         .         .
 10315 400         .         .         .         .         .         .         .         .         .         .         .
 10320 410 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10325 420         .         .         .         .         .         .         .         .         .         .         .
 10330 430         .         .         .         .         .         .         .         .         .         .         .
 10335 440         .         .         .         .         .         .         .         .         .         .         .
 10340 450         .         .         .         .         .         .         .         .         .         .         .
 10345 460         .         .         .         .         .         .         .         .         .         .         .
 10350 470         .         .         .         .         .         .         .         .         .         .         .
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10355	480	.	.	.	.	.	.	.	.	.	.	.
10400	490	.	.	.	.	.	.	.	.	.	.	.
10405	500	.	.	.	.	.	.	.	.	.	.	.
10410	510	.	.	.	.	.	.	.	.	.	.	.
10415	520	.	.	.	.	.	.	.	.	.	.	.
10420	530	.	.	.	.	.	.	.	.	.	.	.
10425	540	.	.	.	.	.	.	.	.	.	.	.
10430	550	.	.	.	.	.	.	.	.	.	.	.
10435	560	.	.	.	.	.	.	.	.	.	.	.
10440	570	.	.	.	.	.	.	.	.	.	.	.
10445	580	.	.	.	.	.	.	.	.	.	.	.
10450	590	.	.	.	.	.	.	.	.	.	.	.
10455	600	.	.	.	.	.	.	.	.	.	.	.
10500	610	.	.	.	.	.	.	.	.	.	.	.
10505	620	.	.	.	.	.	.	.	.	.	.	.
10510	630	.	.	.	.	.	.	.	.	.	.	.
10515	640	.	.	.	.	.	.	.	.	.	.	.
10520	650	.	.	.	.	.	.	.	.	.	.	.
10525	660	.	.	.	.	.	.	.	.	.	.	.
10530	670	.	.	.	.	.	.	.	.	.	.	.
10535	680	.	.	.	.	.	.	.	.	.	.	.
10540	690	.	.	.	.	.	.	.	.	.	.	.
10545	700	.	.	.	.	.	.	.	.	.	.	.
10550	710	.	.	.	.	.	.	.	.	.	.	.
10555	720	.	.	.	.	.	.	.	.	.	.	.
10600	730	.	.	.	.	.	.	.	.	.	.	.
10605	740	.	.	.	.	.	.	.	.	.	.	.
10610	750	.	.	.	.	.	.	.	.	.	.	.
10615	760	.	.	.	.	.	.	.	.	.	.	.
10620	770	.	.	.	.	.	.	.	.	.	.	.
10625	780	.	.	.	.	.	.	.	.	.	.	.
10630	790	.	.	.	.	.	.	.	.	.	.	.
10635	800	.	.	.	.	.	.	.	.	.	.	.
10640	810	.	.	.	.	.	.	.	.	.	.	.
10645	820	.	.	.	.	.	.	.	.	.	.	.
10650	830	.	.	.	.	.	.	.	.	.	.	.
10655	840	.	.	.	.	.	.	.	.	.	.	.
10700	850	.	.	.	.	.	.	.	.	.	.	.
10705	860	.	.	.	.	.	.	.	.	.	.	.
10710	870	.	.	.	.	.	.	.	.	.	.	.
10715	880	.	.	.	.	.	.	.	.	.	.	.
10720	890	.	.	.	.	.	.	.	.	.	.	.
10725	900	.	.	.	.	.	.	.	.	.	.	.
10730	910	.	.	.	.	.	.	.	.	.	.	.
10735	920	.	.	.	.	.	.	.	.	.	.	.
10740	930	.	.	.	.	.	.	.	.	.	.	.
10745	940	.	.	.	.	.	.	.	.	.	.	.
10750	950	.	.	.	.	.	.	.	.	.	.	.
10755	960	.	.	.	.	.	.	.	.	.	.	.
10800	970	.	.	.	.	.	.	.	.	.	.	.
10805	980	.	.	.	.	.	.	.	.	.	.	.
10810	99.	0	.	.	.	.	.	.	.	.	.	.
10815	1000	.	.	.	.	.	.	.	.	.	.	.
10820	101.	0	.	.	.	.	.	.	.	.	.	.
10825	1020	.	.	.	.	.	.	.	.	.	.	.
10830	103.	0	.	.	.	.	.	.	.	.	.	.
10835	1040	.	.	.	.	.	.	.	.	.	.	.
10840	105.	0	.	.	.	.	.	.	.	.	.	.
10845	1060	.	.	.	.	.	.	.	.	.	.	.
10850	107.	0	.	.	.	.	.	.	.	.	.	.

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10855 1080        .         .         .         .         .         .         .         .         .         .         .
10900 109.        0         .         .         .         .         .         .         .         .         .         .
10905 1100        .         .         .         .         .         .         .         .         .         .         .
10910 111. . . . . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10915 1120        .         .         .         .         .         .         .         .         .         .         .
10920 113.        0         .         .         .         .         .         .         .         .         .         .
10925 1140        .         .         .         .         .         .         .         .         .         .         .
10930 115.        0         .         .         .         .         .         .         .         .         .         .
10935 1160        .         .         .         .         .         .         .         .         .         .         .
10940 117.        0         .         .         .         .         .         .         .         .         .         .
10945 1180        .         .         .         .         .         .         .         .         .         .         .
10950 119.        0         .         .         .         .         .         .         .         .         .         .
10955 1200        .         .         .         .         .         .         .         .         .         .         .
11000 121. . . . . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
11005 1220        .         .         .         .         .         .         .         .         .         .         .
11010 123.        0         .         .         .         .         .         .         .         .         .         .
11015 1240        .         .         .         .         .         .         .         .         .         .         .
11020 125.        0         .         .         .         .         .         .         .         .         .         .
11025 1260        .         .         .         .         .         .         .         .         .         .         .
11030 127.        0         .         .         .         .         .         .         .         .         .         .
11035 1280        .         .         .         .         .         .         .         .         .         .         .
11040 129.        0         .         .         .         .         .         .         .         .         .         .
11045 1300        .         .         .         .         .         .         .         .         .         .         .
11050 131. . . . . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
11055 1320        .         .         .         .         .         .         .         .         .         .         .
11100 133.        0         .         .         .         .         .         .         .         .         .         .
11105 1340        .         .         .         .         .         .         .         .         .         .         .
11110 135.        0         .         .         .         .         .         .         .         .         .         .
11115 1360        .         .         .         .         .         .         .         .         .         .         .
11120 137.        0         .         .         .         .         .         .         .         .         .         .
11125 1380        .         .         .         .         .         .         .         .         .         .         .
11130 139.        0         .         .         .         .         .         .         .         .         .         .
11135 1400        .         .         .         .         .         .         .         .         .         .         .
11140 141. . . . . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
11145 1420        .         .         .         .         .         .         .         .         .         .         .
11150 143.        0         .         .         .         .         .         .         .         .         .         .
11155 144.        0         .         .         .         .         .         .         .         .         .         .
11200 145.        0         .         .         .         .         .         .         .         .         .         .
11205 146.        .0        .         .         .         .         .         .         .         .         .         .
11210 147.        . 0       .         .         .         .         .         .         .         .         .         .
11215 148.        .  0      .         .         .         .         .         .         .         .         .         .
11220 149.        .  0      .         .         .         .         .         .         .         .         .         .
11225 150.        .   0     .         .         .         .         .         .         .         .         .         .
11230 151. . . . . . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
11235 152.        .    0    .         .         .         .         .         .         .         .         .         .
11240 153.        .    0    .         .         .         .         .         .         .         .         .         .
11245 154.        .     0   .         .         .         .         .         .         .         .         .         .
11250 155.        .      0  .         .         .         .         .         .         .         .         .         .
11255 156.        .       0.         .         .         .         .         .         .         .         .         .
11300 157.        .        .0        .         .         .         .         .         .         .         .         .
11305 158.        .        . 0       .         .         .         .         .         .         .         .         .
11310 159.        .        .  0      .         .         .         .         .         .         .         .         .
11315 160.        .        .   0     .         .         .         .         .         .         .         .         .
11320 161. . . . . . . . . . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
11325 162.        .        .    0    .         .         .         .         .         .         .         .         .
11330 163.        .        .     0   .         .         .         .         .         .         .         .         .
11335 164.        .        .      0  .         .         .         .         .         .         .         .         .
11340 165.        .        .       0.         .         .         .         .         .         .         .         .
11345 166.        .        .        0         .         .         .         .         .         .         .         .
11350 167.        .        .         .0       .         .         .         .         .         .         .         .
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11355 168.          .         .         .0        .         .         .         .         .         .         .         .         .         .
11400 169.          .         .         . 0       .         .         .         .         .         .         .         .         .         .
11405 170.          .         .         .  0      .         .         .         .         .         .         .         .         .         .
11410 171. . . . . . . . . . . . . . . . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
11415 172.          .         .         .    0    .         .         .         .         .         .         .         .         .         .
11420 173.          .         .         .     0   .         .         .         .         .         .         .         .         .         .
11425 174.          .         .         .      0  .         .         .         .         .         .         .         .         .         .
11430 175.          .         .         .       0 .         .         .         .         .         .         .         .         .         .
11435 176.          .         .         .        .0         .         .         .         .         .         .         .         .         .
11440 177.          .         .         .        . 0        .         .         .         .         .         .         .         .         .
11445 178.          .         .         .        .  0       .         .         .         .         .         .         .         .         .
11450 179.          .         .         .        .   0      .         .         .         .         .         .         .         .         .
11455 180.          .         .         .        .    0     .         .         .         .         .         .         .         .         .
11500 181. . . . . . . . . . . . . . . . . . . . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
11505 182.          .         .         .        .     0 .         .         .         .         .         .         .         .         .
11510 183.          .         .         .        .      0.         .         .         .         .         .         .         .         .
11515 184.          .         .         .        .       0         .         .         .         .         .         .         .         .
11520 185.          .         .         .        .        .0       .         .         .         .         .         .         .         .
11525 186.          .         .         .        .         . 0      .         .         .         .         .         .         .         .
11530 187.          .         .         .        .         .  0     .         .         .         .         .         .         .         .
11535 188.          .         .         .        .         .   0    .         .         .         .         .         .         .         .
11540 189.          .         .         .        .         .    0   .         .         .         .         .         .         .         .
11545 190.          .         .         .        .         .     0  .         .         .         .         .         .         .         .
11550 191. . . . . . . . . . . . . . . . . . . . . . . . . . . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
11555 192.          .         .         .        .         .      0 .         .         .         .         .         .         .         .
11600 193.          .         .         .        .         .       0.         .         .         .         .         .         .         .
11605 194.          .         .         .        .         .        0         .         .         .         .         .         .         .
11610 195.          .         .         .        .         .        0         .         .         .         .         .         .         .
11615 196.          .         .         .        .         .        .0        .         .         .         .         .         .         .
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11625 198.          .         .         .        .         .        . 0       .         .         .         .         .         .         .
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11635 200.          .         .         .        .         .        .  0      .         .         .         .         .         .         .
11640 201. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
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11710 207.          .         .         .        .         .        .    0    .         .         .         .         .         .         .
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11725 210.          .         .         .        .         .        .    0    .         .         .         .         .         .         .
11730 211. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
11735 212.          .         .         .        .         .        .    0    .         .         .         .         .         .         .
11740 213.          .         .         .        .         .        .    0    .         .         .         .         .         .         .
11745 214.          .         .         .        .         .        .    0    .         .         .         .         .         .         .
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11820 221. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
11825 222.          .         .         .        .         .        .    0    .         .         .         .         .         .         .
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12340 285. 0
12345 286. 0
12350 287. 0

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12355 288.        .         .         .         .         .   0     .         .         .         .         .         .         .
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20010 291. . . . . . . . . . . . . . . . . . . . . . . . . . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
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20050 299.        .         .         .         .         .  0      .         .         .         .         .         .         .
20055 300.---------.---------.---------.---------.---------.--0------.---------.---------.---------.---------.---------.---------.
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RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS. AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT	SUBR1	673.	12.67	195.	60.	58.	1.56		
+	ROUTED TO	RR2a	658.	12.75	193.	58.	56.	1.56		
+									1812.56	12.75
+	ROUTED TO	RR2-1	594.	13.83	192.	57.	55.	1.56		
+	ROUTED TO	RR2-2	548.	14.92	191.	56.	54.	1.56		
+	ROUTED TO	RR2-3	513.	16.00	189.	54.	52.	1.56		
+	HYDROGRAPH AT	SUBR2	1504.	14.00	846.	271.	261.	8.43		
+	2 COMBINED AT	HCR2	1480.	14.00	986.	317.	306.	9.99		
+	HYDROGRAPH AT	SUBR3	517.	12.58	145.	45.	43.	1.10		
+	ROUTED TO	RR4a	494.	12.75	145.	44.	42.	1.10		
+									1829.89	12.75
+	ROUTED TO	RR4-1	454.	13.58	144.	43.	42.	1.10		
+	ROUTED TO	RR4-2	424.	14.50	144.	42.	41.	1.10		
+	HYDROGRAPH AT	SUBR4	804.	13.00	299.	93.	89.	2.67		

	2 COMBINED AT								
+		HCR4	803.	13.00	430.	134.	129.	3.77	
	HYDROGRAPH AT								
+		SUBR5	2498.	12.25	475.	148.	142.	2.71	
	ROUTED TO								
+		RR6	2204.	12.75	475.	148.	142.	2.71	
	HYDROGRAPH AT								
+		SUBR6	2550.	12.58	702.	218.	210.	4.19	
	2 COMBINED AT								
+		HCR6	4502.	12.75	1148.	356.	343.	6.90	
	ROUTED TO								
+		RR7	4131.	13.42	1147.	354.	341.	6.90	
	HYDROGRAPH AT								
+		SUBR7	2186.	12.33	433.	134.	129.	2.67	
	2 COMBINED AT								
+		HCR7	4408.	13.42	1526.	473.	456.	9.57	
	ROUTED TO								
+		RR8-1	4149.	14.08	1524.	468.	451.	9.57	
	ROUTED TO								
+		RR8-2	3949.	14.75	1522.	462.	445.	9.57	
	HYDROGRAPH AT								
+		SUBR8	737.	12.75	237.	73.	71.	2.00	
	2 COMBINED AT								
+		HCR8	4042.	14.75	1697.	523.	504.	11.57	
	ROUTED TO								
+		RR9a	4011.	14.83	1697.	520.	501.	11.57	
+									1834.12 14.83
	ROUTED TO								
+		RR9	3920.	15.25	1695.	516.	497.	11.57	
	HYDROGRAPH AT								
+		SUBR9	152.	12.17	25.	8.	7.	.26	
	2 COMBINED AT								
+		HCR9	3923.	15.25	1703.	522.	502.	11.83	
	HYDROGRAPH AT								
+		SUBR10	1472.	12.83	495.	153.	147.	3.35	
	HYDROGRAPH AT								
+		SUBR11	1923.	12.67	577.	178.	172.	3.90	
	2 COMBINED AT								
+		HCR11	3260.	12.75	1040.	321.	309.	7.25	
	ROUTED TO								

+		RR12	3126.	13.33	1039.	319.	307.	7.25	
	HYDROGRAPH AT								
+		SUBR12	1927.	12.67	577.	178.	171.	4.46	
	2 COMBINED AT								
+		HCR12	4134.	13.17	1537.	474.	456.	11.71	
	ROUTED TO								
+		RR13a	4118.	13.25	1537.	469.	452.	11.71	
+									1822.96 13.25
	ROUTED TO								
+		RR13	4043.	13.67	1535.	466.	449.	11.71	
	HYDROGRAPH AT								
+		SUBR13	515.	12.75	167.	51.	49.	1.27	
	2 COMBINED AT								
+		HCR13a	4251.	13.58	1669.	509.	490.	12.98	
	2 COMBINED AT								
+		HCR13b	5470.	13.92	3186.	977.	941.	24.81	
	ROUTED TO								
+		RR14	5331.	15.00	3175.	955.	919.	24.81	
	HYDROGRAPH AT								
+		SUBR14	980.	12.67	302.	93.	90.	2.82	
	2 COMBINED AT								
+		HCR14a	5425.	15.00	3287.	1026.	988.	27.63	
	2 COMBINED AT								
+		HCR14b	5822.	14.92	3578.	1128.	1086.	31.40	
	ROUTED TO								
+		RR15-1	5745.	15.58	3573.	1113.	1072.	31.40	
	ROUTED TO								
+		RR15-2	5678.	16.17	3568.	1097.	1057.	31.40	
	HYDROGRAPH AT								
+		SUBR15	1480.	13.50	705.	221.	212.	6.30	
	2 COMBINED AT								
+		HCR15a	5921.	16.17	3933.	1265.	1218.	37.70	
	2 COMBINED AT								
+		HCR15b	6764.	16.08	4636.	1506.	1450.	47.69	
	DIVERSION TO								
+		DVR16	95.	12.42	95.	51.	50.	47.69	
	HYDROGRAPH AT								
+		HDR16	6669.	16.08	4541.	1454.	1401.	47.69	
	ROUTED TO								
+		RESR	1804.	19.50	1772.	830.	801.	47.69	
+									1593.15 19.50

	HYDROGRAPH AT								
+		SUBV1	2035.	12.42	470.	145.	140.	3.03	
	HYDROGRAPH AT								
+		SUBV2	2304.	12.33	497.	153.	148.	3.34	
	ROUTED TO								
+		RV3	2160.	12.75	497.	153.	147.	3.34	
	HYDROGRAPH AT								
+		SUBV3	319.	12.17	54.	16.	16.	.40	
	3 COMBINED AT								
+		HCV3	3775.	12.58	992.	306.	295.	6.77	
	ROUTED TO								
+		RV4	3601.	13.08	991.	305.	294.	6.77	
	HYDROGRAPH AT								
+		SUBV4	1185.	12.42	272.	88.	84.	1.85	
	2 COMBINED AT								
+		HCV4	4039.	13.00	1230.	383.	369.	8.62	
	ROUTED TO								
+		RV5	3883.	13.67	1229.	380.	366.	8.62	
	HYDROGRAPH AT								
+		SUBV5	1081.	12.33	228.	70.	68.	1.66	
	2 COMBINED AT								
+		HCV5	4020.	13.67	1416.	441.	424.	10.28	
	ROUTED TO								
+		RV6a	3969.	13.75	1416.	437.	421.	10.28	
+									1743.40 13.75
	ROUTED TO								
+		RV6-1	3801.	14.58	1413.	430.	414.	10.28	
	ROUTED TO								
+		RV6-2	3663.	15.42	1410.	422.	407.	10.28	
	HYDROGRAPH AT								
+		SUBV6	641.	13.00	253.	81.	78.	3.59	
	2 COMBINED AT								
+		HCV6	3722.	15.33	1555.	485.	467.	13.87	
	HYDROGRAPH AT								
+		SUBV7	955.	12.67	274.	85.	82.	1.69	
	HYDROGRAPH AT								
+		SUBV8	778.	12.17	137.	47.	45.	.73	
	2 COMBINED AT								
+		HCV8	1418.	12.33	407.	131.	126.	2.42	
	ROUTED TO								

+		RV9	1392.	12.58	407.	131.	126.	2.42	
	HYDROGRAPH AT								
+		SUBV9	689.	12.33	137.	42.	41.	.95	
	2 COMBINED AT								
+		HCV9	1905.	12.50	541.	172.	166.	3.37	
	ROUTED TO								
+		RV10a	206.	15.25	148.	53.	51.	3.37	
+									1773.15 18.58
	ROUTED TO								
+		RV10-1	204.	16.17	147.	50.	48.	3.37	
	ROUTED TO								
+		RV10-2	202.	17.08	147.	47.	45.	3.37	
	ROUTED TO								
+		RV10-3	200.	18.00	146.	45.	43.	3.37	
	HYDROGRAPH AT								
+		SUBV10	1476.	13.58	715.	223.	215.	5.48	
	2 COMBINED AT								
+		HCV10	1420.	13.58	713.	253.	243.	8.85	
	HYDROGRAPH AT								
+		SUBV11	206.	12.83	69.	21.	21.	.44	
	ROUTED TO								
+		RV12a	187.	13.08	69.	21.	21.	.44	
+									1777.06 13.17
	ROUTED TO								
+		RV12-1	175.	14.33	69.	21.	20.	.44	
	ROUTED TO								
+		RV12-2	165.	15.50	69.	21.	20.	.44	
	HYDROGRAPH AT								
+		SUBV12	982.	13.33	442.	137.	132.	3.32	
	2 COMBINED AT								
+		HCV12	989.	13.33	504.	157.	151.	3.76	
	HYDROGRAPH AT								
+		SUBV13	1031.	12.92	363.	112.	108.	2.35	
	ROUTED TO								
+		RV14a	980.	13.08	363.	111.	107.	2.35	
+									1790.31 13.17
	ROUTED TO								
+		RV14-1	937.	14.08	362.	109.	105.	2.35	
	ROUTED TO								
+		RV14-2	900.	15.08	362.	107.	103.	2.35	
	ROUTED TO								

+		RV14-3	867.	16.08	361.	105.	101.	2.35	
	HYDROGRAPH AT								
+		SUBV14	1020.	13.75	533.	167.	161.	4.09	
	2 COMBINED AT								
+		HCV14	1231.	15.92	835.	266.	256.	6.44	
	HYDROGRAPH AT								
+		SUBV15	1001.	12.50	256.	79.	76.	1.64	
	ROUTED TO								
+		RV16a	865.	12.75	256.	78.	75.	1.64	
+									1789.43 12.75
	ROUTED TO								
+		RV16	828.	13.25	256.	78.	75.	1.64	
	HYDROGRAPH AT								
+		SUBV16	742.	12.17	120.	37.	36.	.76	
	2 COMBINED AT								
+		HCV16	914.	13.25	371.	114.	110.	2.40	
	HYDROGRAPH AT								
+		SUBV17	2495.	12.58	680.	211.	203.	4.06	
	ROUTED TO								
+		RV18	2192.	13.75	679.	208.	200.	4.06	
	HYDROGRAPH AT								
+		SUBV18	2300.	12.83	776.	240.	231.	5.06	
	2 COMBINED AT								
+		HCV18	3277.	13.58	1390.	429.	414.	9.12	
	ROUTED TO								
+		RV19	3249.	14.00	1389.	427.	411.	9.12	
	HYDROGRAPH AT								
+		SUBV19	1658.	12.50	412.	127.	123.	2.77	
	2 COMBINED AT								
+		HCV19	3510.	13.92	1738.	537.	518.	11.89	
	ROUTED TO								
+		RV20a	3500.	14.00	1738.	532.	513.	11.89	
+									1799.09 14.00
	ROUTED TO								
+		RV20	3442.	14.67	1734.	526.	506.	11.89	
	HYDROGRAPH AT								
+		SUBV20	311.	12.33	64.	20.	19.	.48	
	2 COMBINED AT								
+		HCV20a	3458.	14.67	1770.	542.	522.	12.37	
	2 COMBINED AT								
+		HCV20b	3666.	14.58	2073.	639.	616.	14.77	

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        ROUTED TO
+                       RV21      3617.   15.67       2062.       624.       601.      14.77

        HYDROGRAPH AT
+                      SUBV21      954.   13.92        519.       164.       158.       4.43

        2 COMBINED AT
+                      HCV21a     4026.   15.00       2464.       759.       731.      19.20

        5 COMBINED AT
+                      HCV21b     8800.   15.42       5272.      1674.      1612.      52.12

        HYDROGRAPH AT
+                      HCV22a       95.   12.42         95.        51.        50.      47.69

        2 COMBINED AT
+                      HCV22b     8895.   15.42       5367.      1725.      1661.      52.12

        ROUTED TO
+                        RESV     2598.   17.75       2508.      1158.      1116.      52.12
+                                                                                                 1570.96       17.75
1                          SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION     RESR


PLAN  1 ..............                    INITIAL VALUE     SPILLWAY CREST     TOP OF DAM
                              ELEVATION       1585.00           1597.60          1602.30
                              STORAGE              0.              3944.            7575.
                              OUTFLOW            583.              2622.           21945.


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

              1.00     1594.50        .00       2173.      2033.       .00         19.75        .00


PLAN  2 ..............                    INITIAL VALUE     SPILLWAY CREST     TOP OF DAM
                              ELEVATION       1585.00           1597.60          1602.30
                              STORAGE              0.              3944.            7575.
                              OUTFLOW            583.              2622.           21945.


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

              1.00     1594.28        .00       2071.      1995.       .00         19.67        .00


PLAN  3 ..............                    INITIAL VALUE     SPILLWAY CREST     TOP OF DAM
                              ELEVATION       1585.00           1597.60          1602.30
                              STORAGE              0.              3944.            7575.
                              OUTFLOW            583.              2622.           21945.


              RATIO     MAXIMUM      MAXIMUM    MAXIMUM    MAXIMUM    DURATION     TIME OF     TIME OF
               OF      RESERVOIR     DEPTH     STORAGE    OUTFLOW    OVER TOP    MAX OUTFLOW   FAILURE
              PMF      W.S.ELEV    OVER DAM     AC-FT       CFS       HOURS        HOURS       HOURS
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1.00	1593.79	.00	1845.	1906.	.00	19.58	.00

PLAN 4 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1585.00	1597.60	1602.30
STORAGE	0.	3944.	7575.
OUTFLOW	583.	2622.	21945.

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	1593.47	.00	1706.	1850.	.00	19.58	.00

PLAN 5 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1585.00	1597.60	1602.30
STORAGE	0.	3944.	7575.
OUTFLOW	583.	2622.	21945.

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	1593.15	.00	1570.	1794.	.00	19.50	.00

SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION RESV

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1564.20	1574.80	1579.50
STORAGE	0.	4388.	9364.
OUTFLOW	396.	4330.	25157.

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	1571.99	.00	2332.	3034.	.00	18.00	.00

PLAN 2 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1564.20	1574.80	1579.50
STORAGE	0.	4388.	9364.
OUTFLOW	396.	4330.	25157.

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	1571.82	.00	2230.	2961.	.00	18.00	.00

PLAN 3 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1564.20	1574.80	1579.50
STORAGE	0.	4388.	9364.

OUTFLOW	396.	4330.	25157.

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	1571.44	.00	2004.	2796.	.00	17.83	.00

PLAN 4 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1564.20	1574.80	1579.50
STORAGE	0.	4388.	9364.
OUTFLOW	396.	4330.	25157.

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	1571.20	.00	1871.	2696.	.00	17.75	.00

PLAN 5 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1564.20	1574.80	1579.50
STORAGE	0.	4388.	9364.
OUTFLOW	396.	4330.	25157.

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	1570.96	.00	1742.	2595.	.00	17.75	.00

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

DM4 - Powerline
25- & 50-year

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

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THIS HEC-1 VERSION CONTAINS ALL OPTIONS EXCEPT ECONOMICS, AND THE NUMBER OF PLANS ARE REDUCED TO 3


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

  1           ID     WEEKES WASH - POWERLINE F.R.S  ANALYSIS
  2           ID     CONVERSION OF MODEL FROM TR-20
  3           ID                 25- & 50-YEAR, 24-HOUR STORM; SCS EXCESS & HYDROGRAPH
  4           ID                 DEVELOPMENT, MUSKINGUM ROUTING
  5           ID        CONDITIONS:   1: 25 & 50-YR, 24-HR STORM IS CONTAINED WITHIN THE BREAKOU
  6           ID                         POINT OF WEEKES WASH AT JUNCTION ROAD.
  7           ID                      2: EXISTING CONDITIONS
  8           ID                      3: SUPERSTITION FREEWAY IN PLACE.
  9           ID                      4: ADJUSTED WATERSHED AREAS.
 10           ID                      5: BREAKOUT CURVE FOR NORTH DIVERSION DAM.
 11           ID                      6: NO MODIFICATIONS TO POWERLINE F.R.S.
 12           ID        FILE = DM4IN,DM4OUT
              *DIAGRAM
 13           IT      10      0      0    200
 14           IO       5
 15           JR    PREC   .7942   .9070

 16           KK      15  WATERSHED 15
 17           KM      HYDROGRAPH FOR WATERSHED 15
 18           PB    4.14
 19           IN      15
 20           PC       0    .002    .005    .008    .011    .014    .017    .020    .023    .026
 21           PC    .029    .032    .035    .038    .041    .044    .048    .052    .056    .060
 22           PC    .064    .068    .072    .076    .080    .085    .090    .095    .100    .105
 23           PC    .110    .115    .120    .126    .133    .140    .147    .155    .163    .172
 24           PC    .181    .191    .203    .218    .236    .257    .283    .387    .663    .707
 25           PC    .735    .758    .766    .791    .804    .815    .825    .834    .842    .849
 26           PC    .856    .863    .869    .875    .881    .887    .893    .898    .903    .908

 27           PC    .913    .918    .922    .926    .930    .934    .938    .942    .946    .950
 28           PC    .953    .956    .959    .962    .965    .968    .971    .974    .977    .980
 29           PC    .983    .986    .992    .995    .998   1.000   1.000   1.000   1.000   1.000
 30           BA    1.76
 31           LS       0      80
 32           UD     .18

 33           KK     R15 ROUTE HYDROGRAPH FROM WS 15
 34           KM     ROUTE HYDROGRAPH FROM WATERSHED 15
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 34          KM     ROUTE HYDROGRAPH FROM WATERSHED 15
 35          RM       1     .11      .3

 36          KK      14 WATERSHED 14
 37          KM     HYDROGRAPH FOR WATERSHED 14
 38          BA    1.11
 39          LS       0      79
 40          UD     .15

 41          KK      16 WATERSHED 16
 42          KM     HYDROGRAPH FOR WATERSHED 16
 43          BA    2.16
 44          LS       0      82
 45          UD     .35
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 46          KK     114 CONCENTRATION PT. 114 (INCLUDES WATERSHEDS 14, 15, & 16)
 47          KM     COMBINE ALL THREE HYDROGRAPHS AT CP 114
 48          HC       3

 49          KK    R114 ROUTE CP 114
 50          KM     ROUTE HYDROGRAPH FROM CP114 TO CP 113
 51          RM       1     .17      .3

 52          KK      13 WATERSHED 13
 53          KM     HYDROGRAPH FOR WATERSHED 13
 54          BA    1.29
 55          LS       0      83
 56          UD    .125

 57          KK     113 CONCENTRATION PT 113 FOR HYDROGRAPHS CP 114 AND WS 13
 58          KM     COMBINE HYDROGRAPHS CP 114 AND WS 13
 59          HC       2

 60          KK    R113 ROUTE CP 113 TO CP 112
 61          KM     ROUTE HYDROGRAPH FOR CP 113
 62          RM       1     .19      .3

 63          KK      12 WATERSHED 12
 64          KM     HYDROGRAPH FOR WATERSHED 12
 65          BA    1.32
 66          LS       0      86
 67          UD     .27

 68          KK     112 CONCENTRATION PT. 112 FOR HYDROGRAPHS FROM CP 113 AND WS 12.
 69          KM     COMBINE HYDROGRAPH FROM CP 113 AND WS 12
 70          HC       2

 71          KK    R112 ROUTE CP 112 TO CP 111

 72          KM     ROUTE HYDROGRAPH CP 112 TO CP 111
 73          RM       1     .07      .3

 74          KK      11 WATERSHED 11
 75          KM     HYDROGRAPH FOR WATERSHED 11
 76          BA     .70
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 75        KM    HYDROGRAPH FOR WATERSHED 11
 76        BA    .70
 77        LS      0      82
 78        UD   .186

 79        KK     17 WATERSHED 17
 80        KM    HYDROGRAPH FOR WATERSHED 17
 81        BA    .37
 82        LS      0      79
 83        UD   .138

 84        KK     10   WATERSHED 10
 85        KM     HYDROGRAPH FOR WATERSHED 10
 86        BA    .54
 87        LS      0      85
 88        UD    .14
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LINE       ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


 89        KK    111 CONCENTRATION PT. 111
 90        KM    COMBINE HYDROGRAPHS FROM CP 112, WS 11, AND WS 17
 91        HC      4

 92        KK  RD111 ROUTE CP 111 TO PT AT WHICH BREAKOUT WOULD OCCUR.
 93        KM    ROUTE HYDROGRAPH CP111 TO THE POINT AT WHICH THE BREAKOUT OCCURS.
 94        RM      5    .64     .3

 95        KK     2A  WATERSHED 2A
 96        KM     HYDROGRAPH FOR WATERSHED 2A
 97        BA   1.09
 98        LS      0      74
 99        UD    .22

100        KK   CP2A  CONCENTRATION POINT 2A
101        KM   COMBINE ROUTED HYDROGRAPH FROM CP 111 AND WATERSHED 2A.
102        HC      2

103        KK  DIVERT    POINT OF DIVERSION FOR WEEKES WASH
104        DT   FLOW
105        DI      0    6500    7000    9000   10000   15000
106        DQ      0       0     260    1300    1880    4600

107        KK   RR2A ROUTE REMAINING HYDROGRAPH TO SUPERSTITION FREWAY
108        KM    ROUTE THE REMAINING HYDROGRAPH TO DETENTION NORTH OF SUPERSTITION FREEWAY
109        RM      2    .42     .3

110        KK    2BE WATERSHED 2B EAST
111        KM    HYDROGRAPH FOR WATERSHED 2B EAST
112        BA   1.22
113        LS      0      79
114        UD    .48

115        KK   102B  CONCENTRATION POINT NORTH OF FREEWAY
116        KM    CONCENTRATION POINT NORTH OF SUPERSTITION FREEWAY AT DETENTION AREA


117        HC      2
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117          HC      2

118          KK  DET2BE   ROUTE THROUGH FREEWAY  (WEEKES WASH DETENTION BASIN)
119          KM     ROUTE FLOW THROUGH WEEKES WASH DETENTION BASIN AND THEN FREEWAY
120          RS      1   ELEV    1636
121          SV      0    6.0    13.0    29.0    47.0    69.0    93.0   122.0   153.0   184.0
122          SV    217    239
123          SE   1636   1637    1638    1640    1642    1644    1646    1648    1650    1652
124          SE   1654   1655
125          SQ      0     22     194     584    1050    1604    2236    2900    3534    4408
126          SQ   4622   4860
127          ST   1650    320     2.2     1.5

128          KK   FRWAY
129          KM   DIVERT ALL FLOW THAT GO UNDER THE ROAD
130          DT   SPILL
131          DI      0   3665    5000   10000   15000
132          DQ      0      0    1335    6335   11335
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

133          KK   CHAN  ROUTE FLOWS THROUGH THE CHANNEL
134          KM    ROUTE FLOW THROUGH THE IMPROVED CHANNEL
135          RM      1     .1     .3

136          KK   WASH   ROUTE FLOWS THROUGH THE WASH
137          KM     ROUTE FLOWS THROUGH THE NATURAL WASH SYSTEM
138          RM      2    .50     .3

139          KK  RSPILL
140          KM    RETRIEVE FLOW DEIVERTED FROM THE EMERGENCY SPILLWAY
141          DR   SPILL

142          KK   IDAHO
143          KM   ROUTE THE RETRIEVED FLOW DOWN IDAYO ROAD.
144          RM      1     .1     .3

145          KK     WW
146          KM   COMBINE ALL THE FLOW FROM THE FREEWAY
147          HC      2

148          KK    RWW
149          KM   ROUTE THE FLOW TO POWERLINE F.R.S.
150          RM      4    .98     .3

151          KK   2BWW  WATERSHED 2B WEST, WEST
152          KM     HYDROGRAPH FOR WATERSHED 2B WEST, WEST
153          BA    .45
154          LS      0     77
155          UD     .4

156          KK   2BWE  WATERSHED 2B WEST, EAST
157          KM    RUNOFF FROM EAST OF IDAHO ROAD 2B WEST, EAST
158          KO      1
159          BA    .70
160          LS      0     77
161          UD     .3
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162        KK  DET28W  ROUTE THROUGH THE DETENTION NORTH OF THE FREEWAY  (N. DIVERSION DAM)
163        KM     ROUTE FLOWS THROUGH THE DETENTION NORTH OF THE SUPERSTITION FREEWAY
164        RS      1    ELEV  1623.5
165        SV      0      .6     8.3    17.5    28.2    36.0    48.6
166        SE  1623.5  1624.0  1626.0  1628.0  1630.0  1632.0  1634.0
167        SQ      0       0      31      93     135     169     208
168        ST  1630.0     110     2.2     1.5

169        KK    C004  COMBINE FLOWS JUST NORTH OF FREEWAY
170        KM    COMBINE THE FLOWS JUST NORTH OF THE FREEWAY
171        HC      2
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LINE       ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

172        KK    NDIV
173        DT    EXIT
174        DI      0    1218    5000   10000
175        DQ      0       0    3782    8782

176        KK  NDROUT  ROUTE THROUGH THE FREEWAY
177        KM    ROUTE COMBINED FLOW THROUGH 3 BBL. 6 X 8 BOX CULVERTS
178        RS      1    ELEV  1622.6
179        SV      0     .02     .16    1.12    4.17   25.42
180        SE  1622.6  1623.0  1624.0  1626.0  1628.0  1630.0
181        SQ      0       0     101     372     738    1111
182        ST  1630.0    2875     2.2     1.5

183        KK    R28W  ROUTE TO CP102
184        KM     ROUTE THE FLOWS FROM DETENTION POND TO CP102 (POWERLINE F.R.S.)
185        RM      2     .40      .3

186        KK     28S  WATERSHED 28 SOUTH OF SUPERTITION FREEWAY
187        KM     HYDROGRAPH FOR WATERSHED 28 SOUTH
188        BA    1.91
189        LS      0      75
190        UD     .32

191        KK     102 CONCENTRATION PT. 102, WEEKES WASH WATERSHED AT POWERLINE FRS.
192        KM     COMBINE HYDROGRAPHS FROM CP D111 AND WS 2 (WE ARE NOW AT POWERLINE DAM)
193        HC      3

194        KK      5 WATERSHED 5 ( BEGINNING OF SIPHON DRAW WATERSHED)
195        KM     HYDROGRAPH FOR WS 5 (BEGINNING OF THE WATERSHED FOR SIPHON DRAW TO THE DAM)
196        BA    5.65
197        LS      0      81
198        UD     .71

199        KK      R5 ROUTE HYDROGRAPH FROM WS 5 TO CP 104
200        KM      ROUTE HYDROGRAPH FOR WS 5 TO CP 104
201        RM      1     .07      .3

202        KK      4 WATERSHED 4
203        KM     HYDROGRAPH FOR WATERSHED 4
204        BA   11.85
205        LS      0      82
206        UD    1.30

207        KK     104  CONCENTRATION POINT 104
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208          KM     COMBINE HYDROGRAPHS AT CP 104
209          HC       2

210          KK    R104
211          KM    ROUTE CP 104 TO 106
212          RM       2     .50      .3
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


213          KK       7  WATERSHED 7
214          KM    HYDROGRAPH FOR WATERSHED 7
215          BA     .61
216          LS       0      79
217          UD      .3

218          KK       6 WATERSHED 6
219          KM      HYDROGRAPH FOR WATERSHED 6
220          BA    7.86
221          LS       0      79
222          UD    1.08

223          KK     106 CONCENTRATION PT. 106. HYDROGRAPHS FROM R 5, WS 4, & WS 6
224          KM      COMBINE HYDROGRAPHS FROM R5, WS 4, AND WS 6
225          HC       3

226          KK    R106 ROUTE THE HYDROGRAPH FROM CP 106 TO WHERE NEXT WASH ENTERS.
227          KM      ROUTE HYDROGRAPH FROM CP 104 TO WHERE OTHER WASH ENTERS
228          RM       1     .27      .3

229          KK      3N WATERSHED 3N
230          KM      HYDROGRAPH FOR WATERSHED 3N
231          BA    2.89
232          LS       0      81
233          UD     .41

234          KK    CULV   ROUTE FLOWS THROUGH CULVERTS
235          KM     ROUTE FLOWS THROUGH THE CULVERTS
236          RS     1.0    ELEV    1665
237          SV       0     .15     .60     1.5     3.1     5.6     9.1    13.7   19.45   26.35
238          SE    1665  1665.5    1666  1666.5    1667  1667.5    1668  1668.5    1669  1669.5
239          SQ       0     119     375     688    1063    1462    1938    2375    2875    3375

240          KK   RCULV  ROUTE FLOWS TO W103
241          KM     ROUTE THE FLOWS TO CONCENTRATION POINT W103
242          RM       2      .5      .3

243          KK      3S  WATERSHED 3 SOUTH
244          KM      HYDROGRAPH FOR WATERSHED 3 SOUTH
245          BA    2.39
246          LS       0      74
247          UD    .436

248          KK     103
249          HC       2

250          KK      3A   WATERSHED 3A
251          KM     HYDROGRAPH FOR WATERSHED 3A
252          BA    1.20
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        253          LS      0     75
        254          UD     .4
1                                          HEC-1 INPUT                                                    PAGE  7

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


        255          KK   CP103
        256          KM     CONCENTRATION POINT FOR WEST FORK OF SIPHON DRAW
        257          HC      2

        258          KK    W103 CONCTRATION PT. W103 WHERE UNNAMED WASH ENTERS.
        259          KM      COMBINE HYDROGRAPHS FROM CP 104 AND WS 3 - SIPHON DRAW WATERSHED
        260          HC      2

        261          KK   RW103 ROUTE RESULTING HYDROGRAPH TO POWELINE DAM STRUCTURE
        262          KM      ROUTE THE HYDROGRAPH TO POWERLINE DAM
        263          RM      1    .16     .3

        264          KK     PLD CONCENTRATION PT. AT POWERLINE DAM
        265          KM     COMBINE HYDROGRAPHS FROM WEEKES WASH SUB-BASIN AND SIPHON DRAW SUB-BASIN
        266          KO      3
        267          HC      2

        268          KK     RES RESERVOIR ROUTING THROUGH THE STRUCTURE
        269          KM     RESERVOIR RATING CURVE
        270          RS      1   ELEV  1568.2
        271          SV      0    175    380    700   1100   1600   2175   2875   3675   4200
        272          SV   4600   5525   6725   7925
        273          SQ      0     75     92    106    119    130    141    150    159    165
        274          SQ   1228   7360  16800  27280
        275          SE  1568.1  1568.2  1570.0  1572.1  1574.1  1576.1  1578.1  1580.1  1582.1  1583.3
        276          SE  1584.1  1586.1  1588.1  1590.1
        277          SS  1583.3      0      0      0
        278          ST  1589.1  13358    2.2    1.5
        279          ZZ
1
             SCHEMATIC DIAGRAM OF STREAM NETWORK
 INPUT
  LINE     (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

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

   16          15
                V
                V
   33         R15
                .
                .
   36           .          14
                .           .
                .           .
   41           .           .          16
                .           .           .
                .           .           .
   46         114.......................
                V
                V
   49        R114
                .
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          .
52        .         13
          .          .
          .          .
57      113...........
          V
          V
60     R113
          .
          .
63        .         12
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          .          .
68      112...........
          V
          V
71     R112
          .
          .
74        .         11
          .          .
          .          .
79        .          .        17
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          .          .         .
84        .          .         .        10
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          .          .         .         .
89      111..................................
          V
          V
92    RD111
          .
          .
95        .         2A
          .          .
          .          .
100    CP2A...........
          .
          .
104       .-------->   FLOW
103   DIVERT
          V
          V
107    RR2A
          .
          .
110       .        2BE
          .          .
          .          .
115    102B...........
          V
          V
118   DET2BE
          .
          .
130       .-------->  SPILL
128    FRWAY
          V
          V
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133       CHAN
            V
            V
136       WASH
            .
            .
141         .          .<-------   SPILL
139         .      RSPILL
            .          V
            .          V
142         .       IDAHO
            .          .
            .          .
145        WW............
            V
            V
148       RWW
            .
            .
151         .        2BWW
            .          .
            .          .
156         .          .       2BWE
            .          .          V
            .          .          V
162         .          .      DET2BW
            .          .          .
            .          .          .
169         .        C004............
            .          .
            .          .
173         .          .------->   EXIT
172         .        NDIV
            .          V
            .          V
176         .      NDROUT
            .          V
            .          V
183         .        R2BW
            .          .
            .          .
186         .          .        2BS
            .          .          .
            .          .          .
191       102........................
            .
            .
194         .          5
            .          V
            .          V
199         .         R5
            .          .
            .          .
202         .          .          4
            .          .          .
            .          .          .
207         .        104............
            .          V
            .          V
210         .        R104
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                .          .
213             .          .          7
                .          .          .
                .          .          .
218             .          .          .          6
                .          .          .          .
                .          .          .          .
223             .        106.......................
                .          V
                .          V
226             .       R106
                .          .
                .          .
229             .          .         3N
                .          .          V
                .          .          V
234             .          .       CULV
                .          .          V
                .          .          V
240             .          .      RCULV
                .          .          .
                .          .          .
243             .          .          .         3S
                .          .          .          .
                .          .          .          .
248             .          .        103............
                .          .          .
                .          .          .
250             .          .          .         3A
                .          .          .          .
                .          .          .          .
255             .          .      CP103............
                .          .          .
                .          .          .
258             .       W103............
                .          V
                .          V
261             .      RW103
                .          .
                .          .
264          PLD............
               V
               V
268          RES
```

(***) 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

****

WEEKES WASH - POWERLINE F.R.S ANALYSIS

CONVERSION OF MODEL FROM TR-20

25- & 50-YEAR, 24-HOUR STORM; SCS EXCESS & HYDROGRAPH

DEVELOPMENT, MUSKINGUM ROUTING

CONDITIONS: 1: 25 & 50-YR, 24-HR STORM IS CONTAINED WITHIN THE BREAKOU

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                                        POINT OF WEEKES WASH AT JUNCTION ROAD.
                                      2: EXISTING CONDITIONS
                                      3: SUPERSTITION FREEWAY IN PLACE.
                                      4: ADJUSTED WATERSHED AREAS.
                                      5: BREAKOUT CURVE FOR NORTH DIVERSION DAM.
                                      6: NO MODIFICATIONS TO POWERLINE F.R.S.
                            FILE = DM4IN,DM4OUT

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

    IT        HYDROGRAPH TIME DATA
                    NMIN         10  MINUTES IN COMPUTATION INTERVAL
                   IDATE     1    0  STARTING DATE
                   ITIME       0000  STARTING TIME
                      NQ        200  NUMBER OF HYDROGRAPH ORDINATES
                  NDDATE     2    0  ENDING DATE
                  NDTIME       0910  ENDING TIME

              COMPUTATION INTERVAL     .17 HOURS
                  TOTAL TIME BASE   33.17 HOURS

        ENGLISH UNITS

    JP        MULTI-PLAN OPTION
                   NPLAN          1  NUMBER OF PLANS

    JR        MULTI-RATIO OPTION
                 RATIOS OF PRECIPITATION
                 .79      .91

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

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WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

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          ***************
          *             *
156 KK    *     2BWE    *      WATERSHED 2B WEST, EAST
          *             *
          ***************

158 KO         OUTPUT CONTROL VARIABLES
                    IPRNT          1  PRINT CONTROL
                    IPLOT          0  PLOT CONTROL
                    QSCAL         0.  HYDROGRAPH PLOT SCALE

            SUBBASIN RUNOFF DATA

159 BA         SUBBASIN CHARACTERISTICS
                    TAREA        .70  SUBBASIN AREA

               PRECIPITATION DATA

 18 PB              STORM       4.14  BASIN TOTAL PRECIPITATION

 20 PI           INCREMENTAL PRECIPITATION PATTERN
                    .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                    .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                    .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                    .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                    .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                    .00      .00      .00      .00      .01      .01      .01      .01      .01      .01
                    .01      .01      .01      .01      .01      .01      .01      .02      .02      .07
                    .13      .18      .03      .02      .02      .02      .01      .01      .02      .01
                    .01      .01      .01      .01      .01      .01      .01      .00      .00      .00
                    .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                    .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                    .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                    .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                    .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                    .00      .00      .00
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160 LS         SCS LOSS RATE
                    STRTL        .60  INITIAL ABSTRACTION
                   CRVNBR      77.00  CURVE NUMBER
                    RTIMP        .00  PERCENT IMPERVIOUS AREA

161 UD         SCS DIMENSIONLESS UNITGRAPH
                     TLAG        .30  LAG

                                                  ***

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

                                              UNIT HYDROGRAPH
                                          11 END-OF-PERIOD ORDINATES
            325.     864.     762.     385.     193.      94.      46.      23.      11.       6.
              2.
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                                          HYDROGRAPH AT STATION     2BWE

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DA	MON	HRMM	ORD	RAIN	LOSS	EXCESS	COMP Q	*	DA	MON	HRMM	ORD	RAIN	LOSS	EXCESS	COMP Q
								*								
1		0000	1	.00	.00	.00	0.	*	1		1640	101	.01	.00	.01	33.
1		0010	2	.01	.01	.00	0.	*	1		1650	102	.01	.00	.01	32.
1		0020	3	.01	.01	.00	0.	*	1		1700	103	.01	.00	.01	30.
1		0030	4	.01	.01	.00	0.	*	1		1710	104	.01	.00	.01	29.
1		0040	5	.01	.01	.00	0.	*	1		1720	105	.01	.00	.01	29.
1		0050	6	.01	.01	.00	0.	*	1		1730	106	.01	.00	.01	29.
1		0100	7	.01	.01	.00	0.	*	1		1740	107	.01	.00	.01	29.
1		0110	8	.01	.01	.00	0.	*	1		1750	108	.01	.00	.01	28.
1		0120	9	.01	.01	.00	0.	*	1		1800	109	.01	.00	.01	27.
1		0130	10	.01	.01	.00	0.	*	1		1810	110	.01	.00	.01	25.
1		0140	11	.01	.01	.00	0.	*	1		1820	111	.01	.00	.01	24.
1		0150	12	.01	.01	.00	0.	*	1		1830	112	.01	.00	.01	24.
1		0200	13	.01	.01	.00	0.	*	1		1840	113	.01	.00	.01	23.
1		0210	14	.01	.01	.00	0.	*	1		1850	114	.01	.00	.01	23.
1		0220	15	.01	.01	.00	0.	*	1		1900	115	.01	.00	.01	23.
1		0230	16	.01	.01	.00	0.	*	1		1910	116	.01	.00	.01	23.
1		0240	17	.01	.01	.00	0.	*	1		1920	117	.01	.00	.01	23.
1		0250	18	.01	.01	.00	0.	*	1		1930	118	.01	.00	.01	23.
1		0300	19	.01	.01	.00	0.	*	1		1940	119	.01	.00	.01	23.
1		0310	20	.01	.01	.00	0.	*	1		1950	120	.01	.00	.01	23.
1		0320	21	.01	.01	.00	0.	*	1		2000	121	.01	.00	.01	22.
1		0330	22	.01	.01	.00	0.	*	1		2010	122	.01	.00	.01	20.
1		0340	23	.01	.01	.00	0.	*	1		2020	123	.01	.00	.01	19.
1		0350	24	.01	.01	.00	0.	*	1		2030	124	.01	.00	.01	18.
1		0400	25	.01	.01	.00	0.	*	1		2040	125	.01	.00	.01	18.
1		0410	26	.01	.01	.00	0.	*	1		2050	126	.01	.00	.01	18.
1		0420	27	.01	.01	.00	0.	*	1		2100	127	.01	.00	.01	18.
1		0430	28	.01	.01	.00	0.	*	1		2110	128	.01	.00	.01	18.
1		0440	29	.01	.01	.00	0.	*	1		2120	129	.01	.00	.01	18.
1		0450	30	.01	.01	.00	0.	*	1		2130	130	.01	.00	.01	18.
1		0500	31	.01	.01	.00	0.	*	1		2140	131	.01	.00	.01	18.
1		0510	32	.01	.01	.00	0.	*	1		2150	132	.01	.00	.01	18.
1		0520	33	.01	.01	.00	0.	*	1		2200	133	.01	.00	.01	18.
1		0530	34	.01	.01	.00	0.	*	1		2210	134	.01	.00	.01	18.
1		0540	35	.01	.01	.00	0.	*	1		2220	135	.01	.00	.01	18.
1		0550	36	.01	.01	.00	0.	*	1		2230	136	.01	.00	.01	18.
1		0600	37	.01	.01	.00	0.	*	1		2240	137	.01	.00	.01	18.
1		0610	38	.01	.01	.00	0.	*	1		2250	138	.01	.00	.01	19.
1		0620	39	.01	.01	.00	0.	*	1		2300	139	.02	.00	.01	23.
1		0630	40	.01	.01	.00	0.	*	1		2310	140	.01	.00	.01	26.
1		0640	41	.01	.01	.00	0.	*	1		2320	141	.01	.00	.01	24.
1		0650	42	.01	.01	.00	0.	*	1		2330	142	.01	.00	.01	21.
1		0700	43	.01	.01	.00	0.	*	1		2340	143	.01	.00	.00	19.
1		0710	44	.01	.01	.00	0.	*	1		2350	144	.00	.00	.00	15.
1		0720	45	.01	.01	.00	0.	*	2		0000	145	.00	.00	.00	11.
1		0730	46	.01	.01	.00	0.	*	2		0010	146	.00	.00	.00	6.
1		0740	47	.01	.01	.00	0.	*	2		0020	147	.00	.00	.00	3.
1		0750	48	.01	.01	.00	0.	*	2		0030	148	.00	.00	.00	1.
1		0800	49	.01	.01	.00	0.	*	2		0040	149	.00	.00	.00	1.
1		0810	50	.02	.02	.00	0.	*	2		0050	150	.00	.00	.00	0.
1		0820	51	.02	.02	.00	0.	*	2		0100	151	.00	.00	.00	0.
1		0830	52	.02	.02	.00	0.	*	2		0110	152	.00	.00	.00	0.
1		0840	53	.02	.02	.00	0.	*	2		0120	153	.00	.00	.00	0.
1		0850	54	.02	.02	.00	0.	*	2		0130	154	.00	.00	.00	0.
1		0900	55	.02	.02	.00	0.	*	2		0140	155	.00	.00	.00	0.
1		0910	56	.02	.02	.00	0.	*	2		0150	156	.00	.00	.00	0.
1		0920	57	.02	.02	.00	1.	*	2		0200	157	.00	.00	.00	0.
1		0930	58	.02	.02	.00	1.	*	2		0210	158	.00	.00	.00	0.

1	0940	59	.02	.02	.00	2.	*	2	0220	159	.00	.00	.00	0.
1	0950	60	.02	.02	.00	3.	*	2	0230	160	.00	.00	.00	0.
1	1000	61	.02	.02	.00	4.	*	2	0240	161	.00	.00	.00	0.
1	1010	62	.03	.02	.00	5.	*	2	0250	162	.00	.00	.00	0.
1	1020	63	.03	.03	.00	6.	*	2	0300	163	.00	.00	.00	0.
1	1030	64	.03	.03	.00	8.	*	2	0310	164	.00	.00	.00	0.
1	1040	65	.04	.03	.01	10.	*	2	0320	165	.00	.00	.00	0.
1	1050	66	.05	.04	.01	14.	*	2	0330	166	.00	.00	.00	0.
1	1100	67	.05	.04	.01	18.	*	2	0340	167	.00	.00	.00	0.
1	1110	68	.06	.04	.01	23.	*	2	0350	168	.00	.00	.00	0.
1	1120	69	.06	.05	.02	29.	*	2	0400	169	.00	.00	.00	0.
1	1130	70	.07	.05	.02	37.	*	2	0410	170	.00	.00	.00	0.
1	1140	71	.29	.19	.10	71.	*	2	0420	171	.00	.00	.00	0.
1	1150	72	.52	.28	.25	192.	*	2	0430	172	.00	.00	.00	0.
1	1200	73	.76	.30	.46	451.	*	2	0440	173	.00	.00	.00	0.
1	1210	74	.12	.04	.08	656.	*	2	0450	174	.00	.00	.00	0.
1	1220	75	.10	.03	.07	559.	*	2	0500	175	.00	.00	.00	0.
1	1230	76	.08	.02	.05	373.	*	2	0510	176	.00	.00	.00	0.
1	1240	77	.06	.02	.04	261.	*	2	0520	177	.00	.00	.00	0.
1	1250	78	.04	.01	.03	188.	*	2	0530	178	.00	.00	.00	0.
1	1300	79	.02	.01	.02	135.	*	2	0540	179	.00	.00	.00	0.
1	1310	80	.07	.02	.05	104.	*	2	0550	180	.00	.00	.00	0.
1	1320	81	.05	.01	.04	104.	*	2	0600	181	.00	.00	.00	0.
1	1330	82	.04	.01	.03	103.	*	2	0610	182	.00	.00	.00	0.
1	1340	83	.03	.01	.02	89.	*	2	0620	183	.00	.00	.00	0.
1	1350	84	.03	.01	.02	75.	*	2	0630	184	.00	.00	.00	0.
1	1400	85	.03	.01	.02	66.	*	2	0640	185	.00	.00	.00	0.
1	1410	86	.02	.01	.02	60.	*	2	0650	186	.00	.00	.00	0.
1	1420	87	.02	.01	.02	55.	*	2	0700	187	.00	.00	.00	0.
1	1430	88	.02	.01	.02	51.	*	2	0710	188	.00	.00	.00	0.
1	1440	89	.02	.00	.01	47.	*	2	0720	189	.00	.00	.00	0.
1	1450	90	.02	.00	.01	44.	*	2	0730	190	.00	.00	.00	0.
1	1500	91	.02	.00	.01	41.	*	2	0740	191	.00	.00	.00	0.
1	1510	92	.02	.00	.01	40.	*	2	0750	192	.00	.00	.00	0.
1	1520	93	.02	.00	.01	39.	*	2	0800	193	.00	.00	.00	0.
1	1530	94	.02	.00	.01	38.	*	2	0810	194	.00	.00	.00	0.
1	1540	95	.02	.00	.01	36.	*	2	0820	195	.00	.00	.00	0.
1	1550	96	.02	.00	.01	35.	*	2	0830	196	.00	.00	.00	0.
1	1600	97	.02	.00	.01	34.	*	2	0840	197	.00	.00	.00	0.
1	1610	98	.02	.00	.01	34.	*	2	0850	198	.00	.00	.00	0.
1	1620	99	.02	.00	.01	34.	*	2	0900	199	.00	.00	.00	0.
1	1630	100	.02	.00	.01	34.	*	2	0910	200	.00	.00	.00	0.
							*							

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TOTAL RAINFALL = 4.14, TOTAL LOSS = 2.22, TOTAL EXCESS = 1.92

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	33.17-HR
+ (CFS)	(HR)					
		(CFS)				
+ 656.	12.17		118.	36.	26.	26.
		(INCHES)	1.564	1.922	1.922	1.922
		(AC-FT)	58.	72.	72.	72.

CUMULATIVE AREA = .70 SQ MI

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HYDROGRAPH AT STATION 28WE
PLAN 1, RATIO = .79

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0000	1	.00	.00	.00	0.	1		1640	101	.01	.00	.01	24.
1		0010	2	.00	.00	.00	0.	1		1650	102	.01	.00	.01	23.
1		0020	3	.01	.01	.00	0.	1		1700	103	.01	.00	.01	22.
1		0030	4	.01	.01	.00	0.	1		1710	104	.01	.00	.01	21.
1		0040	5	.01	.01	.00	0.	1		1720	105	.01	.00	.01	21.
1		0050	6	.01	.01	.00	0.	1		1730	106	.01	.00	.01	21.
1		0100	7	.01	.01	.00	0.	1		1740	107	.01	.00	.01	21.
1		0110	8	.01	.01	.00	0.	1		1750	108	.01	.00	.01	20.
1		0120	9	.01	.01	.00	0.	1		1800	109	.01	.00	.01	19.
1		0130	10	.01	.01	.00	0.	1		1810	110	.01	.00	.01	18.
1		0140	11	.01	.01	.00	0.	1		1820	111	.01	.00	.01	17.
1		0150	12	.01	.01	.00	0.	1		1830	112	.01	.00	.01	17.
1		0200	13	.01	.01	.00	0.	1		1840	113	.01	.00	.01	17.
1		0210	14	.01	.01	.00	0.	1		1850	114	.01	.00	.01	17.
1		0220	15	.01	.01	.00	0.	1		1900	115	.01	.00	.01	17.
1		0230	16	.01	.01	.00	0.	1		1910	116	.01	.00	.01	17.
1		0240	17	.01	.01	.00	0.	1		1920	117	.01	.00	.01	17.
1		0250	18	.01	.01	.00	0.	1		1930	118	.01	.00	.01	17.
1		0300	19	.01	.01	.00	0.	1		1940	119	.01	.00	.01	17.
1		0310	20	.01	.01	.00	0.	1		1950	120	.01	.00	.01	16.
1		0320	21	.01	.01	.00	0.	1		2000	121	.01	.00	.00	16.
1		0330	22	.01	.01	.00	0.	1		2010	122	.01	.00	.00	14.
1		0340	23	.01	.01	.00	0.	1		2020	123	.01	.00	.00	13.
1		0350	24	.01	.01	.00	0.	1		2030	124	.01	.00	.00	13.
1		0400	25	.01	.01	.00	0.	1		2040	125	.01	.00	.00	13.
1		0410	26	.01	.01	.00	0.	1		2050	126	.01	.00	.00	13.
1		0420	27	.01	.01	.00	0.	1		2100	127	.01	.00	.00	13.
1		0430	28	.01	.01	.00	0.	1		2110	128	.01	.00	.00	13.
1		0440	29	.01	.01	.00	0.	1		2120	129	.01	.00	.00	13.
1		0450	30	.01	.01	.00	0.	1		2130	130	.01	.00	.00	13.
1		0500	31	.01	.01	.00	0.	1		2140	131	.01	.00	.00	13.
1		0510	32	.01	.01	.00	0.	1		2150	132	.01	.00	.00	13.
1		0520	33	.01	.01	.00	0.	1		2200	133	.01	.00	.00	13.
1		0530	34	.01	.01	.00	0.	1		2210	134	.01	.00	.00	13.
1		0540	35	.01	.01	.00	0.	1		2220	135	.01	.00	.00	13.
1		0550	36	.01	.01	.00	0.	1		2230	136	.01	.00	.00	13.
1		0600	37	.01	.01	.00	0.	1		2240	137	.01	.00	.00	13.
1		0610	38	.01	.01	.00	0.	1		2250	138	.01	.00	.01	14.
1		0620	39	.01	.01	.00	0.	1		2300	139	.01	.00	.01	16.
1		0630	40	.01	.01	.00	0.	1		2310	140	.01	.00	.00	19.
1		0640	41	.01	.01	.00	0.	1		2320	141	.01	.00	.00	17.
1		0650	42	.01	.01	.00	0.	1		2330	142	.01	.00	.00	15.
1		0700	43	.01	.01	.00	0.	1		2340	143	.00	.00	.00	13.
1		0710	44	.01	.01	.00	0.	1		2350	144	.00	.00	.00	11.
1		0720	45	.01	.01	.00	0.	2		0000	145	.00	.00	.00	8.
1		0730	46	.01	.01	.00	0.	2		0010	146	.00	.00	.00	4.
1		0740	47	.01	.01	.00	0.	2		0020	147	.00	.00	.00	2.
1		0750	48	.01	.01	.00	0.	2		0030	148	.00	.00	.00	1.
1		0800	49	.01	.01	.00	0.	2		0040	149	.00	.00	.00	1.
1		0810	50	.01	.01	.00	0.	2		0050	150	.00	.00	.00	0.
1		0820	51	.01	.01	.00	0.	2		0100	151	.00	.00	.00	0.
1		0830	52	.02	.02	.00	0.	2		0110	152	.00	.00	.00	0.
1		0840	53	.02	.02	.00	0.	2		0120	153	.00	.00	.00	0.

1	0850	54	.02	.02	.00	0.	*	2	0130	154	.00	.00	.00	0.
1	0900	55	.02	.02	.00	0.	*	2	0140	155	.00	.00	.00	0.
1	0910	56	.02	.02	.00	0.	*	2	0150	156	.00	.00	.00	0.
1	0920	57	.02	.02	.00	0.	*	2	0200	157	.00	.00	.00	0.
1	0930	58	.02	.02	.00	0.	*	2	0210	158	.00	.00	.00	0.
1	0940	59	.02	.02	.00	0.	*	2	0220	159	.00	.00	.00	0.
1	0950	60	.02	.02	.00	0.	*	2	0230	160	.00	.00	.00	0.
1	1000	61	.02	.02	.00	0.	*	2	0240	161	.00	.00	.00	0.
1	1010	62	.02	.02	.00	0.	*	2	0250	162	.00	.00	.00	0.
1	1020	63	.02	.02	.00	0.	*	2	0300	163	.00	.00	.00	0.
1	1030	64	.03	.03	.00	1.	*	2	0310	164	.00	.00	.00	0.
1	1040	65	.03	.03	.00	2.	*	2	0320	165	.00	.00	.00	0.
1	1050	66	.04	.03	.00	3.	*	2	0330	166	.00	.00	.00	0.
1	1100	67	.04	.04	.00	6.	*	2	0340	167	.00	.00	.00	0.
1	1110	68	.05	.04	.01	8.	*	2	0350	168	.00	.00	.00	0.
1	1120	69	.05	.04	.01	12.	*	2	0400	169	.00	.00	.00	0.
1	1130	70	.06	.05	.01	16.	*	2	0410	170	.00	.00	.00	0.
1	1140	71	.23	.17	.06	36.	*	2	0420	171	.00	.00	.00	0.
1	1150	72	.42	.26	.15	110.	*	2	0430	172	.00	.00	.00	0.
1	1200	73	.60	.30	.31	280.	*	2	0440	173	.00	.00	.00	0.
1	1210	74	.10	.04	.06	424.	*	2	0450	174	.00	.00	.00	0.
1	1220	75	.08	.03	.05	368.	*	2	0500	175	.00	.00	.00	0.
1	1230	76	.06	.02	.04	249.	*	2	0510	176	.00	.00	.00	0.
1	1240	77	.05	.02	.03	176.	*	2	0520	177	.00	.00	.00	0.
1	1250	78	.03	.01	.02	128.	*	2	0530	178	.00	.00	.00	0.
1	1300	79	.02	.01	.01	93.	*	2	0540	179	.00	.00	.00	0.
1	1310	80	.05	.02	.03	72.	*	2	0550	180	.00	.00	.00	0.
1	1320	81	.04	.01	.03	73.	*	2	0600	181	.00	.00	.00	0.
1	1330	82	.03	.01	.02	72.	*	2	0610	182	.00	.00	.00	0.
1	1340	83	.02	.01	.02	63.	*	2	0620	183	.00	.00	.00	0.
1	1350	84	.02	.01	.02	53.	*	2	0630	184	.00	.00	.00	0.
1	1400	85	.02	.01	.01	47.	*	2	0640	185	.00	.00	.00	0.
1	1410	86	.02	.01	.01	43.	*	2	0650	186	.00	.00	.00	0.
1	1420	87	.02	.01	.01	39.	*	2	0700	187	.00	.00	.00	0.
1	1430	88	.02	.01	.01	36.	*	2	0710	188	.00	.00	.00	0.
1	1440	89	.02	.01	.01	34.	*	2	0720	189	.00	.00	.00	0.
1	1450	90	.02	.01	.01	31.	*	2	0730	190	.00	.00	.00	0.
1	1500	91	.02	.01	.01	29.	*	2	0740	191	.00	.00	.00	0.
1	1510	92	.02	.01	.01	29.	*	2	0750	192	.00	.00	.00	0.
1	1520	93	.01	.00	.01	28.	*	2	0800	193	.00	.00	.00	0.
1	1530	94	.01	.00	.01	27.	*	2	0810	194	.00	.00	.00	0.
1	1540	95	.01	.00	.01	26.	*	2	0820	195	.00	.00	.00	0.
1	1550	96	.01	.00	.01	25.	*	2	0830	196	.00	.00	.00	0.
1	1600	97	.01	.00	.01	25.	*	2	0840	197	.00	.00	.00	0.
1	1610	98	.01	.00	.01	24.	*	2	0850	198	.00	.00	.00	0.
1	1620	99	.01	.00	.01	24.	*	2	0900	199	.00	.00	.00	0.
1	1630	100	.01	.00	.01	24.	*	2	0910	200	.00	.00	.00	0.
							*							

****

TOTAL RAINFALL = 3.29, TOTAL LOSS = 2.01, TOTAL EXCESS = 1.28

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	33.17-HR
+ (CFS)	(HR)					
		(CFS)				
+ 424.	12.17		78.	24.	17.	17.
		(INCHES)	1.039	1.275	1.275	1.275
		(AC-FT)	39.	48.	48.	48.

CUMULATIVE AREA = .70 SQ MI

****

HYDROGRAPH AT STATION 2BWE
PLAN 1, RATIO = .91

****

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0000	1	.00	.00	.00	0.	1		1640	101	.01	.00	.01	29.
1		0010	2	.01	.01	.00	0.	1		1650	102	.01	.00	.01	27.
1		0020	3	.01	.01	.00	0.	1		1700	103	.01	.00	.01	26.
1		0030	4	.01	.01	.00	0.	1		1710	104	.01	.00	.01	25.
1		0040	5	.01	.01	.00	0.	1		1720	105	.01	.00	.01	25.
1		0050	6	.01	.01	.00	0.	1		1730	106	.01	.00	.01	25.
1		0100	7	.01	.01	.00	0.	1		1740	107	.01	.00	.01	25.
1		0110	8	.01	.01	.00	0.	1		1750	108	.01	.00	.01	25.
1		0120	9	.01	.01	.00	0.	1		1800	109	.01	.00	.01	24.
1		0130	10	.01	.01	.00	0.	1		1810	110	.01	.00	.01	22.
1		0140	11	.01	.01	.00	0.	1		1820	111	.01	.00	.01	21.
1		0150	12	.01	.01	.00	0.	1		1830	112	.01	.00	.01	21.
1		0200	13	.01	.01	.00	0.	1		1840	113	.01	.00	.01	20.
1		0210	14	.01	.01	.00	0.	1		1850	114	.01	.00	.01	20.
1		0220	15	.01	.01	.00	0.	1		1900	115	.01	.00	.01	20.
1		0230	16	.01	.01	.00	0.	1		1910	116	.01	.00	.01	20.
1		0240	17	.01	.01	.00	0.	1		1920	117	.01	.00	.01	20.
1		0250	18	.01	.01	.00	0.	1		1930	118	.01	.00	.01	20.
1		0300	19	.01	.01	.00	0.	1		1940	119	.01	.00	.01	20.
1		0310	20	.01	.01	.00	0.	1		1950	120	.01	.00	.01	20.
1		0320	21	.01	.01	.00	0.	1		2000	121	.01	.00	.01	19.
1		0330	22	.01	.01	.00	0.	1		2010	122	.01	.00	.01	17.
1		0340	23	.01	.01	.00	0.	1		2020	123	.01	.00	.01	16.
1		0350	24	.01	.01	.00	0.	1		2030	124	.01	.00	.01	16.
1		0400	25	.01	.01	.00	0.	1		2040	125	.01	.00	.01	16.
1		0410	26	.01	.01	.00	0.	1		2050	126	.01	.00	.01	15.
1		0420	27	.01	.01	.00	0.	1		2100	127	.01	.00	.01	15.
1		0430	28	.01	.01	.00	0.	1		2110	128	.01	.00	.01	15.
1		0440	29	.01	.01	.00	0.	1		2120	129	.01	.00	.01	15.
1		0450	30	.01	.01	.00	0.	1		2130	130	.01	.00	.01	15.
1		0500	31	.01	.01	.00	0.	1		2140	131	.01	.00	.01	15.
1		0510	32	.01	.01	.00	0.	1		2150	132	.01	.00	.01	15.
1		0520	33	.01	.01	.00	0.	1		2200	133	.01	.00	.01	15.
1		0530	34	.01	.01	.00	0.	1		2210	134	.01	.00	.01	15.
1		0540	35	.01	.01	.00	0.	1		2220	135	.01	.00	.01	15.
1		0550	36	.01	.01	.00	0.	1		2230	136	.01	.00	.01	15.
1		0600	37	.01	.01	.00	0.	1		2240	137	.01	.00	.01	15.
1		0610	38	.01	.01	.00	0.	1		2250	138	.01	.00	.01	16.
1		0620	39	.01	.01	.00	0.	1		2300	139	.02	.00	.01	20.
1		0630	40	.01	.01	.00	0.	1		2310	140	.01	.00	.01	23.
1		0640	41	.01	.01	.00	0.	1		2320	141	.01	.00	.01	21.
1		0650	42	.01	.01	.00	0.	1		2330	142	.01	.00	.01	18.
1		0700	43	.01	.01	.00	0.	1		2340	143	.01	.00	.00	16.
1		0710	44	.01	.01	.00	0.	1		2350	144	.00	.00	.00	13.
1		0720	45	.01	.01	.00	0.	2		0000	145	.00	.00	.00	9.
1		0730	46	.01	.01	.00	0.	2		0010	146	.00	.00	.00	5.
1		0740	47	.01	.01	.00	0.	2		0020	147	.00	.00	.00	3.
1		0750	48	.01	.01	.00	0.	2		0030	148	.00	.00	.00	1.

1	0800	49	.01	.01	.00	0.	*	2	0040	149	.00	.00	.00	1.
1	0810	50	.02	.02	.00	0.	*	2	0050	150	.00	.00	.00	0.
1	0820	51	.02	.02	.00	0.	*	2	0100	151	.00	.00	.00	0.
1	0830	52	.02	.02	.00	0.	*	2	0110	152	.00	.00	.00	0.
1	0840	53	.02	.02	.00	0.	*	2	0120	153	.00	.00	.00	0.
1	0850	54	.02	.02	.00	0.	*	2	0130	154	.00	.00	.00	0.
1	0900	55	.02	.02	.00	0.	*	2	0140	155	.00	.00	.00	0.
1	0910	56	.02	.02	.00	0.	*	2	0150	156	.00	.00	.00	0.
1	0920	57	.02	.02	.00	0.	*	2	0200	157	.00	.00	.00	0.
1	0930	58	.02	.02	.00	0.	*	2	0210	158	.00	.00	.00	0.
1	0940	59	.02	.02	.00	0.	*	2	0220	159	.00	.00	.00	0.
1	0950	60	.02	.02	.00	1.	*	2	0230	160	.00	.00	.00	0.
1	1000	61	.02	.02	.00	1.	*	2	0240	161	.00	.00	.00	0.
1	1010	62	.03	.02	.00	2.	*	2	0250	162	.00	.00	.00	0.
1	1020	63	.03	.03	.00	3.	*	2	0300	163	.00	.00	.00	0.
1	1030	64	.03	.03	.00	4.	*	2	0310	164	.00	.00	.00	0.
1	1040	65	.04	.03	.00	6.	*	2	0320	165	.00	.00	.00	0.
1	1050	66	.04	.04	.01	9.	*	2	0330	166	.00	.00	.00	0.
1	1100	67	.05	.04	.01	12.	*	2	0340	167	.00	.00	.00	0.
1	1110	68	.05	.04	.01	16.	*	2	0350	168	.00	.00	.00	0.
1	1120	69	.06	.05	.01	21.	*	2	0400	169	.00	.00	.00	0.
1	1130	70	.07	.05	.02	27.	*	2	0410	170	.00	.00	.00	0.
1	1140	71	.26	.18	.08	54.	*	2	0420	171	.00	.00	.00	0.
1	1150	72	.48	.27	.20	154.	*	2	0430	172	.00	.00	.00	0.
1	1200	73	.69	.30	.39	372.	*	2	0440	173	.00	.00	.00	0.
1	1210	74	.11	.04	.07	549.	*	2	0450	174	.00	.00	.00	0.
1	1220	75	.09	.03	.06	471.	*	2	0500	175	.00	.00	.00	0.
1	1230	76	.07	.02	.05	316.	*	2	0510	176	.00	.00	.00	0.
1	1240	77	.06	.02	.04	222.	*	2	0520	177	.00	.00	.00	0.
1	1250	78	.04	.01	.03	161.	*	2	0530	178	.00	.00	.00	0.
1	1300	79	.02	.01	.01	115.	*	2	0540	179	.00	.00	.00	0.
1	1310	80	.06	.02	.04	90.	*	2	0550	180	.00	.00	.00	0.
1	1320	81	.05	.01	.03	90.	*	2	0600	181	.00	.00	.00	0.
1	1330	82	.03	.01	.02	89.	*	2	0610	182	.00	.00	.00	0.
1	1340	83	.03	.01	.02	77.	*	2	0620	183	.00	.00	.00	0.
1	1350	84	.03	.01	.02	65.	*	2	0630	184	.00	.00	.00	0.
1	1400	85	.03	.01	.02	57.	*	2	0640	185	.00	.00	.00	0.
1	1410	86	.02	.01	.02	52.	*	2	0650	186	.00	.00	.00	0.
1	1420	87	.02	.01	.02	48.	*	2	0700	187	.00	.00	.00	0.
1	1430	88	.02	.01	.01	44.	*	2	0710	188	.00	.00	.00	0.
1	1440	89	.02	.01	.01	41.	*	2	0720	189	.00	.00	.00	0.
1	1450	90	.02	.01	.01	38.	*	2	0730	190	.00	.00	.00	0.
1	1500	91	.02	.00	.01	36.	*	2	0740	191	.00	.00	.00	0.
1	1510	92	.02	.00	.01	35.	*	2	0750	192	.00	.00	.00	0.
1	1520	93	.02	.00	.01	34.	*	2	0800	193	.00	.00	.00	0.
1	1530	94	.02	.00	.01	33.	*	2	0810	194	.00	.00	.00	0.
1	1540	95	.02	.00	.01	31.	*	2	0820	195	.00	.00	.00	0.
1	1550	96	.02	.00	.01	30.	*	2	0830	196	.00	.00	.00	0.
1	1600	97	.02	.00	.01	30.	*	2	0840	197	.00	.00	.00	0.
1	1610	98	.02	.00	.01	30.	*	2	0850	198	.00	.00	.00	0.
1	1620	99	.02	.00	.01	30.	*	2	0900	199	.00	.00	.00	0.
1	1630	100	.02	.00	.01	30.	*	2	0910	200	.00	.00	.00	0.
							*							

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TOTAL RAINFALL = 3.75, TOTAL LOSS = 2.13, TOTAL EXCESS = 1.62

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	33.17-HR
+ (CFS)	(HR)				

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                    (CFS)
+    549.    12.17                99.        31.        22.        22.
                  (INCHES)     1.322      1.623      1.623      1.623
                   (AC-FT)      49.        61.        61.        61.

                  CUMULATIVE AREA =     .70 SQ MI


WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN       0. TO     1462.
              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 *** TIME INTERVAL IS GREATER THAN .29*LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG


*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***


          ***************
          *             *
 264 KK   *      PLD    *     CONCENTRATION PT. AT POWERLINE DAM
          *             *
          ***************

 266 KO        OUTPUT CONTROL VARIABLES
                    IPRNT          3  PRINT CONTROL
                    IPLOT          0  PLOT CONTROL
                    QSCAL         0.  HYDROGRAPH PLOT SCALE

 267 HC        HYDROGRAPH COMBINATION
                    ICOMP          2  NUMBER OF HYDROGRAPHS TO COMBINE

                                                          ***

     ***           ***           ***           ***           ***

                     HYDROGRAPH AT STATION      PLD
                      FOR PLAN 1, RATIO =  .79

 PEAK FLOW    TIME                      MAXIMUM AVERAGE FLOW
                                  6-HR       24-HR      72-HR     33.17-HR
+  (CFS)      (HR)
                    (CFS)
+   9101.    13.83               5757.      1871.      1354.      1354.
                  (INCHES)     1.137      1.478      1.478      1.478
                   (AC-FT)     2855.      3711.      3711.      3711.

                  CUMULATIVE AREA =   47.07 SQ MI


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HYDROGRAPH AT STATION PLD
FOR PLAN 1, RATIO = .91

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	33.17-HR
+		(CFS)				
+ 11534.	13.83		7246.	2340.	1694.	1694.
		(INCHES)	1.431	1.849	1.849	1.849
		(AC-FT)	3593.	4642.	4642.	4642.

CUMULATIVE AREA = 47.07 SQ MI

1

PEAK FLOW AND STAGE (END-OF-PERIOD) SUMMARY FOR MULTIPLE PLAN-RATIO ECONOMIC COMPUTATIONS
FLOWS IN CUBIC FEET PER SECOND, AREA IN SQUARE MILES
TIME TO PEAK IN HOURS

OPERATION	STATION	AREA	PLAN		RATIOS APPLIED TO PRECIPITATION RATIO 1 .79	RATIO 2 .91
HYDROGRAPH AT						
+	15	1.76	1	FLOW	1427.	1810.
				TIME	12.00	12.00
ROUTED TO						
+	R15	1.76	1	FLOW	1432.	1808.
				TIME	12.17	12.17
HYDROGRAPH AT						
+	14	1.11	1	FLOW	963.	1225.
				TIME	12.00	12.00
HYDROGRAPH AT						
+	16	2.16	1	FLOW	1518.	1900.
				TIME	12.17	12.17
3 COMBINED AT						
+	114	5.03	1	FLOW	3732.	4691.
				TIME	12.17	12.17
ROUTED TO						
+	R114	5.03	1	FLOW	3447.	4336.
				TIME	12.33	12.33
HYDROGRAPH AT						
+	13	1.29	1	FLOW	1499.	1850.
				TIME	12.00	12.00
2 COMBINED AT						
+	113	6.32	1	FLOW	3926.	4919.
				TIME	12.33	12.33
ROUTED TO						
+	R113	6.32	1	FLOW	3742.	4693.

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HYDROGRAPH AT
+                12      1.32     1  FLOW      1308.   1586.
                                       TIME     12.17   12.17

 2 COMBINED AT
+               112      7.64     1  FLOW      4478.   5604.
                                       TIME     12.33   12.33

ROUTED TO
+              R112      7.64     1  FLOW      4455.   5565.
                                       TIME     12.50   12.50

HYDROGRAPH AT
+                11       .70     1  FLOW       614.    769.
                                       TIME     12.00   12.00

HYDROGRAPH AT
+                17       .37     1  FLOW       337.    428.
                                       TIME     12.00   12.00

HYDROGRAPH AT
+                10       .54     1  FLOW       647.    791.
                                       TIME     12.00   12.00

 4 COMBINED AT
+               111      9.25     1  FLOW      5059.   6313.
                                       TIME     12.33   12.33

ROUTED TO
+             RD111      9.25     1  FLOW      4725.   5897.
                                       TIME     13.00   13.00

HYDROGRAPH AT
+                2A      1.09     1  FLOW       629.    827.
                                       TIME     12.17   12.17

 2 COMBINED AT
+              CP2A     10.34     1  FLOW      4821.   6018.
                                       TIME     13.00   13.00

DIVERSION TO
+              FLOW     10.34     1  FLOW         0.      0.
                                       TIME       .17     .17

HYDROGRAPH AT
+            DIVERT     10.34     1  FLOW      4821.   6018.
                                       TIME     13.00   13.00

ROUTED TO
+              RR2A     10.34     1  FLOW      4519.   5635.
                                       TIME     13.50   13.50

HYDROGRAPH AT
+               2BE      1.22     1  FLOW       628.    803.
                                       TIME     12.33   12.33

 2 COMBINED AT
+              102B     11.56     1  FLOW      4677.   5829.
                                       TIME     13.50   13.50
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ROUTED TO
+                DET2BE     11.56     1  FLOW       3944.    5570.
                                        TIME       13.83    13.67

                                   ** PEAK STAGES IN FEET **
                                   1  STAGE     1650.45  1651.55
                                        TIME       13.83    13.67

DIVERSION TO
+                 SPILL     11.56     1  FLOW        279.    1905.
                                        TIME       13.83    13.67

HYDROGRAPH AT
+                 FRWAY     11.56     1  FLOW       3665.    3665.
                                        TIME       13.67    13.33

ROUTED TO
+                  CHAN     11.56     1  FLOW       3681.    3699.
                                        TIME       13.83    13.50

ROUTED TO
+                  WASH     11.56     1  FLOW       3525.    3644.
                                        TIME       14.50    14.50

HYDROGRAPH AT
+                RSPILL       .00     1  FLOW        279.    1905.
                                        TIME       13.83    13.67

ROUTED TO
+                 IDAHO       .00     1  FLOW        193.    1780.
                                        TIME       14.00    13.67

 2 COMBINED AT
+                    WW     11.56     1  FLOW       3525.    4949.
                                        TIME       14.50    13.83

ROUTED TO
+                   RWW     11.56     1  FLOW       3319.    4059.
                                        TIME       15.33    14.83

HYDROGRAPH AT
+                  2BWW       .45     1  FLOW        231.     298.
                                        TIME       12.33    12.33

HYDROGRAPH AT
+                  2BWE       .70     1  FLOW        424.     549.
                                        TIME       12.17    12.17

ROUTED TO
+                DET2BW       .70     1  FLOW        100.     124.
                                        TIME       13.00    13.00

                                   ** PEAK STAGES IN FEET **
                                   1  STAGE     1628.35  1629.48
                                        TIME       13.00    13.00

 2 COMBINED AT
+                  C004      1.15     1  FLOW        298.     393.
                                        TIME       12.33    12.33
```

```
DIVERSION TO
+                EXIT     1.15    1  FLOW        0.      0.
                                    TIME       .17     .17

HYDROGRAPH AT
+                NDIV     1.15    1  FLOW      298.    393.
                                    TIME     12.33   12.33

ROUTED TO
+              NDROUT     1.15    1  FLOW      290.    381.
                                    TIME     12.50   12.33

                                  ** PEAK STAGES IN FEET **
                                  1  STAGE  1625.40  1626.05
                                     TIME     12.50   12.33

ROUTED TO
+                R2BW     1.15    1  FLOW      268.    350.
                                    TIME     12.83   12.83

HYDROGRAPH AT
+                 2BS     1.91    1  FLOW      977.   1291.
                                    TIME     12.17   12.17

 3 COMBINED AT
+                 102    14.62    1  FLOW     3480.   4296.
                                    TIME     15.33   14.83

HYDROGRAPH AT
+                   5     5.65    1  FLOW     2532.   3180.
                                    TIME     12.67   12.67

ROUTED TO
+                  R5     5.65    1  FLOW     2531.   3187.
                                    TIME     12.67   12.67

HYDROGRAPH AT
+                   4    11.85    1  FLOW     3681.   4598.
                                    TIME     13.33   13.33

 2 COMBINED AT
+                 104    17.50    1  FLOW     5639.   7069.
                                    TIME     13.00   13.00

ROUTED TO
+                R104    17.50    1  FLOW     5377.   6745.
                                    TIME     13.50   13.50

HYDROGRAPH AT
+                   7      .61    1  FLOW      413.    526.
                                    TIME     12.17   12.17

HYDROGRAPH AT
+                   6     7.86    1  FLOW     2383.   3046.
                                    TIME     13.00   13.00

 3 COMBINED AT
+                 106    25.97    1  FLOW     7565.   9543.
                                    TIME     13.33   13.33
```

```
ROUTED TO
+                R106     25.97    1  FLOW       7378.    9294.
                                     TIME      13.67    13.67

HYDROGRAPH AT
+                  3N      2.89    1  FLOW       1812.    2272.
                                     TIME      12.33    12.33

ROUTED TO
+                CULV      2.89    1  FLOW       1724.    2122.
                                     TIME      12.33    12.33

                                  ** PEAK STAGES IN FEET **
                                  1  STAGE    1667.78  1668.21
                                     TIME      12.33    12.33

ROUTED TO
+               RCULV      2.89    1  FLOW       1492.    1857.
                                     TIME      12.83    12.83

HYDROGRAPH AT
+                  3S      2.39    1  FLOW        976.    1299.
                                     TIME      12.33    12.33

 2 COMBINED AT
+                 103      5.28    1  FLOW       2013.    2530.
                                     TIME      12.83    12.83

HYDROGRAPH AT
+                  3A      1.20    1  FLOW        548.     719.
                                     TIME      12.33    12.33

 2 COMBINED AT
+               CP103      6.48    1  FLOW       2336.    2953.
                                     TIME      12.67    12.67

 2 COMBINED AT
+                W103     32.45    1  FLOW       8349.   10556.
                                     TIME      13.50    13.50

ROUTED TO
+               RW103     32.45    1  FLOW       8298.   10490.
                                     TIME      13.67    13.67

 2 COMBINED AT
+                 PLD     47.07    1  FLOW       9101.   11534.
                                     TIME      13.83    13.83

ROUTED TO
+                 RES     47.07    1  FLOW        158.     695.
                                     TIME      27.33    25.67

                                  ** PEAK STAGES IN FEET **
                                  1  STAGE    1581.98  1583.70
                                     TIME      27.33    25.67
1                        SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION   DET28E

     PLAN  1 ..............                INITIAL VALUE    SPILLWAY CREST    TOP OF DAM
```

ELEVATION	1636.00	1650.00	1650.00
STORAGE	0.	153.	153.
OUTFLOW	0.	3534.	3534.

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
.79	1650.45	.45	160.	3944.	.50	13.83	.00
.91	1651.55	1.55	177.	5570.	1.00	13.67	.00

1 SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION DET28W

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1623.50	1630.00	1630.00
STORAGE	0.	28.	28.
OUTFLOW	0.	135.	135.

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
.79	1628.35	.00	19.	100.	.00	13.00	.00
.91	1629.48	.00	25.	124.	.00	13.00	.00

1 SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION NDROUT

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1622.60	1630.00	1630.00
STORAGE	0.	25.	25.
OUTFLOW	0.	1111.	1111.

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
.79	1625.40	.00	1.	290.	.00	12.50	.00
.91	1626.05	.00	1.	381.	.00	12.33	.00

1 SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION RES

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1568.20	1583.30	1589.10
STORAGE	175.	4200.	7325.
OUTFLOW	75.	165.	22040.

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
.79	1581.98	.00	3627.	158.	.00	27.33	.00
.91	1583.70	.00	4399.	695.	.00	25.67	.00

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

DM5 - Vineyard & Rittenhouse
PMF - 6-hour PMP

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

****

THIS HEC-1 VERSION CONTAINS ALL OPTIONS EXCEPT ECONOMICS, AND THE NUMBER OF PLANS ARE REDUCED TO 3


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

              *DIAGRAM
   1          ID     VINEYARD AND RITTENHOUSE F.R.S. ANALYSIS
   2          ID     6-HR PMP STORM; SCS EXCESS & HYDROGRAPH DEVELOPMENT,
   3          ID     MUSKINGUM ROUTING
   4          ID     ANTECEDENT SOIL MOISTURE CONDITION III
   5          ID     TIME INCREMENT = 5 MINUTES
   6          ID     FILENAME = DM5IN, DM5OUT
   7          IT       5      0      0    150
   8          IO       5
   9          IN      15

  10          KK   SUBR1
  11          KM     HYDROGRAPH FOR SUBBASIN R1
  12          BA    1.56
  13          PB    7.60
  14          PI     .05    .05    .05    .05    .15    .15    .15    .15    .30    .30
  15          PI     .30    .30   2.30   1.10    .60    .50    .18    .18    .18    .18
  16          PI     .10    .10    .10    .10
  17          LS       0    94.
  18          UD     .72

  19          KK    RR2a
  20          KM    ROUTE HYDROGRAPH FROM SUBBASIN R1 TO R2 ACROSS HWY 60
  21          RS       1   STOR      0
  22          SA       0      1     26    115    224    326
  23          SE    1800 1810.6   1820   1830   1840   1850
  24          SQ       0    290    692   1204   2198   6601  17223  34714
  25          SE  1810.6   1812   1813   1814 1815.9 1818.5 1819.5 1820.5

  26          KK   RR2-1
  27          KM     ROUTE HYDROGRAPH FROM SUBBASIN R1 THRU REACH R2-1
  28          RM       9   1.06     .3

  29          KK   RR2-2
  30          KM     ROUTE HYDROGRAPH FROM SUBBASIN R1 THRU REACH R2-2
  31          RM       9   1.06     .3

  32          KK   RR2-3
  33          KM     ROUTE HYDROGRAPH FROM SUBBASIN R1 THRU REACH R2-3
  34          RM       9   1.06     .3
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 35          KK   SUBR2
 36          KM     HYDROGRAPH FOR SUBBASIN R2
 37          BA    8.43
 38          LS       0     93.
 39          UD    1.90

 40          KK    HCR2
 41          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R1 & R2
 42          HC       2
1                                        HEC-1 INPUT                                          PAGE  2

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


 43          KK   SUBR3
 44          KM     HYDROGRAPH FOR SUBBASIN R3
 45          BA    1.10
 46          LS       0     95.
 47          UD     .69

 48          KK    RR4a
 49          KM    ROUTE HYDROGRAPH FROM SUBBASIN R3 TO R4 ACROSS HWY 60
 50          RS       1    STOR       0
 51          SA       0       1      26     115     205
 52          SE  1823.4  1827.8    1840    1850    1860
 53          SQ       0     412    1127    1832    9597   23670   46850
 54          SE  1827.8    1830    1832  1833.6    1837    1838    1839

 55          KK   RR4-1
 56          KM     ROUTE HYDROGRAPH FROM SUBBASIN R3 THRU REACH R4-1
 57          RM       7     .85      .3

 58          KK   RR4-2
 59          KM     ROUTE HYDROGRAPH FROM SUBBASIN R3 THRU REACH R4-2
 60          RM       7     .85      .3

 61          KK   SUBR4
 62          KM     HYDROGRAPH FOR SUBBASIN R4
 63          BA    2.67
 64          LS       0     93.
 65          UD    1.01

 66          KK    HCR4
 67          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R3 & R4
 68          HC       2

 69          KK   SUBR5
 70          KM     HYDROGRAPH FOR SUBBASIN R5
 71          BA    2.71
 72          LS       0     98.
 73          UD     .39

 74          KK     RR6
 75          KM     ROUTE HYDROGRAPH FROM SUBBASIN R5
 76          RM       5     .51      .3

 77          KK   SUBR6
 78          KM     HYDROGRAPH FOR SUBBASIN R6
 79          BA    4.19
 80          LS       0     97.
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 81          UD    .70

 82          KK   HCR6
 83          KM    COMBINE HYDROGRAPHS FOR SUBBASINS R5 & R6
 84          HC      2
```



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


 85          KK    RR7
 86          KM    ROUTE HYDROGRAPH FROM SUBBASINS R5 & R6
 87          RM      6     .68      .3

 88          KK   SUBR7
 89          KM    HYDROGRAPH FOR SUBBASIN R7
 90          BA   2.67
 91          LS      0     97.
 92          UD    .41

 93          KK   HCR7
 94          KM    COMBINE HYDROGRAPHS FOR SUBBASINS R5 THRU R7
 95          HC      2

 96          KK   RR8-1
 97          KM    ROUTE HYDROGRAPH FROM SUBBASINS R5 THRU R7 THRU REACH R8-1
 98          RM      6     .70      .3

 99          KK   RR8-2
100          KM    ROUTE HYDROGRAPH FROM SUBBASINS R5 THRU R7 THRU REACH R8-2
101          RM      6     .70      .3

102          KK   SUBR8
103          KM    HYDROGRAPH FOR SUBBASIN R8
104          BA   2.00
105          LS      0     93.
106          UD    .83

107          KK   HCR8
108          KM    COMBINE HYDROGRAPHS FOR SUBBASINS R5 THRU R8
109          HC      2

110          KK   RR9a
111          KM   ROUTE HYDROGRAPH FROM SUBBASINS R5 THRU R8 TO R9 ACROSS HWY 60
112          RS      1    STOR      0
113          SA      0      1     26     77    141
114          SE  1813.9  1829.5   1840   1850   1860
115          SQ      0    563   2236   4601   5986  27109
116          SE  1829.5   1831   1833   1835   1836   1840

117          KK    RR9
118          KM    ROUTE HYDROGRAPH FROM SUBBASINS R5 THRU R8
119          RM      4     .44      .3

120          KK   SUBR9
121          KM    HYDROGRAPH FOR SUBBASIN R9
122          BA   0.26
123          LS      0     90.
124          UD    .27
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


 125          KK   HCR9
 126          KM    COMBINE HYDROGRAPHS FOR SUBBASINS R5 THRU R9
 127          HC      2

 128          KK  SUBR10
 129          KM    HYDROGRAPH FOR SUBBASIN R10
 130          BA   3.35
 131          LS      0     96.
 132          UD    .92

 133          KK  SUBR11
 134          KM    HYDROGRAPH FOR SUBBASIN R11
 135          BA   3.90
 136          LS      0     96.
 137          UD    .78

 138          KK  HCR11
 139          KM    COMBINE HYDROGRAPHS FOR SUBBASINS R10 & R11
 140          HC      2

 141          KK   RR12
 142          KM    ROUTE HYDROGRAPH FROM SUBBASINS R10 & R11
 143          RM      5    .55     .3

 144          KK  SUBR12
 145          KM    HYDROGRAPH FOR SUBBASIN R12
 146          BA   4.46
 147          LS      0     95.
 148          UD    .76

 149          KK  HCR12
 150          KM    COMBINE HYDROGRAPHS FOR SUBBASINS R10 THRU R12
 151          HC      2

 152          KK  RR13a
 153          KM   ROUTE HYDROGRAPH FROM SUBBASINS R10 THRU R12 TO R13 ACROSS HWY 60
 154          RS      1   STOR      0
 155          SA      0      1     83    186    358
 156          SE 1793.6 1819.4   1840   1850   1860
 157          SQ      0   2071   5240   9357  14240  18616  62142
 158          SE 1819.4   1822   1824   1826   1828 1829.6 1834.5

 159          KK   RR13
 160          KM    ROUTE HYDROGRAPH FROM SUBBASINS R10 THRU R13
 161          RM      4    .41     .3

 162          KK  SUBR13
 163          KM    HYDROGRAPH FOR SUBBASIN R13
 164          BA   1.27
 165          LS      0     95.
 166          UD    .85
```


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

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167          KK  HCR13a
168          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R10 THRU R13
169          HC       2

170          KK  HCR13b
171          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R5 THRU R13
172          HC       2

173          KK   RR14
174          KM     ROUTE HYDROGRAPH FROM SUBBASINS R5 THRU R13
175          RM       9    1.10      .3

176          KK  SUBR14
177          KM     HYDROGRAPH FOR SUBBASIN R14
178          BA    2.82
179          LS       0     92.
180          UD     .76

181          KK  HCR14a
182          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R5 THRU R14
183          HC       2

184          KK  HCR14b
185          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R3 THRU R14
186          HC       2

187          KK  RR15-1
188          KM     ROUTE HYDROGRAPH FROM SUBBASINS R3 THRU R14 THRU REACH R15-1
189          RM       5     .63      .3

190          KK  RR15-2
191          KM     ROUTE HYDROGRAPH FROM SUBBASINS R3 THRU R14 THRU REACH R15-2
192          RM       5     .63      .3

193          KK  SUBR15
194          KM     HYDROGRAPH FOR SUBBASIN R15
195          BA    6.30
196          LS       0     93.
197          UD    1.47

198          KK  HCR15a
199          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R3 THRU R15
200          HC       2

201          KK  HCR15b
202          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R1 THRU R15
203          HC       2

204          KK   HDR16
205          KM     DIVERT FLOW FROM RITTENHOUSE (TO VINEYARD FRS)
206          DT   DVR16
207          DI       0     100     500    1000  100000
208          DQ       0      50     130     130     130
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

209          KK    RESR
210          KM     RESERVOIR ROUTING THRU RITTENHOUSE F.R.S.
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```
211          KO      1      2
212          RS      1   STOR      0
213          SA      0    118    200    400    600    800
214          SE   1585 1587.5 1589.1 1592.9 1596.5 1600.5
215          SL 1577.7   5.94    .62    1.5
216          SS 1597.6    600      3    1.5
217          ST 1602.3  19000    3.3    1.5

218          KK  SUBV1
219          KM    HYDROGRAPH FOR SUBBASIN V1
220          BA   3.03
221          LS      0    97.
222          UD    .53

223          KK  SUBV2
224          KM    HYDROGRAPH FOR SUBBASIN V2
225          BA   3.34
226          LS      0    93.
227          UD    .47

228          KK    RV3
229          KM    ROUTE HYDROGRAPH FROM SUBBASIN V2
230          RM      4    .38     .3

231          KK  SUBV3
232          KM    HYDROGRAPH FOR SUBBASIN V3
233          BA   0.40
234          LS      0    95.
235          UD    .30

236          KK   HCV3
237          KM    COMBINE HYDROGRAPHS FOR SUBBASINS V1 THRU V3
238          HC      3

239          KK    RV4
240          KM    ROUTE HYDROGRAPH FROM SUBBASINS V1 THRU V3
241          RM      4    .43     .3

242          KK  SUBV4
243          KM    HYDROGRAPH FOR SUBBASIN V4
244          BA   1.85
245          LS      0    95.     15
246          UD    .52

247          KK   HCV4
248          KM    COMBINE HYDROGRAPHS FOR SUBBASINS V1 THRU V4
249          HC      2
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

250          KK    RV5
251          KM    ROUTE HYDROGRAPH FROM SUBBASINS V1 THRU V4
252          RM      8    .66     .3

253          KK  SUBV5
254          KM    HYDROGRAPH FOR SUBBASIN V5
255          BA   1.66
256          LS      0    95.
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257          UD     .45

258          KK    HCV5
259          KM    COMBINE HYDROGRAPHS FOR SUBBASINS V1 THRU V5
260          HC       2

261          KK    RV6a
262          KM    ROUTE HYDROGRAPH FROM SUBBASINS V1 THRU V5 TO V6 ACROSS HWY 60
263          RS       1    STOR       0
264          SA       0       1      45     147     205
265          SE  1719.9  1739.7    1750    1760    1770
266          SQ       0     387    2348    6889   19775   36999
267          SE  1739.7  1740.7  1742.7  1745.6    1749    1750

268          KK   RV6-1
269          KM     ROUTE HYDROGRAPH FROM SUBBASINS V1 THRU V5 THRU REACH RV6-1
270          RM       9     .83      .3

271          KK   RV6-2
272          KM     ROUTE HYDROGRAPH FROM SUBBASINS V1 THRU V5 THRU REACH RV6-2
273          RM       9     .83      .3

274          KK   SUBV6
275          KM     HYDROGRAPH FOR SUBBASIN V6
276          BA    3.59
277          LS       0     87.
278          UD     .99

279          KK    HCV6
280          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V1 THRU V6
281          HC       2

282          KK   SUBV7
283          KM     HYDROGRAPH FOR SUBBASIN V7
284          BA    1.69
285          LS       0     97.
286          UD     .74

287          KK   SUBV8
288          KM     HYDROGRAPH FOR SUBBASIN V8
289          BA    0.73
290          LS       0     95.      50
291          UD     .33
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


292          KK    HCV8
293          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V7 & V8
294          HC       2

295          KK     RV9
296          KM     ROUTE HYDROGRAPH FROM SUBBASINS V7 & V8
297          RM       3     .23      .3

298          KK   SUBV9
299          KM     HYDROGRAPH FOR SUBBASIN V9
300          BA    0.95
301          LS       0     96.
```

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302          UD     .41

303          KK    HCV9
304          KM    COMBINE HYDROGRAPHS FOR SUBBASINS V7 THRU V9
305          HC       2

306          KK   RV10a
307          KM    ROUTE HYDROGRAPH FROM SUBBASINS V7 THRU V9 TO V10 ACROSS HWY 60
308          RS       1    STOR       0
309          SA       0      19      77     179     294
310          SE    1745    1770    1780    1790    1800
311          SQ       0    1211    3230    6108    9716   14201   63126
312          SE    1773    1775    1777    1779    1781  1783.3  1788.5

313          KK  RV10-1
314          KM     ROUTE HYDROGRAPH FROM SUBBASINS V7 THRU V9 THRU REACH V10-1
315          RM       9     .86      .3

316          KK  RV10-2
317          KM     ROUTE HYDROGRAPH FROM SUBBASINS V7 THRU V9 THRU REACH V10-2
318          RM       9     .86      .3

319          KK  RV10-3
320          KM     ROUTE HYDROGRAPH FROM SUBBASINS V7 THRU V9 THRU REACH V10-3
321          RM       9     .86      .3

322          KK  SUBV10
323          KM     HYDROGRAPH FOR SUBBASIN V10
324          BA    5.48
325          LS       0     95.
326          UD    1.54

327          KK   HCV10
328          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V7 THRU V10
329          HC       2

330          KK  SUBV11
331          KM     HYDROGRAPH FOR SUBBASIN V11
332          BA    0.44
333          LS       0     97.
334          UD     .93
```



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

335          KK   RV12a
336          KM    ROUTE HYDROGRAPH FROM SUBBASIN V11 TO V12 ACROSS HWY 60
337          RS       1    STOR       0
338          SA       0      32      64      96
339          SE  1773.7    1790    1800    1810
340          SQ       0      24     237     363    5249   12106   38086
341          SE  1773.7  1774.7  1778.7  1780.7  1784.5  1785.5  1787.5

342          KK  RV12-1
343          KM     ROUTE HYDROGRAPH FROM SUBBASIN V11 THRU REACH V12-1
344          RM       9    1.15      .3

345          KK  RV12-2
346          KM     ROUTE HYDROGRAPH FROM SUBBASIN V11 THRU REACH V12-2
```

```
347          RM      9    1.15      .3

348          KK  SUBV12
349          KM     HYDROGRAPH FOR SUBBASIN V12
350          BA    3.32
351          LS      0     95.
352          UD    1.38

353          KK   HCV12
354          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V11 & V12
355          HC      2

356          KK  SUBV13
357          KM     HYDROGRAPH FOR SUBBASIN V13
358          BA    2.35
359          LS      0     97.
360          UD     .99

361          KK   RV14a
362          KM    ROUTE HYDROGRAPH FROM SUBBASIN V13 TO V14 ACROSS HWY 60
363          RS      1    STOR      0
364          SA      0       1     38      96     154
365          SE  1780.4  1786.9   1800    1810    1820
366          SQ      0     120     372    1191    1925   16426   62329
367          SE  1786.9    1788    1789  1791.5    1794    1796    1798

368          KK  RV14-1
369          KM     ROUTE HYDROGRAPH FROM SUBBASIN V13 THRU REACH V14-1
370          RM      9     .96      .3

371          KK  RV14-2
372          KM     ROUTE HYDROGRAPH FROM SUBBASIN V13 THRU REACH V14-2
373          RM      9     .96      .3

374          KK  RV14-3
375          KM     ROUTE HYDROGRAPH FROM SUBBASIN V13 THRU REACH V14-3
376          RM      9     .96      .3
```



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


377          KK  SUBV14
378          KM     HYDROGRAPH FOR SUBBASIN V14
379          BA    4.09
380          LS      0     95.
381          UD    1.73

382          KK   HCV14
383          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V13 & V14
384          HC      2

385          KK  SUBV15
386          KM     HYDROGRAPH FOR SUBBASIN V15
387          BA    1.64
388          LS      0     97.
389          UD     .62

390          KK   RV16a
391          KM    ROUTE HYDROGRAPH FROM SUBBASIN V15 TO V16 ACROSS HWY 60
```

```
392        RS      1   STOR      0
393        SA      0      1     58    141    160
394        SE 1779.4   1786   1800   1810   1820
395        SQ      0    192    572   1061   1866   9058  26139
396        SE   1786 1787.5   1789 1790.5 1792.6   1796   1797

397        KK   RV16
398        KM    ROUTE HYDROGRAPH FROM SUBBASIN V15
399        RM      4    .48     .3

400        KK  SUBV16
401        KM    HYDROGRAPH FOR SUBBASIN V16
402        BA   0.76
403        LS      0    97.
404        UD    .29

405        KK   HCV16
406        KM    COMBINE HYDROGRAPHS FOR SUBBASINS V15 & V16
407        HC      2

408        KK  SUBV17
409        KM    HYDROGRAPH FOR SUBBASIN V17
410        BA   4.06
411        LS      0    97.
412        UD    .69

413        KK   RV18
414        KM    ROUTE HYDROGRAPH FROM SUBBASIN V17
415        RM      9   1.14     .3

416        KK  SUBV18
417        KM    HYDROGRAPH FOR SUBBASIN V18
418        BA   5.06
419        LS      0    97.
420        UD    .93
```



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

421        KK   HCV18
422        KM    COMBINE HYDROGRAPHS FOR SUBBASINS V17 & V18
423        HC      2

424        KK   RV19
425        KM    ROUTE HYDROGRAPH FROM SUBBASINS V17 & V18
426        RM      6    .38     .3

427        KK  SUBV19
428        KM    HYDROGRAPH FOR SUBBASIN V19
429        BA   2.77
430        LS      0    96.
431        UD    .59

432        KK   HCV19
433        KM    COMBINE HYDROGRAPHS FOR SUBBASINS V17 THRU V19
434        HC      2

435        KK   RV20a
436        KM    ROUTE HYDROGRAPH FROM SUBBASINS V17 THRU V19 TO V20 ACROSS HWY 60
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437          RS      1   STOR      0
438          SA      0      1     13     51    154    294
439          SE   1768  1796.4   1800   1810   1820   1830
440          SQ      0   1226   4652   9549  16620  41739
441          SE  1796.4   1798   1800   1802  1804.3  1808.5

442          KK   RV20
443          KM    ROUTE HYDROGRAPH FROM SUBBASINS V17 THRU V19
444          RM      6    .72     .3

445          KK  SUBV20
446          KM    HYDROGRAPH FOR SUBBASIN V20
447          BA   0.48
448          LS      0    95.
449          UD    .43

450          KK  HCV20a
451          KM    COMBINE HYDROGRAPHS FOR SUBBASINS V17 THRU V20
452          HC      2

453          KK  HCV20b
454          KM    COMBINE HYDROGRAPHS FOR SUBBASINS V15 THRU V20
455          HC      2

456          KK   RV21
457          KM    ROUTE HYDROGRAPH FROM SUBBASINS V15 THRU V20
458          RM      9   1.21     .3

459          KK  SUBV21
460          KM    HYDROGRAPH FOR SUBBASIN V21
461          BA   4.43
462          LS      0    94.
463          UD   1.83
```



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


464          KK  HCV21a
465          KM    COMBINE HYDROGRAPHS FOR SUBBASINS V15 THRU V21
466          HC      2

467          KK  HCV21b
468          KM    COMBINE HYDROGRAPHS FOR SUBBASINS V1 THRU V21
469          HC      5

470          KK  HCV22a
471          KM    DIVERSION FROM RITTENHOUSE FRS
472          DR   DVR16

473          KK  HCV22b
474          KM    COMBINING DIVERSION WITH UPSTREAM HYDROGRAPH
475          HC      2

476          KK   RESV
477          KM    RESERVOIR ROUTING THRU VINEYARD F.R.S.
478          KO      1      2
479          RS      1   STOR      0
480          SA      0     65    200    400    600    800   1000   1200
481          SE  1564.2   1565  1566.6  1569.5  1571.8  1574.2  1576.1  1579.2
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482          SL  1561.5    15.9      .7     1.5
483          SS  1574.8     600       3     1.5
484          ST  1579.5   28829     3.3     1.5
485          ZZ
1
                SCHEMATIC DIAGRAM OF STREAM NETWORK
INPUT
 LINE     (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

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

   10      SUBR1
              V
              V
   19       RR2a
              V
              V
   26      RR2-1
              V
              V
   29      RR2-2
              V
              V
   32      RR2-3
              .
              .
   35         .       SUBR2
              .          .
              .          .
   40       HCR2............
              .
              .
   43         .       SUBR3
              .          V
              .          V
   48         .       RR4a
              .          V
              .          V
   55         .      RR4-1
              .          V
              .          V
   58         .      RR4-2
              .          .
              .          .
   61         .          .      SUBR4
              .          .         .
              .          .         .
   66         .       HCR4............
              .          .
              .          .
   69         .          .      SUBR5
              .          .         V
              .          .         V
   74         .          .       RR6
              .          .         .
              .          .         .
   77         .          .         .      SUBR6
              .          .         .         .
              .          .         .         .
   82         .          .      HCR6............
```

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          .         .         V
          .         .         V
 85       .         .        RR7
          .         .         .
          .         .         .
 88       .         .         .      SUBR7
          .         .         .         .
          .         .         .         .
 93       .         .       HCR7............
          .         .         V
          .         .         V
 96       .         .      RR8-1
          .         .         V
          .         .         V
 99       .         .      RR8-2
          .         .         .
          .         .         .
102       .         .         .      SUBR8
          .         .         .         .
          .         .         .         .
107       .         .       HCR8............
          .         .         V
          .         .         V
110       .         .       RR9a
          .         .         V
          .         .         V
117       .         .        RR9
          .         .         .
          .         .         .
120       .         .         .      SUBR9
          .         .         .         .
          .         .         .         .
125       .         .       HCR9............
          .         .         .
          .         .         .
128       .         .         .     SUBR10
          .         .         .         .
          .         .         .         .
133       .         .         .         .     SUBR11
          .         .         .         .         .
          .         .         .         .         .
138       .         .         .      HCR11............
          .         .         .         V
          .         .         .         V
141       .         .         .       RR12
          .         .         .         .
          .         .         .         .
144       .         .         .         .     SUBR12
          .         .         .         .         .
          .         .         .         .         .
149       .         .         .      HCR12............
          .         .         .         V
          .         .         .         V
152       .         .         .      RR13a
          .         .         .         V
          .         .         .         V
159       .         .         .       RR13
          .         .         .         .
          .         .         .         .
162       .         .         .         .     SUBR13
```

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                .          .          .          .          .
                .          .          .          .          .
167             .          .          .     HCR13a............
                .          .          .          .
                .          .          .          .
170             .          .     HCR13b............
                .          .          V
                .          .          V
173             .          .       RR14
                .          .          .
                .          .          .
176             .          .          .     SUBR14
                .          .          .          .
                .          .          .          .
181             .          .     HCR14a............
                .          .          .
                .          .          .
184             .     HCR14b............
                .          V
                .          V
187             .     RR15-1
                .          V
                .          V
190             .     RR15-2
                .          .
                .          .
193             .          .     SUBR15
                .          .          .
                .          .          .
198             .     HCR15a............
                .          .
                .          .
201        HCR15b............
                .
                .
206             .-------> DVR16
204        HDR16
               V
               V
209        RESR
                .
                .
218             .     SUBV1
                .          .
                .          .
223             .          .     SUBV2
                .          .          V
                .          .          V
228             .          .       RV3
                .          .          .
                .          .          .
231             .          .          .     SUBV3
                .          .          .          .
                .          .          .          .
236             .     HCV3.......................
                .          V
                .          V
239             .       RV4
                .          .
                .          .
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242          .          .      SUBV4
             .          .          .
             .          .          .
247          .      HCV4............
             .        V
             .        V
250          .       RV5
             .        .
             .        .
253          .          .      SUBV5
             .          .          .
             .          .          .
258          .      HCV5............
             .        V
             .        V
261          .      RV6a
             .        V
             .        V
268          .     RV6-1
             .        V
             .        V
271          .     RV6-2
             .        .
             .        .
274          .          .      SUBV6
             .          .          .
             .          .          .
279          .      HCV6............
             .        .
             .        .
282          .          .      SUBV7
             .          .          .
             .          .          .
287          .          .          .      SUBV8
             .          .          .          .
             .          .          .          .
292          .          .      HCV8............
             .          .        V
             .          .        V
295          .          .       RV9
             .          .          .
             .          .          .
298          .          .          .      SUBV9
             .          .          .          .
             .          .          .          .
303          .          .      HCV9............
             .          .        V
             .          .        V
306          .          .     RV10a
             .          .        V
             .          .        V
313          .          .    RV10-1
             .          .        V
             .          .        V
316          .          .    RV10-2
             .          .        V
             .          .        V
319          .          .    RV10-3
             .          .        .
             .          .        .
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322          .         .         .     SUBV10
             .         .         .         .
             .         .         .         .
327          .         .     HCV10............
             .         .         .
             .         .         .
330          .         .         .     SUBV11
             .         .         .         V
             .         .         .         V
335          .         .         .      RV12a
             .         .         .         V
             .         .         .         V
342          .         .         .     RV12-1
             .         .         .         V
             .         .         .         V
345          .         .         .     RV12-2
             .         .         .         .
             .         .         .         .
348          .         .         .         .     SUBV12
             .         .         .         .         .
             .         .         .         .         .
353          .         .         .      HCV12............
             .         .         .         .
             .         .         .         .
356          .         .         .         .     SUBV13
             .         .         .         .         V
             .         .         .         .         V
361          .         .         .         .      RV14a
             .         .         .         .         V
             .         .         .         .         V
368          .         .         .         .     RV14-1
             .         .         .         .         V
             .         .         .         .         V
371          .         .         .         .     RV14-2
             .         .         .         .         V
             .         .         .         .         V
374          .         .         .         .     RV14-3
             .         .         .         .         .
             .         .         .         .         .
377          .         .         .         .         .     SUBV14
             .         .         .         .         .         .
             .         .         .         .         .         .
382          .         .         .         .      HCV14............
             .         .         .         .         .
             .         .         .         .         .
385          .         .         .         .         .     SUBV15
             .         .         .         .         .         V
             .         .         .         .         .         V
390          .         .         .         .         .      RV16a
             .         .         .         .         .         V
             .         .         .         .         .         V
397          .         .         .         .         .      RV16
             .         .         .         .         .         .
             .         .         .         .         .         .
400          .         .         .         .         .         .     SUBV16
             .         .         .         .         .         .         .
             .         .         .         .         .         .         .
405          .         .         .         .         .      HCV16............
             .         .         .         .         .         .
             .         .         .         .         .         .
```

```
408          .         .         .         .         .         .     SUBV17
             .         .         .         .         .         .        V
             .         .         .         .         .         .        V
413          .         .         .         .         .         .      RV18
             .         .         .         .         .         .        .
             .         .         .         .         .         .        .
416          .         .         .         .         .         .        .     SUBV18
             .         .         .         .         .         .        .        .
             .         .         .         .         .         .        .        .
421          .         .         .         .         .         .     HCV18............
             .         .         .         .         .         .        V
             .         .         .         .         .         .        V
424          .         .         .         .         .         .      RV19
             .         .         .         .         .         .        .
             .         .         .         .         .         .        .
427          .         .         .         .         .         .        .     SUBV19
             .         .         .         .         .         .        .        .
             .         .         .         .         .         .        .        .
432          .         .         .         .         .         .     HCV19............
             .         .         .         .         .         .        V
             .         .         .         .         .         .        V
435          .         .         .         .         .         .     RV20a
             .         .         .         .         .         .        V
             .         .         .         .         .         .        V
442          .         .         .         .         .         .      RV20
             .         .         .         .         .         .        .
             .         .         .         .         .         .        .
445          .         .         .         .         .         .        .     SUBV20
             .         .         .         .         .         .        .        .
             .         .         .         .         .         .        .        .
450          .         .         .         .         .         .     HCV20a...........
             .         .         .         .         .         .        .
             .         .         .         .         .         .        .
453          .         .         .         .         .     HCV20b...........
             .         .         .         .         .         V
             .         .         .         .         .         V
456          .         .         .         .         .       RV21
             .         .         .         .         .         .
             .         .         .         .         .         .
459          .         .         .         .         .         .     SUBV21
             .         .         .         .         .         .        .
             .         .         .         .         .         .        .
464          .         .         .         .         .     HCV21a...........
             .         .         .         .         .         .
             .         .         .         .         .         .
467          .     HCV21b.............................................
             .         .
             .         .
472          .         .         .<-------   DVR16
470          .         .     HCV22a
             .         .         .
             .         .         .
473          .     HCV22b...........
             .         V
             .         V
476          .       RESV
```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

U.S. ARMY CORPS OF ENGINEERS, THE HYDROLOGIC ENGINEERING CENTER, 609 SECOND STREET, DAVIS, CA. 95616
****

VINEYARD AND RITTENHOUSE F.R.S. ANALYSIS
6-HR PMP STORM; SCS EXCESS & HYDROGRAPH DEVELOPMENT,
MUSKINGUM ROUTING
ANTECEDENT SOIL MOISTURE CONDITION III
TIME INCREMENT = 5 MINUTES
FILENAME = DM5IN, DM5OUT

```
  8 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     1    0  STARTING DATE
                   ITIME       0000  STARTING TIME
                      NQ        150  NUMBER OF HYDROGRAPH ORDINATES
                  NDDATE     1    0  ENDING DATE
                  NDTIME       1225  ENDING TIME

              COMPUTATION INTERVAL     .08 HOURS
                  TOTAL TIME BASE   12.42 HOURS

        ENGLISH UNITS

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN     6601. TO    34714.
               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     9597. TO   301830.
               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 *** TIME INTERVAL IS GREATER THAN .29*LAG

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN        0. TO     2071.
               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.)


*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***


          ***************
          *             *
209 KK    *     RESR    *
          *             *
          ***************

211 KO        OUTPUT CONTROL VARIABLES
                   IPRNT          1  PRINT CONTROL
                   IPLOT          2  PLOT CONTROL
                   QSCAL         0.  HYDROGRAPH PLOT SCALE
```

HYDROGRAPH ROUTING DATA

```
212 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

213 SA            AREA         .0     118.0     200.0     400.0     600.0     800.0

214 SE        ELEVATION    1585.00   1587.50   1589.10   1592.90   1596.50   1600.50

215 SL        LOW-LEVEL OUTLET
                   ELEVL    1577.70  ELEVATION AT CENTER OF OUTLET
                   CAREA       5.94  CROSS-SECTIONAL AREA
                    COQL        .62  COEFFICIENT
                    EXPL       1.50  EXPONENT OF HEAD

216 SS        SPILLWAY
                    CREL    1597.60  SPILLWAY CREST ELEVATION
                   SPWID     600.00  SPILLWAY WIDTH
                    COQW       3.00  WEIR COEFFICIENT
                    EXPW       1.50  EXPONENT OF HEAD

217 ST        TOP OF DAM
                   TOPEL    1602.30  ELEVATION AT TOP OF DAM
                  DAMWID   19000.00  DAM WIDTH
                    COQD       3.30  WEIR COEFFICIENT
                    EXPD       1.50  EXPONENT OF HEAD
```

***

COMPUTED STORAGE-ELEVATION DATA

STORAGE	.00	98.33	349.86	1468.14	3256.01	6046.44
ELEVATION	1585.00	1587.50	1589.10	1592.90	1596.50	1600.50

COMPUTED OUTFLOW-ELEVATION DATA

(EXCLUDING FLOW OVER DAM)

OUTFLOW	.00	718.35	873.76	1050.11	1248.72	1470.92	1718.01	1991.35	2292.22	2622.00
ELEVATION	1585.00	1586.09	1587.27	1588.51	1589.84	1591.24	1592.71	1594.27	1595.89	1597.60
OUTFLOW	2656.75	2768.00	3004.52	3412.79	4040.19	4933.41	6139.43	7705.24	9677.88	12105.01
ELEVATION	1597.66	1597.76	1597.92	1598.13	1598.39	1598.70	1599.07	1599.50	1599.97	1600.50

COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

(INCLUDING FLOW OVER DAM)

STORAGE	.00	8.25	73.14	98.33	242.06	349.86	509.18	884.24	1394.13	1468.14
OUTFLOW	582.56	718.35	873.76	906.14	1050.11	1136.87	1248.72	1470.92	1718.01	1750.33
ELEVATION	1585.00	1586.09	1587.27	1587.50	1588.51	1589.10	1589.84	1591.24	1592.71	1592.90
STORAGE	2062.05	2903.69	3256.01	3944.47	3980.93	4048.97	4153.00	4294.06	4474.00	4694.84
OUTFLOW	1991.35	2292.22	2407.64	2622.00	2656.75	2768.00	3004.52	3412.79	4040.19	4933.41
ELEVATION	1594.27	1595.89	1596.50	1597.60	1597.66	1597.76	1597.92	1598.13	1598.39	1598.70

STORAGE	4959.15	5270.01	5631.03	6046.44
OUTFLOW	6139.43	7705.24	9677.88	12105.01
ELEVATION	1599.07	1599.50	1599.97	1600.50

****

HYDROGRAPH AT STATION RESR

****

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1		0000	1	583.	.0	1585.0	*	1		0410	51	1338.	649.8	1590.4	*	1		0820	101	37676.	7901.9	1602.7
1		0005	2	0.	.0	1585.0	*	1		0415	52	1400.	755.4	1590.8	*	1		0825	102	36579.	7885.7	1602.6
1		0010	3	0.	.0	1585.0	*	1		0420	53	1464.	871.5	1591.2	*	1		0830	103	35536.	7869.9	1602.6
1		0015	4	0.	.0	1585.0	*	1		0425	54	1530.	998.2	1591.6	*	1		0835	104	34540.	7854.4	1602.6
1		0020	5	0.	.0	1585.0	*	1		0430	55	1598.	1135.5	1592.0	*	1		0840	105	33582.	7839.2	1602.6
1		0025	6	0.	.0	1585.0	*	1		0435	56	1668.	1283.7	1592.4	*	1		0845	106	32648.	7824.0	1602.6
1		0030	7	0.	.0	1585.0	*	1		0440	57	1739.	1442.7	1592.8	*	1		0850	107	31726.	7808.6	1602.6
1		0035	8	583.	.0	1585.0	*	1		0445	58	1812.	1612.5	1593.3	*	1		0855	108	30798.	7792.6	1602.5
1		0040	9	0.	.0	1585.0	*	1		0450	59	1885.	1791.8	1593.7	*	1		0900	109	29863.	7776.0	1602.5
1		0045	10	583.	.0	1585.0	*	1		0455	60	1960.	1980.8	1594.1	*	1		0905	110	28902.	7758.3	1602.5
1		0050	11	0.	.0	1585.0	*	1		0500	61	2035.	2178.5	1594.5	*	1		0910	111	27912.	7739.3	1602.5
1		0055	12	583.	.0	1585.0	*	1		0505	62	2111.	2383.9	1594.9	*	1		0915	112	26896.	7718.8	1602.5
1		0100	13	0.	.0	1585.0	*	1		0510	63	2187.	2595.9	1595.3	*	1		0920	113	25861.	7696.5	1602.4
1		0105	14	583.	.0	1585.0	*	1		0515	64	2262.	2813.1	1595.7	*	1		0925	114	24822.	7672.3	1602.4
1		0110	15	0.	.0	1585.0	*	1		0520	65	2336.	3035.2	1596.1	*	1		0930	115	23806.	7645.9	1602.4
1		0115	16	583.	.0	1585.0	*	1		0525	66	2409.	3259.7	1596.5	*	1		0935	116	22857.	7616.9	1602.3
1		0120	17	0.	.0	1585.0	*	1		0530	67	2480.	3484.2	1596.9	*	1		0940	117	22080.	7584.7	1602.3
1		0125	18	583.	.0	1585.0	*	1		0535	68	2550.	3710.3	1597.2	*	1		0945	118	21756.	7547.1	1602.3
1		0130	19	0.	.0	1585.0	*	1		0540	69	2619.	3936.1	1597.6	*	1		0950	119	21457.	7502.7	1602.2
1		0135	20	583.	.0	1585.0	*	1		0545	70	3024.	4160.3	1597.9	*	1		0955	120	21117.	7452.1	1602.2
1		0140	21	0.	.0	1585.0	*	1		0550	71	3703.	4380.9	1598.3	*	1		1000	121	20740.	7395.9	1602.1
1		0145	22	583.	.0	1585.0	*	1		0555	72	4522.	4596.7	1598.6	*	1		1005	122	20333.	7334.9	1602.0
1		0150	23	0.	.0	1585.0	*	1		0600	73	5431.	4807.5	1598.9	*	1		1010	123	19898.	7269.8	1602.0
1		0155	24	583.	.0	1585.0	*	1		0605	74	6403.	5013.5	1599.1	*	1		1015	124	19443.	7201.2	1601.9
1		0200	25	0.	.0	1585.0	*	1		0610	75	7419.	5215.2	1599.4	*	1		1020	125	18971.	7129.8	1601.8
1		0205	26	583.	.0	1585.0	*	1		0615	76	8471.	5413.3	1599.7	*	1		1025	126	18485.	7056.1	1601.7
1		0210	27	0.	.0	1585.0	*	1		0620	77	9553.	5608.9	1599.9	*	1		1030	127	17991.	6980.7	1601.6
1		0215	28	613.	.1	1585.3	*	1		0625	78	10663.	5802.8	1600.2	*	1		1035	128	17492.	6904.1	1601.5
1		0220	29	583.	.0	1585.0	*	1		0630	79	11801.	5995.7	1600.4	*	1		1040	129	16990.	6826.8	1601.4
1		0225	30	583.	.0	1585.0	*	1		0635	80	12964.	6188.1	1600.7	*	1		1045	130	16488.	6749.0	1601.4
1		0230	31	635.	.5	1585.4	*	1		0640	81	14149.	6380.1	1600.9	*	1		1050	131	15988.	6671.1	1601.3
1		0235	32	664.	1.8	1585.7	*	1		0645	82	15354.	6571.5	1601.1	*	1		1055	132	15493.	6593.5	1601.2
1		0240	33	691.	4.3	1585.9	*	1		0650	83	16571.	6762.0	1601.4	*	1		1100	133	15004.	6516.3	1601.1
1		0245	34	717.	8.0	1586.1	*	1		0655	84	17795.	6950.6	1601.6	*	1		1105	134	14523.	6439.9	1601.0
1		0250	35	742.	13.2	1586.3	*	1		0700	85	19015.	7136.5	1601.8	*	1		1110	135	14051.	6364.2	1600.9
1		0255	36	767.	19.9	1586.5	*	1		0705	86	20222.	7318.4	1602.0	*	1		1115	136	13588.	6289.7	1600.8
1		0300	37	791.	28.5	1586.7	*	1		0710	87	21402.	7494.5	1602.2	*	1		1120	137	13136.	6216.2	1600.7
1		0305	38	816.	39.2	1586.8	*	1		0715	88	24249.	7657.8	1602.4	*	1		1125	138	12694.	6143.9	1600.6
1		0310	39	842.	52.5	1587.0	*	1		0720	89	30652.	7790.1	1602.5	*	1		1130	139	12265.	6072.9	1600.5
1		0315	40	868.	69.0	1587.2	*	1		0725	90	36191.	7879.8	1602.6	*	1		1135	140	11846.	6003.3	1600.4
1		0320	41	895.	89.3	1587.4	*	1		0730	91	39959.	7934.8	1602.7	*	1		1140	141	11439.	5934.9	1600.4
1		0325	42	924.	114.1	1587.6	*	1		0735	92	42148.	7965.1	1602.7	*	1		1145	142	11044.	5867.9	1600.3
1		0330	43	957.	144.0	1587.9	*	1		0740	93	43124.	7978.3	1602.7	*	1		1150	143	10661.	5802.3	1600.2
1		0335	44	993.	179.7	1588.1	*	1		0745	94	43368.	7981.5	1602.7	*	1		1155	144	10289.	5738.1	1600.1
1		0340	45	1032.	221.8	1588.4	*	1		0750	95	43116.	7978.2	1602.7	*	1		1200	145	9930.	5675.4	1600.0
1		0345	46	1075.	271.1	1588.7	*	1		0755	96	42530.	7970.3	1602.7	*	1		1205	146	9582.	5614.1	1599.9
1		0350	47	1121.	328.4	1589.0	*	1		0800	97	41727.	7959.3	1602.7	*	1		1210	147	9246.	5554.2	1599.9

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 1    0355  48    1169.    394.3  1589.3 * 1    0805  98   40788.   7946.4  1602.7 * 1    1215 148    8923.   5495.9  1599.8
 1    0400  49    1222.    469.5  1589.7 * 1    0810  99   39776.   7932.2  1602.7 * 1    1220 149    8610.   5438.9  1599.7
 1    0405  50    1278.    554.6  1590.0 * 1    0815 100   36727.   7917.2  1602.7 * 1    1225 150    8309.   5383.5  1599.6
                                          *                                           *
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PEAK OUTFLOW IS    43368. AT TIME   7.75 HOURS


 PEAK FLOW     TIME                      MAXIMUM AVERAGE FLOW
                                   6-HR      24-HR      72-HR     12.42-HR
+  (CFS)       (HR)
                          (CFS)
+  43368.      7.75                22952.     11866.     11866.      11866.
                        (INCHES)   4.475      4.787      4.787       4.787
                        (AC-FT)   11381.     12176.     12176.      12176.

 PEAK STORAGE  TIME                      MAXIMUM AVERAGE STORAGE
                                   6-HR      24-HR      72-HR     12.42-HR
+ (AC-FT)      (HR)
    7982.      7.75                7075.      3987.      3987.       3987.

 PEAK STAGE    TIME                      MAXIMUM AVERAGE STAGE
                                   6-HR      24-HR      72-HR     12.42-HR
+  (FEET)      (HR)
  1602.75      7.75              1601.70    1595.36    1595.36     1595.36

                        CUMULATIVE AREA =   47.69 SQ MI

1                                                   STATION    RESR

                        (I) INFLOW,   (O) OUTFLOW
        0.    10000.   20000.   30000.   40000.   50000.       0.       0.       0.       0.       0.       0.       0.
                                                                                (S) STORAGE
        0.       0.       0.       0.       0.       0.       0.    2000.    4000.    6000.    8000.       0.       0.
 DAHRMN PER
  10000   1IO--------.---------.---------.---------.---------.---------S---------.---------.---------.---------.---------.---------.
  10005   2I        .         .         .         .         .         S         .         .         .         .         .         .
  10010   3I        .         .         .         .         .         S         .         .         .         .         .         .
  10015   4I        .         .         .         .         .         S         .         .         .         .         .         .
  10020   5I        .         .         .         .         .         S         .         .         .         .         .         .
  10025   6I        .         .         .         .         .         S         .         .         .         .         .         .
  10030   7I        .         .         .         .         .         S         .         .         .         .         .         .
  10035   8IO       .         .         .         .         .         S         .         .         .         .         .         .
  10040   9I        .         .         .         .         .         S         .         .         .         .         .         .
  10045  10IO       .         .         .         .         .         S         .         .         .         .         .         .
  10050  11I . . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
  10055  12IO       .         .         .         .         .         S         .         .         .         .         .         .
  10100  13I        .         .         .         .         .         S         .         .         .         .         .         .
  10105  14IO       .         .         .         .         .         S         .         .         .         .         .         .
  10110  15I        .         .         .         .         .         S         .         .         .         .         .         .
  10115  16IO       .         .         .         .         .         S         .         .         .         .         .         .
  10120  17I        .         .         .         .         .         S         .         .         .         .         .         .
  10125  18IO       .         .         .         .         .         S         .         .         .         .         .         .
  10130  19I        .         .         .         .         .         S         .         .         .         .         .         .
  10135  20IO       .         .         .         .         .         S         .         .         .         .         .         .
  10140  21I . . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
  10145  22IO       .         .         .         .         .         S         .         .         .         .         .         .
  10150  23I        .         .         .         .         .         S         .         .         .         .         .         .
  10155  24IO       .         .         .         .         .         S         .         .         .         .         .         .
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10200  25I        .        .        .        .        .        S        .        .        .        .        .        .
10205  26IO       .        .        .        .        .        S        .        .        .        .        .        .
10210  27I        .        .        .        .        .        S        .        .        .        .        .        .
10215  28IO       .        .        .        .        .        S        .        .        .        .        .        .
10220  29IO       .        .        .        .        .        S        .        .        .        .        .        .
10225  30.I       .        .        .        .        .        S        .        .        .        .        .        .
10230  31.I.......................................S.......................................
10235  32.I       .        .        .        .        .        S        .        .        .        .        .        .
10240  33.I       .        .        .        .        .        S        .        .        .        .        .        .
10245  34.I       .        .        .        .        .        S        .        .        .        .        .        .
10250  35.0I      .        .        .        .        .        S        .        .        .        .        .        .
10255  36.0I      .        .        .        .        .        S        .        .        .        .        .        .
10300  37.0I      .        .        .        .        .        S        .        .        .        .        .        .
10305  38.0 I     .        .        .        .        .        S        .        .        .        .        .        .
10310  39.0 I     .        .        .        .        .        S        .        .        .        .        .        .
10315  40.0  I    .        .        .        .        .        S        .        .        .        .        .        .
10320  41.0. I.......................................S.......................................
10325  42.0  I    .        .        .        .        .        .S       .        .        .        .        .        .
10330  43.0   I   .        .        .        .        .        .S       .        .        .        .        .        .
10335  44.0    I  .        .        .        .        .        .S       .        .        .        .        .        .
10340  45.0     I .        .        .        .        .        .S       .        .        .        .        .        .
10345  46.0      I.        .        .        .        .        .S       .        .        .        .        .        .
10350  47.0       I        .        .        .        .        . S      .        .        .        .        .        .
10355  48.0       .I       .        .        .        .        . S      .        .        .        .        .        .
10400  49.0        . I     .        .        .        .        . S      .        .        .        .        .        .
10405  50.0        .  I    .        .        .        .        .  S     .        .        .        .        .        .
10410  51.0.......I.......................................S.......................................
10415  52.0        .    I  .        .        .        .        .  S     .        .        .        .        .        .
10420  53.0        .     I.        .        .        .        .  S     .        .        .        .        .        .
10425  54. 0       .      .I       .        .        .        .   S    .        .        .        .        .        .
10430  55. 0       .      . I      .        .        .        .    S   .        .        .        .        .        .
10435  56. 0       .      .  I     .        .        .        .    S   .        .        .        .        .        .
10440  57. 0       .      .   I    .        .        .        .     S  .        .        .        .        .        .
10445  58. 0       .      .    I   .        .        .        .     S  .        .        .        .        .        .
10450  59. 0       .      .     I. .        .        .        .      S.        .        .        .        .        .
10455  60. 0       .      .      I .        .        .        .      S         .        .        .        .        .
10500  61. 0...............I.......................................S.......................................
10505  62. 0       .      .       . I      .        .        .       . S      .        .        .        .        .
10510  63. 0       .      .       .  I     .        .        .        . S     .        .        .        .        .
10515  64. 0       .      .       .  I     .        .        .        .  S    .        .        .        .        .
10520  65. 0       .      .       .   I    .        .        .        .   S   .        .        .        .        .
10525  66. 0       .      .       .   I    .        .        .        .    S  .        .        .        .        .
10530  67. 0       .      .       .   I    .        .        .        .     S .        .        .        .        .
10535  68.  0      .      .       .   I    .        .        .        .      S.        .        .        .        .
10540  69.  0      .      .       .   I    .        .        .        .       S        .        .        .        .
10545  70.  0      .      .       .   I    .        .        .        .       .S       .        .        .        .
10550  71. . 0.....................I.......................................S.......................................
10555  72.   0     .      .       .   I    .        .        .        .        . S     .        .        .        .
10600  73.   0     .      .       .    I   .        .        .        .        .  S    .        .        .        .
10605  74.    0    .      .       .    I   .        .        .        .        .   S   .        .        .        .
10610  75.     0   .      .       .    I   .        .        .        .        .    S  .        .        .        .
10615  76.      0  .      .       .     I  .        .        .        .        .     S .        .        .        .
10620  77.       0 .      .       .     I  .        .        .        .        .      S.        .        .        .
10625  78.       .0       .       .      I.        .        .        .        .       S.        .        .        .
10630  79.       . 0      .       .       I        .        .        .        .        S        .        .        .
10635  80.       .  0     .       .       .I       .        .        .        .        .S       .        .        .
10640  81.......  0.....................I.......................................S.......................................
10645  82.        .  0    .       .       . I      .        .        .        .        . S      .        .        .
10650  83.        .   0   .       .       .  I     .        .        .        .        .  S     .        .        .
10655  84.        .    0  .       .       .   I    .        .        .        .        .   S    .        .        .
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10700  85.        .      0.       .       .    I  .       .       .       .       .    S  .       .       .
10705  86.        .       0       .       .    I  .       .       .       .       .    S  .       .       .
10710  87.        .      .0       .       .     I .       .       .       .       .    S  .       .       .
10715  88.        .       .  0    .       .     I .       .       .       .       .     S .       .       .
10720  89.        .       .      .0       .     I .       .       .       .       .      S.       .       .
10725  90.        .       .      .   0    .    I  .       .       .       .       .      S.       .       .
10730  91. . . . . . . . . . . . . . . . . . . 0 . . I . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . .
10735  92.        .       .       .       . 0 I   .       .       .       .       .      S       .       .
10740  93.        .       .       .       . 0I    .       .       .       .       .      S       .       .
10745  94.        .       .       .       . I     .       .       .       .       .      S       .       .
10750  95.        .       .       .       . I0    .       .       .       .       .      S       .       .
10755  96.        .       .       .       .I 0    .       .       .       .       .      S       .       .
10800  97.        .       .       .       I 0     .       .       .       .       .      S       .       .
10805  98.        .       .       .      I.0      .       .       .       .       .      S       .       .
10810  99.        .       .       .    I  0       .       .       .       .       .      S       .       .
10815 100.        .       .       .   I  0.       .       .       .       .       .      S       .       .
10820 101. . . . . . . . . . . . . . . . . .I. 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . .
10825 102.        .       .       .  I  0 .       .       .       .       .       .      S.       .       .
10830 103.        .       .       . I  0  .       .       .       .       .       .      S.       .       .
10835 104.        .       .       .I  0   .       .       .       .       .       .      S.       .       .
10840 105.        .       .       .I  0   .       .       .       .       .       .      S.       .       .
10845 106.        .       .       I  0    .       .       .       .       .       .      S.       .       .
10850 107.        .       .      I. 0     .       .       .       .       .       .      S.       .       .
10855 108.        .       .     I .0      .       .       .       .       .       .      S.       .       .
10900 109.        .       .    I  0       .       .       .       .       .       .      S.       .       .
10905 110.        .       .   I  0.       .       .       .       .       .       .      S.       .       .
10910 111. . . . . . . . . . . . .I. 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . .
10915 112.        .       .  I  0 .       .       .       .       .       .       .      S.       .       .
10920 113.        .       . I  0  .       .       .       .       .       .       .     S .       .       .
10925 114.        .       .I  0   .       .       .       .       .       .       .     S .       .       .
10930 115.        .       I  0    .       .       .       .       .       .       .     S .       .       .
10935 116.        .     I . 0     .       .       .       .       .       .       .     S .       .       .
10940 117.        .    I  . 0     .       .       .       .       .       .       .     S .       .       .
10945 118.        .   I   . 0     .       .       .       .       .       .       .     S .       .       .
10950 119.        .  I    .0      .       .       .       .       .       .       .     S .       .       .
10955 120.        . I     .0      .       .       .       .       .       .       .    S  .       .       .
11000 121. . . . . . I . . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . .
11005 122.       .I      0       .       .       .       .       .       .       .    S  .       .       .
11010 123.       I       0       .       .       .       .       .       .       .   S   .       .       .
11015 124.      I.      0.       .       .       .       .       .       .       .   S   .       .       .
11020 125.     I .      0.       .       .       .       .       .       .       .   S   .       .       .
11025 126.     I .      0 .      .       .       .       .       .       .       .  S    .       .       .
11030 127.    I  .      0 .      .       .       .       .       .       .       .  S    .       .       .
11035 128.   I   .     0  .      .       .       .       .       .       .       .  S    .       .       .
11040 129.   I   .     0  .      .       .       .       .       .       .       . S     .       .       .
11045 130.  I    .    0   .      .       .       .       .       .       .       . S     .       .       .
11050 131. .I. . . . . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . .
11055 132.  I    .   0    .      .       .       .       .       .       .       . S     .       .       .
11100 133.  I    .   0    .      .       .       .       .       .       .       . S     .       .       .
11105 134. I     .   0    .      .       .       .       .       .       .       .S      .       .       .
11110 135. I     .  0     .      .       .       .       .       .       .       .S      .       .       .
11115 136. I     .  0     .      .       .       .       .       .       .       .S      .       .       .
11120 137. I     . 0      .      .       .       .       .       .       .       .S      .       .       .
11125 138. I     . 0      .      .       .       .       .       .       .       .S      .       .       .
11130 139. I     . 0      .      .       .       .       .       .       .       S       .       .       .
11135 140. I     . 0      .      .       .       .       .       .       .       S       .       .       .
11140 141. I . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . .
11145 142.I      .0       .      .       .       .       .       .       .      S.       .       .       .
11150 143.I      .0       .      .       .       .       .       .       .      S.       .       .       .
11155 144.I      0        .      .       .       .       .       .       .      S.       .       .       .
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11200 145.I       0        .        .        .        .        .        .        .      S .        .        .        .
11205 146.I       0        .        .        .        .        .        .        .      S .        .        .        .
11210 147.I      0.        .        .        .        .        .        .        .      S .        .        .        .
11215 148.I      0.        .        .        .        .        .        .        .    S .        .        .        .
11220 149I       0.        .        .        .        .        .        .        .    S .        .        .        .
11225 150I-------0-.---------.---------.---------.---------.---------.---------.---------.------S--.---------.---------.---------.
1
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*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 19775. TO 36999.
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 70561.
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 1925. TO 337747.
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 9058. TO 77382.
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 1226.
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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          ***************
          *             *
476 KK    *     RESV    *
          *             *
          ***************

478 KO        OUTPUT CONTROL VARIABLES
                   IPRNT          1  PRINT CONTROL
                   IPLOT          2  PLOT CONTROL
                   QSCAL         0.  HYDROGRAPH PLOT SCALE

            HYDROGRAPH ROUTING DATA

479 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

480 SA            AREA         .0     65.0    200.0    400.0    600.0    800.0   1000.0   1200.0

481 SE        ELEVATION    1564.20  1565.00  1566.60  1569.50  1571.80  1574.20  1576.10  1579.20

482 SL        LOW-LEVEL OUTLET
                   ELEVL     1561.50  ELEVATION AT CENTER OF OUTLET
                   CAREA       15.90  CROSS-SECTIONAL AREA
                    COQL         .70  COEFFICIENT
```

	EXPL	1.50	EXPONENT OF HEAD

483 SS SPILLWAY

CREL	1574.80	SPILLWAY CREST ELEVATION
SPWID	600.00	SPILLWAY WIDTH
COQW	3.00	WEIR COEFFICIENT
EXPW	1.50	EXPONENT OF HEAD

484 ST TOP OF DAM

TOPEL	1579.50	ELEVATION AT TOP OF DAM
DAMWID	28829.00	DAM WIDTH
COQD	3.30	WEIR COEFFICIENT
EXPD	1.50	EXPONENT OF HEAD

***

COMPUTED STORAGE-ELEVATION DATA

STORAGE	.00	17.33	219.47	1072.90	2215.18	3889.36	5595.86	9001.12
ELEVATION	1564.20	1565.00	1566.60	1569.50	1571.80	1574.20	1576.10	1579.20

COMPUTED OUTFLOW-ELEVATION DATA

(EXCLUDING FLOW OVER DAM)

OUTFLOW	.00	579.78	813.08	1101.82	1451.91	1869.30	2359.81	2929.45	3584.08	4329.62
ELEVATION	1564.20	1564.98	1565.86	1566.84	1567.92	1569.10	1570.37	1571.75	1573.23	1574.80
OUTFLOW	4490.64	4809.33	5388.79	6306.65	7639.98	9465.85	11863.04	14908.50	18681.66	23259.61
ELEVATION	1574.94	1575.12	1575.37	1575.70	1576.10	1576.57	1577.12	1577.74	1578.43	1579.20

COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

(INCLUDING FLOW OVER DAM)

STORAGE	.00	16.14	17.33	99.16	219.47	269.37	536.29	918.36	1072.90	1453.39
OUTFLOW	396.01	579.78	584.48	813.08	1028.07	1101.82	1451.91	1869.30	2019.78	2359.81
ELEVATION	1564.20	1564.98	1565.00	1565.86	1566.60	1566.84	1567.92	1569.10	1569.50	1570.37
STORAGE	2185.56	2215.18	3151.59	3889.36	4387.56	4508.02	4666.85	4896.32	5202.67	5593.78
OUTFLOW	2929.45	2950.72	3584.08	4039.92	4329.62	4490.64	4809.33	5388.79	6306.65	7639.98
ELEVATION	1571.75	1571.80	1573.23	1574.20	1574.80	1574.94	1575.12	1575.37	1575.70	1576.10
STORAGE	6074.04	6646.43	7318.59	8100.04	9001.12					
OUTFLOW	9465.85	11863.04	14908.50	18681.66	23259.61					
ELEVATION	1576.57	1577.12	1577.74	1578.43	1579.20					

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HYDROGRAPH AT STATION RESV

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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
1		0000	1	396.	.0	1564.2	*	1		0410	51	2296.	1379.3	1570.2	*	1		0820	101	28251.	9472.9	1579.6
1		0005	2	0.	.0	1564.2	*	1		0415	52	2460.	1573.9	1570.6	*	1		0825	102	26804.	9433.5	1579.6
1		0010	3	0.	.0	1564.2	*	1		0420	53	2628.	1783.3	1571.0	*	1		0830	103	25632.	9392.1	1579.5
1		0015	4	0.	.0	1564.2	*	1		0425	54	2798.	2006.4	1571.4	*	1		0835	104	25066.	9346.8	1579.5

1	0020	5	396.	.0	1564.2	*	1	0430	55	2970.	2241.8	1571.8	*	1	0840	105	24792.	9294.6	1579.4
1	0025	6	0.	.0	1564.2	*	1	0435	56	3143.	2487.9	1572.2	*	1	0845	106	24483.	9235.8	1579.4
1	0030	7	396.	.0	1564.2	*	1	0440	57	3316.	2742.5	1572.6	*	1	0850	107	24144.	9171.0	1579.3
1	0035	8	0.	.0	1564.2	*	1	0445	58	3489.	3004.1	1573.0	*	1	0855	108	23779.	9101.0	1579.3
1	0040	9	396.	.0	1564.2	*	1	0450	59	3660.	3271.3	1573.4	*	1	0900	109	23391.	9026.5	1579.2
1	0045	10	0.	.0	1564.2	*	1	0455	60	3830.	3543.6	1573.8	*	1	0905	110	22984.	8948.0	1579.2
1	0050	11	396.	.0	1564.2	*	1	0500	61	3999.	3820.6	1574.1	*	1	0910	111	22561.	8866.1	1579.1
1	0055	12	0.	.0	1564.2	*	1	0505	62	4166.	4102.5	1574.5	*	1	0915	112	22123.	8781.1	1579.0
1	0100	13	396.	.0	1564.2	*	1	0510	63	4331.	4389.2	1574.8	*	1	0920	113	21675.	8693.7	1578.9
1	0105	14	0.	.0	1564.2	*	1	0515	64	4839.	4679.7	1575.1	*	1	0925	114	21217.	8604.1	1578.9
1	0110	15	396.	.0	1564.2	*	1	0520	65	5602.	4971.7	1575.5	*	1	0930	115	20753.	8512.7	1578.8
1	0115	16	0.	.0	1564.2	*	1	0525	66	6504.	5263.6	1575.8	*	1	0935	116	20283.	8419.9	1578.7
1	0120	17	396.	.0	1564.2	*	1	0530	67	7498.	5554.1	1576.1	*	1	0940	117	19810.	8326.1	1578.6
1	0125	18	0.	.0	1564.2	*	1	0535	68	8561.	5842.3	1576.3	*	1	0945	118	19336.	8231.4	1578.5
1	0130	19	396.	.0	1564.2	*	1	0540	69	9682.	6127.8	1576.6	*	1	0950	119	18861.	8136.1	1578.5
1	0135	20	0.	.0	1564.2	*	1	0545	70	10848.	6410.1	1576.9	*	1	0955	120	18387.	8040.5	1578.4
1	0140	21	396.	.0	1564.2	*	1	0550	71	12051.	6689.3	1577.2	*	1	1000	121	17916.	7945.0	1578.3
1	0145	22	396.	.0	1564.2	*	1	0555	72	13281.	6965.4	1577.4	*	1	1005	122	17450.	7849.6	1578.2
1	0150	23	396.	.0	1564.2	*	1	0600	73	14536.	7238.8	1577.7	*	1	1010	123	16987.	7754.6	1578.1
1	0155	24	437.	.2	1564.4	*	1	0605	74	15810.	7509.6	1577.9	*	1	1015	124	16531.	7660.1	1578.0
1	0200	25	466.	1.0	1564.5	*	1	0610	75	17102.	7778.2	1578.2	*	1	1020	125	16082.	7566.6	1578.0
1	0205	26	493.	2.6	1564.6	*	1	0615	76	18407.	8044.6	1578.4	*	1	1025	126	15641.	7474.0	1577.9
1	0210	27	520.	5.3	1564.7	*	1	0620	77	19723.	8308.8	1578.6	*	1	1030	127	15209.	7382.5	1577.8
1	0215	28	546.	9.1	1564.8	*	1	0625	78	21045.	8570.2	1578.8	*	1	1035	128	14786.	7292.5	1577.7
1	0220	29	572.	14.4	1565.0	*	1	0630	79	22364.	8828.0	1579.1	*	1	1040	129	14374.	7203.8	1577.6
1	0225	30	599.	21.1	1565.1	*	1	0635	80	23672.	9080.5	1579.3	*	1	1045	130	13971.	7116.6	1577.6
1	0230	31	629.	29.7	1565.2	*	1	0640	81	24948.	9324.5	1579.5	*	1	1050	131	13579.	7030.9	1577.5
1	0235	32	663.	40.2	1565.3	*	1	0645	82	31394.	9542.8	1579.6	*	1	1055	132	13198.	6946.9	1577.4
1	0240	33	700.	52.8	1565.4	*	1	0650	83	40828.	9704.8	1579.8	*	1	1100	133	12827.	6864.6	1577.3
1	0245	34	740.	67.8	1565.6	*	1	0655	84	47889.	9805.7	1579.9	*	1	1105	134	12469.	6784.1	1577.2
1	0250	35	782.	85.4	1565.8	*	1	0700	85	52083.	9860.9	1579.9	*	1	1110	135	12120.	6705.2	1577.2
1	0255	36	827.	105.7	1565.9	*	1	0705	86	53930.	9884.4	1579.9	*	1	1115	136	11783.	6628.1	1577.1
1	0300	37	874.	129.1	1566.1	*	1	0710	87	54368.	9889.9	1579.9	*	1	1120	137	11457.	6552.8	1577.0
1	0305	38	924.	155.9	1566.3	*	1	0715	88	53846.	9883.3	1579.9	*	1	1125	138	11142.	6479.3	1577.0
1	0310	39	977.	187.1	1566.4	*	1	0720	89	52679.	9868.5	1579.9	*	1	1130	139	10838.	6407.6	1576.9
1	0315	40	1035.	223.9	1566.6	*	1	0725	90	50975.	9846.6	1579.9	*	1	1135	140	10543.	6337.5	1576.8
1	0320	41	1100.	267.8	1566.8	*	1	0730	91	48999.	9820.6	1579.9	*	1	1140	141	10259.	6269.1	1576.8
1	0325	42	1174.	320.2	1567.1	*	1	0735	92	46852.	9791.5	1579.8	*	1	1145	142	9985.	6202.4	1576.7
1	0330	43	1258.	382.5	1567.3	*	1	0740	93	44611.	9760.3	1579.8	*	1	1150	143	9720.	6137.2	1576.6
1	0335	44	1353.	456.2	1567.6	*	1	0745	94	42336.	9727.4	1579.8	*	1	1155	144	9464.	6073.7	1576.6
1	0340	45	1460.	542.8	1567.9	*	1	0750	95	40066.	9693.2	1579.8	*	1	1200	145	9218.	6011.6	1576.5
1	0345	46	1577.	643.4	1568.3	*	1	0755	96	37846.	9658.2	1579.7	*	1	1205	146	8980.	5951.1	1576.5
1	0350	47	1704.	758.9	1568.6	*	1	0800	97	35690.	9622.3	1579.7	*	1	1210	147	8751.	5892.0	1576.4
1	0355	48	1841.	890.0	1569.0	*	1	0805	98	33633.	9585.8	1579.7	*	1	1215	148	8530.	5834.3	1576.3
1	0400	49	1986.	1037.0	1569.4	*	1	0810	99	31694.	9548.8	1579.7	*	1	1220	149	8317.	5778.0	1576.3
1	0405	50	2138.	1200.2	1569.8	*	1	0815	100	29894.	9511.3	1579.6	*	1	1225	150	8112.	5723.1	1576.2
						*							*						

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PEAK OUTFLOW IS 54368. AT TIME 7.17 HOURS

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	12.42-HR
+ (CFS)	(HR)					
		(CFS)				
+ 54368.	7.17		24814.	13299.	13299.	13299.
		(INCHES)	4.426	4.910	4.910	4.910
		(AC-FT)	12304.	13647.	13647.	13647.

PEAK STORAGE (AC-FT)	TIME (HR)	MAXIMUM AVERAGE STORAGE 6-HR	24-HR	72-HR	12.42-HR
9890.	7.17	8402.	4914.	4914.	4914.

PEAK STAGE (FEET)	TIME (HR)	MAXIMUM AVERAGE STAGE 6-HR	24-HR	72-HR	12.42-HR
1579.93	7.17	1578.66	1573.50	1573.50	1573.50

CUMULATIVE AREA = 52.12 SQ MI

1 STATION RESV

(I) INFLOW, (O) OUTFLOW

0.	10000.	20000.	30000.	40000.	50000.	60000.	70000.	0.	0.	0.	0.	0.
								(S) STORAGE				
0.	0.	0.	0.	0.	0.	0.	4000.	8000.	12000.	0.	0.	0.

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DAHRMN PER
 10000  1I---------.---------.---------.---------.---------.---------$---------.---------.---------.---------.---------.---------.
 10005  2I         .         .         .         .         .         $         .         .         .         .         .         .
 10010  3I         .         .         .         .         .         $         .         .         .         .         .         .
 10015  4I         .         .         .         .         .         $         .         .         .         .         .         .
 10020  5I         .         .         .         .         .         $         .         .         .         .         .         .
 10025  6I         .         .         .         .         .         $         .         .         .         .         .         .
 10030  7I         .         .         .         .         .         $         .         .         .         .         .         .
 10035  8I         .         .         .         .         .         $         .         .         .         .         .         .
 10040  9I         .         .         .         .         .         $         .         .         .         .         .         .
 10045 10I         .         .         .         .         .         $         .         .         .         .         .         .
 10050 11I . . . . . . . . . . . . . . . . . . . . . . . . . . . . . $ . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10055 12I         .         .         .         .         .         $         .         .         .         .         .         .
 10100 13I         .         .         .         .         .         $         .         .         .         .         .         .
 10105 14I         .         .         .         .         .         $         .         .         .         .         .         .
 10110 15I         .         .         .         .         .         $         .         .         .         .         .         .
 10115 16I         .         .         .         .         .         $         .         .         .         .         .         .
 10120 17I         .         .         .         .         .         $         .         .         .         .         .         .
 10125 18I         .         .         .         .         .         $         .         .         .         .         .         .
 10130 19I         .         .         .         .         .         $         .         .         .         .         .         .
 10135 20I         .         .         .         .         .         $         .         .         .         .         .         .
 10140 21I . . . . . . . . . . . . . . . . . . . . . . . . . . . . . $ . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10145 22I         .         .         .         .         .         $         .         .         .         .         .         .
 10150 23I         .         .         .         .         .         $         .         .         .         .         .         .
 10155 240I        .         .         .         .         .         $         .         .         .         .         .         .
 10200 250I        .         .         .         .         .         $         .         .         .         .         .         .
 10205 260I        .         .         .         .         .         $         .         .         .         .         .         .
 10210 27.I        .         .         .         .         .         $         .         .         .         .         .         .
 10215 28.I        .         .         .         .         .         $         .         .         .         .         .         .
 10220 29.I        .         .         .         .         .         $         .         .         .         .         .         .
 10225 30.0I       .         .         .         .         .         $         .         .         .         .         .         .
 10230 31.0I . . . . . . . . . . . . . . . . . . . . . . . . . . . . . $ . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10235 32.0I       .         .         .         .         .         $         .         .         .         .         .         .
 10240 33.0 I      .         .         .         .         .         $         .         .         .         .         .         .
 10245 34.0 I      .         .         .         .         .         $         .         .         .         .         .         .
 10250 35.0  I     .         .         .         .         .         $         .         .         .         .         .         .
 10255 36.0  I     .         .         .         .         .         $         .         .         .         .         .         .
 10300 37.0  I     .         .         .         .         .         $         .         .         .         .         .         .
 10305 38.0   I    .         .         .         .         .         $         .         .         .         .         .         .
 10310 39.0    I   .         .         .         .         .         $         .         .         .         .         .         .
 10315 40.0     I  .         .         .         .         .         .$         .         .         .         .         .         .
 10320 41.0. . . I . . . . . . . . . . . . . . . . . . . . . . . . .$. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
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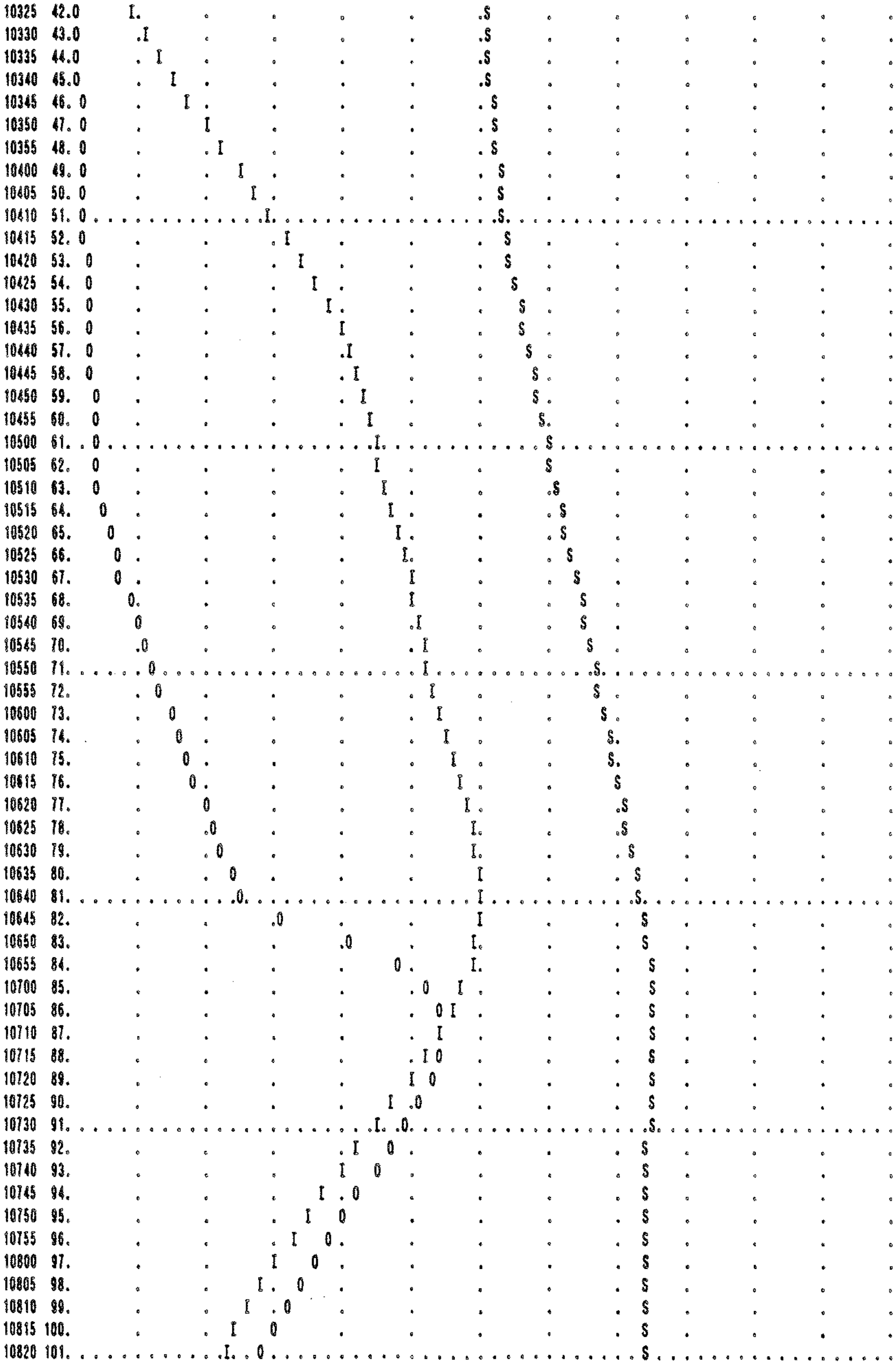
10325 42.0
10330 43.0
10335 44.0
10340 45.0
10345 46. 0
10350 47. 0
10355 48. 0
10400 49. 0
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10410 51. 0
10415 52. 0
10420 53. 0
10425 54. 0
10430 55. 0
10435 56. 0
10440 57. 0
10445 58. 0
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10500 61. 0
10505 62. 0
10510 63. 0
10515 64.
10520 65.
10525 66.
10530 67.
10535 68.
10540 69.
10545 70.
10550 71.
10555 72.
10600 73.
10605 74.
10610 75.
10615 76.
10620 77.
10625 78.
10630 79.
10635 80.
10640 81.
10645 82.
10650 83.
10655 84.
10700 85.
10705 86.
10710 87.
10715 88.
10720 89.
10725 90.
10730 91.
10735 92.
10740 93.
10745 94.
10750 95.
10755 96.
10800 97.
10805 98.
10810 99.
10815 100.
10820 101.

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10825 102.         .         .I     O  .         .         .         .         .         .   S     .         .         .         .
10830 103.         .        I.     O   .         .         .         .         .         .  S      .         .         .         .
10835 104.         .       I .    O    .         .         .         .         .         .  S      .         .         .         .
10840 105.         .      I  .    O    .         .         .         .         .         .  S      .         .         .         .
10845 106.         .    I    .   O     .         .         .         .         .         .  S      .         .         .         .
10850 107.         .   I     .   O     .         .         .         .         .         .  S      .         .         .         .
10855 108.         .  I      .   O     .         .         .         .         .         .  S      .         .         .         .
10900 109.         . I       .  O      .         .         .         .         .         .  S      .         .         .         .
10905 110.         .I        .  O      .         .         .         .         .         . S       .         .         .         .
10910 111. . . . . I . . . . . .O. . . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . .
10915 112.         I         . O       .         .         .         .         .         . S       .         .         .         .
10920 113.        I.         . O       .         .         .         .         .         . S       .         .         .         .
10925 114.       I .         .O        .         .         .         .         .         . S       .         .         .         .
10930 115.      I  .         .O        .         .         .         .         .         .S        .         .         .         .
10935 116.      I  .         O         .         .         .         .         .         .S        .         .         .         .
10940 117.     I   .         O         .         .         .         .         .         .S        .         .         .         .
10945 118.     I   .        O.         .         .         .         .         .         .S        .         .         .         .
10950 119.    I    .        O.         .         .         .         .         .         S         .         .         .         .
10955 120.   I     .       O .         .         .         .         .         .         S         .         .         .         .
11000 121. . I . . . . . . O . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . . .
11005 122.   I     .      O  .         .         .         .         .         .         S         .         .         .         .
11010 123.  I      .      O  .         .         .         .         .         .        S.         .         .         .         .
11015 124.  I      .      O  .         .         .         .         .         .        S.         .         .         .         .
11020 125.  I      .     O   .         .         .         .         .         .        S.         .         .         .         .
11025 126. I       .     O   .         .         .         .         .         .        S.         .         .         .         .
11030 127. I       .    O    .         .         .         .         .         .       S .         .         .         .         .
11035 128. I       .    O    .         .         .         .         .         .       S .         .         .         .         .
11040 129. I       .   O     .         .         .         .         .         .       S .         .         .         .         .
11045 130.I        .   O     .         .         .         .         .         .       S .         .         .         .         .
11050 131.I. . . . . . O . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . . . .
11055 132.I        .  O      .         .         .         .         .         .      S  .         .         .         .         .
11100 133.I        .  O      .         .         .         .         .         .      S  .         .         .         .         .
11105 134.I        . O       .         .         .         .         .         .      S  .         .         .         .         .
11110 135.I        . O       .         .         .         .         .         .      S  .         .         .         .         .
11115 136.I        . O       .         .         .         .         .         .      S  .         .         .         .         .
11120 137.I        .O        .         .         .         .         .         .     S   .         .         .         .         .
11125 138.I        .O        .         .         .         .         .         .     S   .         .         .         .         .
11130 139.I        .O        .         .         .         .         .         .     S   .         .         .         .         .
11135 140I         .O        .         .         .         .         .         .     S   .         .         .         .         .
11140 141I . . . . O . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . . . .
11145 142I         O         .         .         .         .         .         .     S   .         .         .         .         .
11150 143I         O         .         .         .         .         .         .    S    .         .         .         .         .
11155 144I        O.         .         .         .         .         .         .    S    .         .         .         .         .
11200 145I        O.         .         .         .         .         .         .    S    .         .         .         .         .
11205 146I        O.         .         .         .         .         .         .    S    .         .         .         .         .
11210 147I        O.         .         .         .         .         .         .    S    .         .         .         .         .
11215 148I        O.         .         .         .         .         .         .    S    .         .         .         .         .
11220 149I       O .         .         .         .         .         .         .   S     .         .         .         .         .
11225 150I-------O-.---------.---------.---------.---------.---------.---------.---S-----.---------.---------.---------.---------.
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RUNOFF SUMMARY

FLOW IN CUBIC FEET PER SECOND

TIME IN HOURS, AREA IN SQUARE MILES

OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+									
HYDROGRAPH AT									

+		SUBR1	3807.	4.00	1150.	558.	558.	1.56		
	ROUTED TO								
+		RR2a	3719.	4.08	1146.	555.	555.	1.56		
+									1816.80	4.08
	ROUTED TO								
+		RR2-1	3425.	5.17	1144.	555.	555.	1.56		
	ROUTED TO								
+		RR2-2	3211.	6.25	1143.	555.	555.	1.56		
	ROUTED TO								
+		RR2-3	3047.	7.33	1141.	555.	555.	1.56		
	HYDROGRAPH AT								
+		SUBR2	11120.	5.25	5825.	2961.	2961.	8.43		
	2 COMBINED AT								
+		HCR2	11304.	5.33	6879.	3516.	3516.	9.99		
	HYDROGRAPH AT								
+		SUBR3	2765.	4.00	825.	400.	400.	1.10		
	ROUTED TO								
+		RR4a	2738.	4.00	823.	399.	399.	1.10		
+									1834.00	4.00
	ROUTED TO								
+		RR4-1	2524.	4.92	822.	399.	399.	1.10		
	ROUTED TO								
+		RR4-2	2364.	5.83	821.	399.	399.	1.10		
	HYDROGRAPH AT								
+		SUBR4	5325.	4.33	1923.	939.	939.	2.67		
	2 COMBINED AT								
+		HCR4	5688.	4.33	2717.	1338.	1338.	3.77		
	HYDROGRAPH AT								
+		SUBR5	9129.	3.58	2139.	1037.	1037.	2.71		
	ROUTED TO								
+		RR6	8376.	4.17	2138.	1037.	1037.	2.71		
	HYDROGRAPH AT								
+		SUBR6	10625.	4.00	3243.	1577.	1577.	4.19		
	2 COMBINED AT								
+		HCR6	18745.	4.08	5381.	2614.	2614.	6.90		
	ROUTED TO								
+		RR7	17496.	4.75	5376.	2614.	2614.	6.90		
	HYDROGRAPH AT								
+		SUBR7	8777.	3.67	2075.	1005.	1005.	2.67		
	2 COMBINED AT								
+		HCR7	19355.	4.75	7400.	3618.	3618.	9.57		

	ROUTED TO								
+		RR8-1	18569.	5.42	7392.	3618.	3618.	9.57	
	ROUTED TO								
+		RR8-2	17946.	6.08	7385.	3618.	3618.	9.57	
	HYDROGRAPH AT								
+		SUBR8	4460.	4.17	1447.	703.	703.	2.00	
	2 COMBINED AT								
+		HCR8	18806.	6.08	8756.	4322.	4322.	11.57	
	ROUTED TO								
+		RR9a	18749.	6.08	8755.	4317.	4317.	11.57	
+									1838.42 6.08
	ROUTED TO								
+		RR9	18464.	6.58	8749.	4317.	4317.	11.57	
	HYDROGRAPH AT								
+		SUBR9	940.	3.50	179.	87.	87.	.26	
	2 COMBINED AT								
+		HCR9	18472.	6.58	8890.	4403.	4403.	11.83	
	HYDROGRAPH AT								
+		SUBR10	7264.	4.25	2540.	1240.	1240.	3.35	
	HYDROGRAPH AT								
+		SUBR11	9282.	4.08	2967.	1444.	1444.	3.90	
	2 COMBINED AT								
+		HCR11	16406.	4.17	5506.	2684.	2684.	7.25	
	ROUTED TO								
+		RR12	15918.	4.67	5502.	2684.	2684.	7.25	
	HYDROGRAPH AT								
+		SUBR12	10652.	4.08	3340.	1623.	1623.	4.46	
	2 COMBINED AT								
+		HCR12	23340.	4.50	8820.	4307.	4307.	11.71	
	ROUTED TO								
+		RR13a	23270.	4.50	8819.	4298.	4298.	11.71	
+									1830.12 4.50
	ROUTED TO								
+		RR13	22920.	4.92	8815.	4298.	4298.	11.71	
	HYDROGRAPH AT								
+		SUBR13	2857.	4.17	949.	462.	462.	1.27	
	2 COMBINED AT								
+		HCR13a	24549.	4.92	9751.	4761.	4761.	12.98	
	2 COMBINED AT								
+		HCR13b	34428.	5.17	18485.	9164.	9164.	24.81	

	ROUTED TO								
+		RR14	33681.	6.25	18450.	9164.	9164.	24.81	
	HYDROGRAPH AT								
+		SUBR14	6528.	4.08	2008.	974.	974.	2.82	
	2 COMBINED AT								
+		HCR14a	34646.	6.25	20069.	10138.	10138.	27.63	
	2 COMBINED AT								
+		HCR14b	38050.	6.17	22653.	11476.	11476.	31.40	
	ROUTED TO								
+		RR15-1	37604.	6.75	22607.	11473.	11473.	31.40	
	ROUTED TO								
+		RR15-2	37177.	7.42	22558.	11461.	11461.	31.40	
	HYDROGRAPH AT								
+		SUBR15	9906.	4.83	4459.	2215.	2215.	6.30	
	2 COMBINED AT								
+		HCR15a	39265.	7.33	26039.	13676.	13676.	37.70	
	2 COMBINED AT								
+		HCR15b	46895.	7.25	32649.	17192.	17192.	47.69	
	DIVERSION TO								
+		DVR16	130.	7.25	130.	111.	111.	47.69	
	HYDROGRAPH AT								
+		HDR16	46765.	7.25	32519.	17081.	17081.	47.69	
	ROUTED TO								
+		RESR	43368.	7.75	22952.	11866.	11866.	47.69	
+									1602.75 7.75
	HYDROGRAPH AT								
+		SUBV1	8828.	3.75	2351.	1140.	1140.	3.03	
	HYDROGRAPH AT								
+		SUBV2	9959.	3.75	2428.	1174.	1174.	3.34	
	ROUTED TO								
+		RV3	9504.	4.08	2427.	1174.	1174.	3.34	
	HYDROGRAPH AT								
+		SUBV3	1484.	3.50	301.	146.	146.	.40	
	3 COMBINED AT								
+		HCV3	17764.	4.00	5073.	2460.	2460.	6.77	
	ROUTED TO								
+		RV4	17150.	4.42	5071.	2460.	2460.	6.77	
	HYDROGRAPH AT								
+		SUBV4	5387.	3.75	1405.	682.	682.	1.85	
	2 COMBINED AT								
+		HCV4	20165.	4.33	6467.	3142.	3142.	8.62	

	ROUTED TO								
+		RV5	19535.	5.00	6463.	3142.	3142.	8.62		
	HYDROGRAPH AT								
+		SUBV5	5158.	3.67	1248.	604.	604.	1.66		
	2 COMBINED AT								
+		HCV5	20522.	5.00	7675.	3747.	3747.	10.28		
	ROUTED TO								
+		RV6a	20577.	5.00	7674.	3740.	3740.	10.28		
+									1749.05	5.00
	ROUTED TO								
+		RV6-1	19679.	5.83	7667.	3740.	3740.	10.28		
	ROUTED TO								
+		RV6-2	19121.	6.67	7659.	3740.	3740.	10.28		
	HYDROGRAPH AT								
+		SUBV6	6650.	4.33	2325.	1131.	1131.	3.59		
	2 COMBINED AT								
+		HCV6	20261.	6.67	9827.	4871.	4871.	13.87		
	HYDROGRAPH AT								
+		SUBV7	4164.	4.00	1307.	636.	636.	1.69		
	HYDROGRAPH AT								
+		SUBV8	2613.	3.50	570.	277.	277.	.73		
	2 COMBINED AT								
+		HCV8	5831.	3.83	1872.	913.	913.	2.42		
	ROUTED TO								
+		RV9	5785.	4.08	1872.	913.	913.	2.42		
	HYDROGRAPH AT								
+		SUBV9	3104.	3.67	727.	352.	352.	.95		
	2 COMBINED AT								
+		HCV9	8132.	3.83	2596.	1265.	1265.	3.37		
	ROUTED TO								
+		RV10a	6003.	4.42	2137.	1036.	1036.	3.37		
+									1778.93	4.42
	ROUTED TO								
+		RV10-1	5822.	5.33	2134.	1036.	1036.	3.37		
	ROUTED TO								
+		RV10-2	5646.	6.25	2131.	1036.	1036.	3.37		
	ROUTED TO								
+		RV10-3	5493.	7.08	2129.	1034.	1034.	3.37		
	HYDROGRAPH AT								
+		SUBV10	8566.	4.83	3989.	1994.	1994.	5.48		

	2 COMBINED AT								
+		HCV10	8566.	4.83	5838.	3028.	3028.	8.85		
	HYDROGRAPH AT								
+		SUBV11	956.	4.25	339.	166.	166.	.44		
	ROUTED TO								
+		RV12a	947.	4.33	338.	166.	166.	.44		
+									1781.15	4.33
	ROUTED TO								
+		RV12-1	877.	5.50	337.	166.	166.	.44		
	ROUTED TO								
+		RV12-2	821.	6.67	337.	166.	166.	.44		
	HYDROGRAPH AT								
+		SUBV12	5576.	4.67	2436.	1208.	1208.	3.32		
	2 COMBINED AT								
+		HCV12	5654.	4.75	2731.	1374.	1374.	3.76		
	HYDROGRAPH AT								
+		SUBV13	4925.	4.25	1806.	884.	884.	2.35		
	ROUTED TO								
+		RV14a	4925.	4.33	1804.	882.	882.	2.35		
+									1794.41	4.33
	ROUTED TO								
+		RV14-1	4714.	5.33	1801.	882.	882.	2.35		
	ROUTED TO								
+		RV14-2	4522.	6.25	1799.	882.	882.	2.35		
	ROUTED TO								
+		RV14-3	4354.	7.25	1796.	882.	882.	2.35		
	HYDROGRAPH AT								
+		SUBV14	5908.	5.08	2946.	1488.	1488.	4.09		
	2 COMBINED AT								
+		HCV14	6513.	7.08	4566.	2370.	2370.	6.44		
	HYDROGRAPH AT								
+		SUBV15	4420.	3.92	1271.	617.	617.	1.64		
	ROUTED TO								
+		RV16a	4215.	4.00	1269.	615.	615.	1.64		
+									1793.71	4.00
	ROUTED TO								
+		RV16	4010.	4.50	1268.	615.	615.	1.64		
	HYDROGRAPH AT								
+		SUBV16	2892.	3.50	591.	286.	286.	.76		
	2 COMBINED AT								
+		HCV16	4550.	4.50	1843.	901.	901.	2.40		

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        HYDROGRAPH AT
+                   SUBV17   10358.   4.00     3143.    1528.    1528.    4.06

        ROUTED TO
+                    RV18    9411.   5.08     3138.    1528.    1528.    4.06

        HYDROGRAPH AT
+                   SUBV18   10998.   4.25     3895.    1904.    1904.    5.06

        2 COMBINED AT
+                   HCV18    16009.   4.83     6997.    3432.    3432.    9.12

        ROUTED TO
+                    RV19    15921.   5.25     6995.    3432.    3432.    9.12

        HYDROGRAPH AT
+                   SUBV19    7618.   3.83     2114.    1025.    1025.    2.77

        2 COMBINED AT
+                   HCV19    17770.   5.08     9048.    4458.    4458.    11.89

        ROUTED TO
+                   RV20a    17753.   5.17     9047.    4448.    4448.    11.89
+                                                                        1804.49      5.17

        ROUTED TO
+                    RV20    17683.   5.75     9037.    4448.    4448.    11.89

        HYDROGRAPH AT
+                   SUBV20    1526.   3.67      361.     175.     175.     .48

        2 COMBINED AT
+                   HCV20a   17830.   5.75     9360.    4623.    4623.    12.37

        2 COMBINED AT
+                   HCV20b   20089.   5.17    11122.    5524.    5524.    14.77

        ROUTED TO
+                    RV21    19790.   6.50    11095.    5524.    5524.    14.77

        HYDROGRAPH AT
+                   SUBV21    6082.   5.17     3123.    1584.    1584.    4.43

        2 COMBINED AT
+                   HCV21a   23838.   6.25    14139.    7108.    7108.    19.20

        5 COMBINED AT
+                   HCV21b   59994.   6.67    37000.   18751.   18751.    52.12

        HYDROGRAPH AT
+                   HCV22a     130.   2.33      130.     111.     111.     .00

        2 COMBINED AT
+                   HCV22b   60124.   6.67    37130.   18861.   18861.    52.12

        ROUTED TO
+                    RESV    54368.   7.17    24814.   13299.   13299.    52.12
+                                                                        1579.93      7.17
1                   SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION    RESR
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PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1585.00	1597.60	1602.30
STORAGE	0.	3944.	7575.
OUTFLOW	583.	2622.	21945.

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	1602.75	.45	7982.	43368.	2.50	7.75	.00

1 SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION RESV

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1564.20	1574.80	1579.50
STORAGE	0.	4388.	9364.
OUTFLOW	396.	4330.	25157.

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	1579.93	.43	9890.	54368.	1.83	7.17	.00

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

DM6 - Vineyard & Rittenhouse
PMF- 72-hour PMP

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

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THIS HEC-1 VERSION CONTAINS ALL OPTIONS EXCEPT ECONOMICS. AND THE NUMBER OF PLANS ARE REDUCED TO 3


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

              *DIAGRAM
   1          ID     VINEYARD AND RITTENHOUSE F.R.S. ANALYSIS
   2          ID     72-HR PMP STORM: SCS EXCESS & HYDROGRAPH DEVELOPMENT.
   3          ID     MUSKINGUM ROUTING
   4          ID     ANTECEDENT SOIL MOISTURE CONDITION III
   5          ID     TIME INCREMENT = 15 MINUTES
   6          ID     FILENAME = DM6IN. DM6OUT
   7          IT      15       0       0     300
   8          IO       5
   9          IN      60

  10          KK   SUBR1
  11          KM     HYDROGRAPH FOR SUBBASIN R1
  12          BA    1.56
  13          PB   17.80
  14          PI    0.02    0.03    0.03    0.03    0.04    0.04    0.04    0.05    0.05    0.05
  15          PI    0.06    0.06    0.06    0.07    0.07    0.08    0.08    0.08    0.08    0.09
  16          PI    0.10    0.10    0.10    0.11    0.11    0.12    0.12    0.13    0.14    0.15
  17          PI    0.16    0.17    0.18    0.18    0.18    0.19    0.21    0.23    0.26    0.30
  18          PI    0.35    0.46    0.58    0.71    0.85    1.57    2.11    2.22    1.24    0.52
  19          PI    0.39    0.33    0.28    0.23    0.18    0.15    0.14    0.13    0.12    0.11
  20          PI    0.11    0.10    0.10    0.09    0.08    0.07    0.06    0.05    0.04    0.03
  21          PI    0.03    0.02
  22          LS       0     94.
  23          UD     .72

  24          KK    RR2a
  25          KM    ROUTE HYDROGRAPH FROM SUBBASIN R1 TO R2 ACROSS HWY 60
  26          RS       1    STOR       0
  27          SA       0       1      26     115     224     326
  28          SE    1800  1810.6    1820    1830    1840    1850
  29          SQ       0     290     692    1204    2198    6601   17223   34714
  30          SE  1810.6    1812    1813    1814  1815.9  1818.5  1819.5  1820.5

  31          KK   RR2-1
  32          KM     ROUTE HYDROGRAPH FROM SUBBASIN R1 THRU REACH R2-1
  33          RM       9    1.06      .3

  34          KK   RR2-2
  35          KM     ROUTE HYDROGRAPH FROM SUBBASIN R1 THRU REACH R2-2
  36          RM       9    1.06      .3
```

```
 37          KK   RR2-3
 38          KM     ROUTE HYDROGRAPH FROM SUBBASIN R1 THRU REACH R2-3
 39          RM       9    1.06      .3

 40          KK   SUBR2
 41          KM     HYDROGRAPH FOR SUBBASIN R2
 42          BA    8.43
 43          LS       0     93.
 44          UD    1.90
```



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


 45          KK    HCR2
 46          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R1 & R2
 47          HC       2

 48          KK   SUBR3
 49          KM     HYDROGRAPH FOR SUBBASIN R3
 50          BA    1.10
 51          LS       0     95.
 52          UD     .69

 53          KK    RR4a
 54          KM    ROUTE HYDROGRAPH FROM SUBBASIN R3 TO R4 ACROSS HWY 60
 55          RS       1    STOR       0
 56          SA       0       1      26     115     205
 57          SE  1823.4  1827.8    1840    1850    1860
 58          SQ       0     412    1127    1832    9597   23670   46850
 59          SE  1827.8    1830    1832  1833.6    1837    1838    1839

 60          KK   RR4-1
 61          KM     ROUTE HYDROGRAPH FROM SUBBASIN R3 THRU REACH R4-1
 62          RM       7     .85      .3

 63          KK   RR4-2
 64          KM     ROUTE HYDROGRAPH FROM SUBBASIN R3 THRU REACH R4-2
 65          RM       7     .85      .3

 66          KK   SUBR4
 67          KM     HYDROGRAPH FOR SUBBASIN R4
 68          BA    2.67
 69          LS       0     93.
 70          UD    1.01

 71          KK    HCR4
 72          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R3 & R4
 73          HC       2

 74          KK   SUBR5
 75          KM     HYDROGRAPH FOR SUBBASIN R5
 76          BA    2.71
 77          LS       0     98.
 78          UD     .39

 79          KK     RR6
 80          KM     ROUTE HYDROGRAPH FROM SUBBASIN R5
 81          RM       5     .51      .3
```

```
 82          KK   SUBR6
 83          KM     HYDROGRAPH FOR SUBBASIN R6
 84          BA    4.19
 85          LS       0     97.
 86          UD     .70
```



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


 87          KK    HCR6
 88          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R5 & R6
 89          HC       2

 90          KK     RR7
 91          KM     ROUTE HYDROGRAPH FROM SUBBASINS R5 & R6
 92          RM       6     .58      .3

 93          KK   SUBR7
 94          KM     HYDROGRAPH FOR SUBBASIN R7
 95          BA    2.67
 96          LS       0     97.
 97          UD     .41

 98          KK    HCR7
 99          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R5 THRU R7
100          HC       2

101          KK   RR8-1
102          KM     ROUTE HYDROGRAPH FROM SUBBASINS R5 THRU R7 THRU REACH R8-1
103          RM       6     .70      .3

104          KK   RR8-2
105          KM     ROUTE HYDROGRAPH FROM SUBBASINS R5 THRU R7 THRU REACH R8-2
106          RM       6     .70      .3

107          KK   SUBR8
108          KM     HYDROGRAPH FOR SUBBASIN R8
109          BA    2.00
110          LS       0     93.
111          UD     .83

112          KK    HCR8
113          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R5 THRU R8
114          HC       2

115          KK    RR9a
116          KM    ROUTE HYDROGRAPH FROM SUBBASINS R5 THRU R8 TO R9 ACROSS HWY 60
117          RS       1    STOR       0
118          SA       0       1      26      77     141
119          SE  1813.9  1829.5    1840    1850    1860
120          SQ       0     563    2236    4601    5986   27109
121          SE  1829.5    1831    1833    1835    1836    1840

122          KK     RR9
123          KM     ROUTE HYDROGRAPH FROM SUBBASINS R5 THRU R8
124          RM       4     .44      .3

125          KK   SUBR9
```

```
126          KM     HYDROGRAPH FOR SUBBASIN R9
127          BA    0.26
128          LS       0     90.
129          UD     .27
```



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

130          KK    HCR9
131          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R5 THRU R9
132          HC       2

133          KK  SUBR10
134          KM     HYDROGRAPH FOR SUBBASIN R10
135          BA    3.35
136          LS       0     96.
137          UD     .92

138          KK  SUBR11
139          KM     HYDROGRAPH FOR SUBBASIN R11
140          BA    3.90
141          LS       0     96.
142          UD     .78

143          KK   HCR11
144          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R10 & R11
145          HC       2

146          KK    RR12
147          KM     ROUTE HYDROGRAPH FROM SUBBASINS R10 & R11
148          RM       5     .55      .3

149          KK  SUBR12
150          KM     HYDROGRAPH FOR SUBBASIN R12
151          BA    4.46
152          LS       0     95.
153          UD     .76

154          KK   HCR12
155          KM     COMBINE HYDROGRAPHS FOR SUBBASINS R10 THRU R12
156          HC       2

157          KK   RR13a
158          KM    ROUTE HYDROGRAPH FROM SUBBASINS R10 THRU R12 TO R13 ACROSS HWY 60
159          RS       1    STOR       0
160          SA       0       1      83     186     358
161          SE  1793.6  1819.4    1840    1850    1860
162          SQ       0    2071    5240    9357   14240   18616   62142
163          SE  1819.4    1822    1824    1826    1828  1829.6  1834.5

164          KK    RR13
165          KM     ROUTE HYDROGRAPH FROM SUBBASINS R10 THRU R13
166          RM       4     .41      .3

167          KK  SUBR13
168          KM     HYDROGRAPH FOR SUBBASIN R13
169          BA    1.27
170          LS       0     95.
171          UD     .85
```

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

 172        KK  HCR13a
 173        KM    COMBINE HYDROGRAPHS FOR SUBBASINS R10 THRU R13
 174        HC      2

 175        KK  HCR13b
 176        KM    COMBINE HYDROGRAPHS FOR SUBBASINS R5 THRU R13
 177        HC      2

 178        KK   RR14
 179        KM    ROUTE HYDROGRAPH FROM SUBBASINS R5 THRU R13
 180        RM      9    1.10      .3

 181        KK  SUBR14
 182        KM    HYDROGRAPH FOR SUBBASIN R14
 183        BA   2.82
 184        LS      0     92.
 185        UD    .76

 186        KK  HCR14a
 187        KM    COMBINE HYDROGRAPHS FOR SUBBASINS R5 THRU R14
 188        HC      2

 189        KK  HCR14b
 190        KM    COMBINE HYDROGRAPHS FOR SUBBASINS R3 THRU R14
 191        HC      2

 192        KK  RR15-1
 193        KM    ROUTE HYDROGRAPH FROM SUBBASINS R3 THRU R14 THRU REACH R15-1
 194        RM      5     .63      .3

 195        KK  RR15-2
 196        KM    ROUTE HYDROGRAPH FROM SUBBASINS R3 THRU R14 THRU REACH R15-2
 197        RM      5     .63      .3

 198        KK  SUBR15
 199        KM    HYDROGRAPH FOR SUBBASIN R15
 200        BA   6.30
 201        LS      0     93.
 202        UD   1.47

 203        KK  HCR15a
 204        KM    COMBINE HYDROGRAPHS FOR SUBBASINS R3 THRU R15
 205        HC      2

 206        KK  HCR15b
 207        KM    COMBINE HYDROGRAPHS FOR SUBBASINS R1 THRU R15
 208        HC      2

 209        KK   HDR16
 210        KM    DIVERT FLOW FROM RITTENHOUSE (TO VINEYARD FRS)
 211        DT   DVR16
 212        DI      0    100    500   1000  100000
 213        DQ      0     50    130    130     130
```

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


 214        KK    RESR
 215        KM    RESERVOIR ROUTING THRU RITTENHOUSE F.R.S.
 216        KO       1       2
 217        RS       1    STOR       0
 218        SA       0     118     200     400     600     800
 219        SE    1585  1587.5  1589.1  1592.9  1596.5  1600.5
 220        SL  1577.7    5.94     .62     1.5
 221        SS  1597.6     600       3     1.5
 222        ST  1602.3   19000     3.3     1.5

 223        KK   SUBV1
 224        KM      HYDROGRAPH FOR SUBBASIN V1
 225        BA    3.03
 226        LS       0     97.
 227        UD     .53

 228        KK   SUBV2
 229        KM     HYDROGRAPH FOR SUBBASIN V2
 230        BA    3.34
 231        LS       0     93.
 232        UD     .47

 233        KK     RV3
 234        KM     ROUTE HYDROGRAPH FROM SUBBASIN V2
 235        RM       4     .38      .3

 236        KK   SUBV3
 237        KM     HYDROGRAPH FOR SUBBASIN V3
 238        BA    0.40
 239        LS       0     95.
 240        UD     .30

 241        KK    HCV3
 242        KM     COMBINE HYDROGRAPHS FOR SUBBASINS V1 THRU V3
 243        HC       3

 244        KK     RV4
 245        KM     ROUTE HYDROGRAPH FROM SUBBASINS V1 THRU V3
 246        RM       4     .43      .3

 247        KK   SUBV4
 248        KM     HYDROGRAPH FOR SUBBASIN V4
 249        BA    1.85
 250        LS       0     95.      15
 251        UD     .52

 252        KK    HCV4
 253        KM     COMBINE HYDROGRAPHS FOR SUBBASINS V1 THRU V4
 254        HC       2
```



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


 255        KK     RV5
 256        KM     ROUTE HYDROGRAPH FROM SUBBASINS V1 THRU V4
 257        RM       8     .66      .3
```

```
258          KK   SUBV5
259          KM     HYDROGRAPH FOR SUBBASIN V5
260          BA    1.66
261          LS       0     95.
262          UD     .45

263          KK    HCV5
264          KM    COMBINE HYDROGRAPHS FOR SUBBASINS V1 THRU V5
265          HC       2

266          KK    RV6a
267          KM    ROUTE HYDROGRAPH FROM SUBBASINS V1 THRU V5 TO V6 ACROSS HWY 60
268          RS       1    STOR       0
269          SA       0       1      45     147     205
270          SE  1719.9  1739.7    1750    1760    1770
271          SQ       0     387    2348    6889   19775   36999
272          SE  1739.7  1740.7  1742.7  1745.6    1749    1750

273          KK   RV6-1
274          KM     ROUTE HYDROGRAPH FROM SUBBASINS V1 THRU V5 THRU REACH RV6-1
275          RM       9     .83      .3

276          KK   RV6-2
277          KM     ROUTE HYDROGRAPH FROM SUBBASINS V1 THRU V5 THRU REACH RV6-2
278          RM       9     .83      .3

279          KK   SUBV6
280          KM     HYDROGRAPH FOR SUBBASIN V6
281          BA    3.59
282          LS       0     87.
283          UD     .99

284          KK    HCV6
285          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V1 THRU V6
286          HC       2

287          KK   SUBV7
288          KM     HYDROGRAPH FOR SUBBASIN V7
289          BA    1.69
290          LS       0     97.
291          UD     .74

292          KK   SUBV8
293          KM     HYDROGRAPH FOR SUBBASIN V8
294          BA    0.73
295          LS       0     95.      50
296          UD     .33
```



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


297          KK    HCV8
298          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V7 & V8
299          HC       2

300          KK     RV9
301          KM     ROUTE HYDROGRAPH FROM SUBBASINS V7 & V8
302          RM       3     .23      .3
```

```
303          KK   SUBV9
304          KM     HYDROGRAPH FOR SUBBASIN V9
305          BA    0.95
306          LS       0     96.
307          UD     .41

308          KK    HCV9
309          KM    COMBINE HYDROGRAPHS FOR SUBBASINS V7 THRU V9
310          HC       2

311          KK   RV10a
312          KM    ROUTE HYDROGRAPH FROM SUBBASINS V7 THRU V9 TO V10 ACROSS HWY 60
313          RS       1    STOR       0
314          SA       0      19      77     179     294
315          SE    1745    1770    1780    1790    1800
316          SQ       0    1211    3230    6108    9716   14201   63126
317          SE    1773    1775    1777    1779    1781  1783.3  1788.5

318          KK  RV10-1
319          KM     ROUTE HYDROGRAPH FROM SUBBASINS V7 THRU V9 THRU REACH V10-1
320          RM       9     .86      .3

321          KK  RV10-2
322          KM     ROUTE HYDROGRAPH FROM SUBBASINS V7 THRU V9 THRU REACH V10-2
323          RM       9     .86      .3

324          KK  RV10-3
325          KM     ROUTE HYDROGRAPH FROM SUBBASINS V7 THRU V9 THRU REACH V10-3
326          RM       9     .86      .3

327          KK  SUBV10
328          KM     HYDROGRAPH FOR SUBBASIN V10
329          BA    5.48
330          LS       0     95.
331          UD    1.54

332          KK   HCV10
333          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V7 THRU V10
334          HC       2

335          KK  SUBV11
336          KM     HYDROGRAPH FOR SUBBASIN V11
337          BA    0.44
338          LS       0     97.
339          UD     .93
```



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


340          KK   RV12a
341          KM    ROUTE HYDROGRAPH FROM SUBBASIN V11 TO V12 ACROSS HWY 60
342          RS       1    STOR       0
343          SA       0      32      64      96
344          SE  1773.7    1790    1800    1810
345          SQ       0      24     237     363    5249   12106   38086
346          SE  1773.7  1774.7  1778.7  1780.7  1784.5  1785.5  1787.5

347          KK  RV12-1
```

```
348          KM     ROUTE HYDROGRAPH FROM SUBBASIN V11 THRU REACH V12-1
349          RM       9    1.15      .3

350          KK  RV12-2
351          KM     ROUTE HYDROGRAPH FROM SUBBASIN V11 THRU REACH V12-2
352          RM       9    1.15      .3

353          KK  SUBV12
354          KM     HYDROGRAPH FOR SUBBASIN V12
355          BA    3.32
356          LS       0     95.
357          UD    1.38

358          KK   HCV12
359          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V11 & V12
360          HC       2

361          KK  SUBV13
362          KM     HYDROGRAPH FOR SUBBASIN V13
363          BA    2.35
364          LS       0     97.
365          UD     .99

366          KK   RV14a
367          KM    ROUTE HYDROGRAPH FROM SUBBASIN V13 TO V14 ACROSS HWY 60
368          RS       1    STOR       0
369          SA       0       1      38      96     154
370          SE  1780.4  1786.9    1800    1810    1820
371          SQ       0     120     372    1191    1925   16426   62329
372          SE  1786.9    1788    1789  1791.5    1794    1796    1798

373          KK  RV14-1
374          KM     ROUTE HYDROGRAPH FROM SUBBASIN V13 THRU REACH V14-1
375          RM       9     .96      .3

376          KK  RV14-2
377          KM     ROUTE HYDROGRAPH FROM SUBBASIN V13 THRU REACH V14-2
378          RM       9     .96      .3

379          KK  RV14-3
380          KM     ROUTE HYDROGRAPH FROM SUBBASIN V13 THRU REACH V14-3
381          RM       9     .96      .3
```



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


382          KK  SUBV14
383          KM     HYDROGRAPH FOR SUBBASIN V14
384          BA    4.09
385          LS       0     95.
386          UD    1.73

387          KK   HCV14
388          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V13 & V14
389          HC       2

390          KK  SUBV15
391          KM     HYDROGRAPH FOR SUBBASIN V15
392          BA    1.64
```

```
393          LS      0     97.
394          UD    .62

395          KK   RV16a
396          KM    ROUTE HYDROGRAPH FROM SUBBASIN V15 TO V16 ACROSS HWY 60
397          RS      1    STOR      0
398          SA      0       1     58     141     160
399          SE  1779.4    1786   1800    1810    1820
400          SQ      0     192    572    1061    1866    9058   26139
401          SE    1786  1787.5   1789  1790.5  1792.6    1796    1797

402          KK    RV16
403          KM     ROUTE HYDROGRAPH FROM SUBBASIN V15
404          RM      4     .48      .3

405          KK  SUBV16
406          KM     HYDROGRAPH FOR SUBBASIN V16
407          BA    0.76
408          LS      0     97.
409          UD    .29

410          KK   HCV16
411          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V15 & V16
412          HC      2

413          KK  SUBV17
414          KM     HYDROGRAPH FOR SUBBASIN V17
415          BA    4.06
416          LS      0     97.
417          UD    .69

418          KK    RV18
419          KM     ROUTE HYDROGRAPH FROM SUBBASIN V17
420          RM      9    1.14      .3

421          KK  SUBV18
422.         KM     HYDROGRAPH FOR SUBBASIN V18
423          BA    5.06
424          LS      0     97.
425          UD    .93
```



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


426          KK   HCV18
427          KM     COMBINE HYDROGRAPHS FOR SUBBASINS V17 & V18
428          HC      2

429          KK    RV19
430          KM     ROUTE HYDROGRAPH FROM SUBBASINS V17 & V18
431          RM      6     .38      .3

432          KK  SUBV19
433          KM     HYDROGRAPH FOR SUBBASIN V19
434          BA    2.77
435          LS      0     96.
436          UD    .59

437          KK   HCV19
```

```
438          KM    COMBINE HYDROGRAPHS FOR SUBBASINS V17 THRU V19
439          HC      2

440          KK   RV20a
441          KM    ROUTE HYDROGRAPH FROM SUBBASINS V17 THRU V19 TO V20 ACROSS HWY 60
442          RS      1    STOR       0
443          SA      0       1      13      51     154     294
444          SE   1768  1796.4    1800    1810    1820    1830
445          SQ      0    1226    4652    9549   16620   41739
446          SE  1796.4    1798    1800    1802  1804.3  1808.5

447          KK    RV20
448          KM    ROUTE HYDROGRAPH FROM SUBBASINS V17 THRU V19
449          RM      6     .72      .3

450          KK  SUBV20
451          KM    HYDROGRAPH FOR SUBBASIN V20
452          BA   0.48
453          LS      0     95.
454          UD    .43

455          KK  HCV20a
456          KM    COMBINE HYDROGRAPHS FOR SUBBASINS V17 THRU V20
457          HC      2

458          KK  HCV20b
459          KM    COMBINE HYDROGRAPHS FOR SUBBASINS V15 THRU V20
460          HC      2

461          KK    RV21
462          KM    ROUTE HYDROGRAPH FROM SUBBASINS V15 THRU V20
463          RM      9   1.21      .3

464          KK  SUBV21
465          KM    HYDROGRAPH FOR SUBBASIN V21
466          BA   4.43
467          LS      0     94.
468          UD   1.83
```



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


469          KK  HCV21a
470          KM    COMBINE HYDROGRAPHS FOR SUBBASINS V15 THRU V21
471          HC      2

472          KK  HCV21b
473          KM    COMBINE HYDROGRAPHS FOR SUBBASINS V1 THRU V21
474          HC      5

475          KK  HCV22a
476          KM   DIVERSION FROM RITTENHOUSE FRS
477          DR   DVR16

478          KK  HCV22b
479          KM    COMBINING DIVERSION WITH UPSTREAM HYDROGRAPH
480          HC      2

481          KK    RESV
```

```
482          KM   RESERVOIR ROUTING THRU VINEYARD F.R.S.
483          KO      1      2
484          RS      1   STOR      0
485          SA      0     65    200    400    600    800   1000   1200
486          SE  1564.2   1565 1566.6 1569.5 1571.8 1574.2 1576.1 1579.2
487          SL  1561.5   15.9     .7    1.5
488          SS  1574.8    600      3    1.5
489          ST  1579.5  28829    3.3    1.5
490          ZZ
```

1

SCHEMATIC DIAGRAM OF STREAM NETWORK

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

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

   10      SUBR1
              V
              V
   24       RR2a
              V
              V
   31      RR2-1
              V
              V
   34      RR2-2
              V
              V
   37      RR2-3
              .
              .
   40         .       SUBR2
              .          .
              .          .
   45       HCR2............
              .
              .
   48         .       SUBR3
              .          V
              .          V
   53         .       RR4a
              .          V
              .          V
   60         .      RR4-1
              .          V
              .          V
   63         .      RR4-2
              .          .
              .          .
   66         .          .      SUBR4
              .          .          .
              .          .          .
   71         .       HCR4............
              .          .
              .          .
   74         .          .      SUBR5
              .          .          V
              .          .          V
   79         .          .        RR6
              .          .          .
```

```
                .         .         .
 82             .         .         .      SUBR6
                .         .         .         .
                .         .         .         .
 87             .         .      HCR6............
                .         .         V
                .         .         V
 90             .         .      RR7
                .         .         .
                .         .         .
 93             .         .         .      SUBR7
                .         .         .         .
                .         .         .         .
 98             .         .      HCR7............
                .         .         V
                .         .         V
101             .         .      RR8-1
                .         .         V
                .         .         V
104             .         .      RR8-2
                .         .         .
                .         .         .
107             .         .         .      SUBR8
                .         .         .         .
                .         .         .         .
112             .         .      HCR8............
                .         .         V
                .         .         V
115             .         .      RR9a
                .         .         V
                .         .         V
122             .         .      RR9
                .         .         .
                .         .         .
125             .         .         .      SUBR9
                .         .         .         .
                .         .         .         .
130             .         .      HCR9............
                .         .         .
                .         .         .
133             .         .         .      SUBR10
                .         .         .         .
                .         .         .         .
138             .         .         .         .      SUBR11
                .         .         .         .         .
                .         .         .         .         .
143             .         .         .      HCR11............
                .         .         .         V
                .         .         .         V
146             .         .         .      RR12
                .         .         .         .
                .         .         .         .
149             .         .         .         .      SUBR12
                .         .         .         .         .
                .         .         .         .         .
154             .         .         .      HCR12............
                .         .         .         V
                .         .         .         V
157             .         .         .      RR13a
                .         .         .         V
```

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                .         .         .         V
164             .         .         .       RR13
                .         .         .         .
                .         .         .         .
167             .         .         .         .     SUBR13
                .         .         .         .         .
                .         .         .         .         .
172             .         .         .     HCR13a............
                .         .         .         .
                .         .         .         .
175             .         .     HCR13b............
                .         .         V
                .         .         V
178             .         .       RR14
                .         .         .
                .         .         .
181             .         .         .     SUBR14
                .         .         .         .
                .         .         .         .
186             .         .     HCR14a............
                .         .         .
                .         .         .
189             .     HCR14b............
                .         V
                .         V
192             .     RR15-1
                .         V
                .         V
195             .     RR15-2
                .         .
                .         .
198             .         .     SUBR15
                .         .         .
                .         .         .
203             .     HCR15a............
                .         .
                .         .
206         HCR15b............
                .
                .
211             .------>  DVR16
209         HDR16
                V
                V
214         RESR
                .
                .
223             .     SUBV1
                .         .
                .         .
228             .         .     SUBV2
                .         .         V
                .         .         V
233             .         .       RV3
                .         .         .
                .         .         .
236             .         .         .     SUBV3
                .         .         .         .
                .         .         .         .
241             .     HCV3........................
```

```
          .        V
          .        V
244       .      RV4
          .        .
          .        .
247       .        .      SUBV4
          .        .        .
          .        .        .
252       .     HCV4............
          .        V
          .        V
255       .      RV5
          .        .
          .        .
258       .        .      SUBV5
          .        .        .
          .        .        .
263       .     HCV5............
          .        V
          .        V
266       .     RV6a
          .        V
          .        V
273       .    RV6-1
          .        V
          .        V
276       .    RV6-2
          .        .
          .        .
279       .        .      SUBV6
          .        .        .
          .        .        .
284       .     HCV6............
          .        .
          .        .
287       .        .      SUBV7
          .        .        .
          .        .        .
292       .        .        .      SUBV8
          .        .        .        .
          .        .        .        .
297       .        .      HCV8............
          .        .        V
          .        .        V
300       .        .      RV9
          .        .        .
          .        .        .
303       .        .        .      SUBV9
          .        .        .        .
          .        .        .        .
308       .        .      HCV9............
          .        .        V
          .        .        V
311       .        .     RV10a
          .        .        V
          .        .        V
318       .        .    RV10-1
          .        .        V
          .        .        V
321       .        .    RV10-2
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          .         .         V
          .         .         V
324       .         .     RV10-3
          .         .         .
          .         .         .
327       .         .         .     SUBV10
          .         .         .         .
          .         .         .         .
332       .         .     HCV10............
          .         .         .
          .         .         .
335       .         .         .     SUBV11
          .         .         .         V
          .         .         .         V
340       .         .         .      RV12a
          .         .         .         V
          .         .         .         V
347       .         .         .     RV12-1
          .         .         .         V
          .         .         .         V
350       .         .         .     RV12-2
          .         .         .         .
          .         .         .         .
353       .         .         .         .     SUBV12
          .         .         .         .         .
          .         .         .         .         .
356       .         .         .      HCV12............
          .         .         .         .
          .         .         .         .
361       .         .         .         .     SUBV13
          .         .         .         .         V
          .         .         .         .         V
366       .         .         .         .      RV14a
          .         .         .         .         V
          .         .         .         .         V
373       .         .         .         .     RV14-1
          .         .         .         .         V
          .         .         .         .         V
376       .         .         .         .     RV14-2
          .         .         .         .         V
          .         .         .         .         V
379       .         .         .         .     RV14-3
          .         .         .         .         .
          .         .         .         .         .
382       .         .         .         .         .     SUBV14
          .         .         .         .         .         .
          .         .         .         .         .         .
387       .         .         .         .      HCV14............
          .         .         .         .         .
          .         .         .         .         .
390       .         .         .         .         .     SUBV15
          .         .         .         .         .         V
          .         .         .         .         .         V
395       .         .         .         .         .      RV16a
          .         .         .         .         .         V
          .         .         .         .         .         V
402       .         .         .         .         .      RV16
          .         .         .         .         .         .
          .         .         .         .         .         .
405       .         .         .         .         .         .     SUBV16
```

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410                 HCV16............
413                                     SUBV17
                                           V
                                           V
418                                      RV18
421                                                  SUBV18
426                                      HCV18............
                                           V
                                           V
429                                      RV19
432                                                  SUBV19
437                                      HCV19............
                                           V
                                           V
440                                      RV20a
                                           V
                                           V
447                                      RV20
450                                                  SUBV20
455                                     HCV20a............
458                 HCV20b............
                       V
                       V
461                  RV21
464                                     SUBV21
469                 HCV21a............
472         HCV21b.........................................
477                       .<-------   DVR16
475                 HCV22a
478         HCV22b............
               V
               V
```

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  481          .        RESV

(***) 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
                                                    ****



                        VINEYARD AND RITTENHOUSE F.R.S. ANALYSIS
                        72-HR PMP STORM; SCS EXCESS & HYDROGRAPH DEVELOPMENT.
                        MUSKINGUM ROUTING
                        ANTECEDENT SOIL MOISTURE CONDITION III
                        TIME INCREMENT = 15 MINUTES
                        FILENAME = DM6IN, DM6OUT

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

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

                COMPUTATION INTERVAL     .25 HOURS
                     TOTAL TIME BASE   74.75 HOURS

         ENGLISH UNITS

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN       0. TO   375789.
               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 *** TIME INTERVAL IS GREATER THAN .29*LAG

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN       0. TO   533630.
               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 *** TIME INTERVAL IS GREATER THAN .29*LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN       0. TO    79917.
               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 *** TIME INTERVAL IS GREATER THAN .29*LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN       0. TO   110997.
              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 *** TIME INTERVAL IS GREATER THAN .29*LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG


*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***


         ***************
         *             *
214 KK   *     RESR    *
         *             *
         ***************

216 KO        OUTPUT CONTROL VARIABLES
                   IPRNT          1  PRINT CONTROL
                   IPLOT          2  PLOT CONTROL
                   QSCAL         0.  HYDROGRAPH PLOT SCALE

            HYDROGRAPH ROUTING DATA

217 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

218 SA            AREA         .0     118.0     200.0     400.0     600.0     800.0

219 SE        ELEVATION     1585.00   1587.50   1589.10   1592.90   1596.50   1600.50

220 SL        LOW-LEVEL OUTLET
                   ELEVL     1577.70  ELEVATION AT CENTER OF OUTLET
                   CAREA        5.94  CROSS-SECTIONAL AREA
                    COQL         .62  COEFFICIENT
                    EXPL        1.50  EXPONENT OF HEAD

221 SS        SPILLWAY
                    CREL     1597.60  SPILLWAY CREST ELEVATION
                   SPWID      600.00  SPILLWAY WIDTH
                    COQW        3.00  WEIR COEFFICIENT
                    EXPW        1.50  EXPONENT OF HEAD

222 ST        TOP OF DAM
                   TOPEL     1602.30  ELEVATION AT TOP OF DAM
                  DAMWID    19000.00  DAM WIDTH
                    COQD        3.30  WEIR COEFFICIENT
                    EXPD        1.50  EXPONENT OF HEAD
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***

COMPUTED STORAGE-ELEVATION DATA

STORAGE	.00	98.33	349.86	1468.14	3256.01	6046.44
ELEVATION	1585.00	1587.50	1589.10	1592.90	1596.50	1600.50

COMPUTED OUTFLOW-ELEVATION DATA

(EXCLUDING FLOW OVER DAM)

OUTFLOW	.00	718.35	873.76	1050.11	1248.72	1470.92	1718.01	1991.35	2292.22	2622.00
ELEVATION	1585.00	1586.09	1587.27	1588.51	1589.84	1591.24	1592.71	1594.27	1595.89	1597.60
OUTFLOW	2656.75	2768.00	3004.52	3412.79	4040.19	4933.41	6139.43	7705.24	9677.88	12105.01
ELEVATION	1597.66	1597.76	1597.92	1598.13	1598.39	1598.70	1599.07	1599.50	1599.97	1600.50

COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

(INCLUDING FLOW OVER DAM)

STORAGE	.00	8.25	73.14	98.33	242.06	349.86	509.18	884.24	1394.13	1468.14
OUTFLOW	582.56	718.35	873.76	906.14	1050.11	1136.87	1248.72	1470.92	1718.01	1750.33
ELEVATION	1585.00	1586.09	1587.27	1587.50	1588.51	1589.10	1589.84	1591.24	1592.71	1592.90
STORAGE	2062.05	2903.69	3256.01	3944.47	3980.93	4048.97	4153.00	4294.06	4474.00	4694.84
OUTFLOW	1991.35	2292.22	2407.64	2622.00	2656.75	2768.00	3004.52	3412.79	4040.19	4933.41
ELEVATION	1594.27	1595.89	1596.50	1597.60	1597.66	1597.76	1597.92	1598.13	1598.39	1598.70
STORAGE	4959.15	5270.01	5631.03	6046.44						
OUTFLOW	6139.43	7705.24	9677.88	12105.01						
ELEVATION	1599.07	1599.50	1599.97	1600.50						

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HYDROGRAPH AT STATION RESR

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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
1		0000	1	583.	.0	1585.0	2		0100	101	1326.	631.3	1590.3	3		0200	201	46492.	8022.5	1602.8
1		0015	2	0.	.0	1585.0	2		0115	102	1342.	657.2	1590.4	3		0215	202	46907.	8027.8	1602.8
1		0030	3	0.	.0	1585.0	2		0130	103	1358.	683.5	1590.5	3		0230	203	46978.	8028.7	1602.8
1		0045	4	0.	.0	1585.0	2		0145	104	1374.	710.3	1590.6	3		0245	204	46801.	8026.4	1602.8
1		0100	5	0.	.0	1585.0	2		0200	105	1389.	737.5	1590.7	3		0300	205	46377.	8021.0	1602.8
1		0115	6	0.	.0	1585.0	2		0215	106	1405.	765.2	1590.8	3		0315	206	45668.	8011.8	1602.8
1		0130	7	0.	.0	1585.0	2		0230	107	1421.	793.3	1590.9	3		0330	207	44655.	7998.6	1602.8
1		0145	8	0.	.0	1585.0	2		0245	108	1437.	821.8	1591.0	3		0345	208	43301.	7980.6	1602.7
1		0200	9	0.	.0	1585.0	2		0300	109	1453.	850.9	1591.1	3		0400	209	41406.	7954.9	1602.7
1		0215	10	0.	.0	1585.0	2		0315	110	1469.	880.4	1591.2	3		0415	210	39292.	7925.3	1602.7
1		0230	11	0.	.0	1585.0	2		0330	111	1485.	910.5	1591.3	3		0430	211	36947.	7891.2	1602.6
1		0245	12	0.	.0	1585.0	2		0345	112	1501.	941.0	1591.4	3		0445	212	34426.	7852.6	1602.6
1		0300	13	0.	.0	1585.0	2		0400	113	1517.	972.0	1591.5	3		0500	213	31832.	7810.4	1602.6
1		0315	14	0.	.0	1585.0	2		0415	114	1533.	1003.4	1591.6	3		0515	214	29254.	7764.9	1602.5
1		0330	15	0.	.0	1585.0	2		0430	115	1549.	1035.3	1591.7	3		0530	215	26785.	7716.5	1602.5
1		0345	16	0.	.0	1585.0	2		0445	116	1566.	1067.8	1591.8	3		0545	216	24516.	7664.7	1602.4
1		0400	17	583.	.0	1585.0	2		0500	117	1582.	1101.0	1591.9	3		0600	217	22601.	7607.8	1602.3
1		0415	18	0.	.0	1585.0	2		0515	118	1598.	1134.9	1592.0	3		0615	218	21674.	7534.8	1602.3

1	0430	19	583.	.0	1585.0	*	2	0530	119	1615.	1169.6	1592.1	*	3	0630	219	21024.	7438.3	1602.1
1	0445	20	0.	.0	1585.0	*	2	0545	120	1632.	1205.1	1592.2	*	3	0645	220	20244.	7321.6	1602.0
1	0500	21	583.	.0	1585.0	*	2	0600	121	1649.	1241.3	1592.3	*	3	0700	221	19384.	7192.2	1601.9
1	0515	22	0.	.0	1585.0	*	2	0615	122	1666.	1278.2	1592.4	*	3	0715	222	18483.	7055.6	1601.7
1	0530	23	583.	.0	1585.0	*	2	0630	123	1683.	1315.9	1592.5	*	3	0730	223	17570.	6916.2	1601.5
1	0545	24	0.	.0	1585.0	*	2	0645	124	1700.	1354.4	1592.6	*	3	0745	224	16668.	6776.9	1601.4
1	0600	25	583.	.0	1585.0	*	2	0700	125	1718.	1393.8	1592.7	*	3	0800	225	15792.	6640.4	1601.2
1	0615	26	0.	.0	1585.0	*	2	0715	126	1736.	1434.2	1592.8	*	3	0815	226	14956.	6508.6	1601.1
1	0630	27	583.	.0	1585.0	*	2	0730	127	1754.	1475.7	1592.9	*	3	0830	227	14167.	6382.9	1600.9
1	0645	28	0.	.0	1585.0	*	2	0745	128	1772.	1518.1	1593.0	*	3	0845	228	13428.	6263.7	1600.8
1	0700	29	583.	.0	1585.0	*	2	0800	129	1790.	1561.7	1593.1	*	3	0900	229	12737.	6150.9	1600.6
1	0715	30	0.	.0	1585.0	*	2	0815	130	1809.	1606.3	1593.2	*	3	0915	230	12092.	6044.2	1600.5
1	0730	31	583.	.0	1585.0	*	2	0830	131	1828.	1652.0	1593.3	*	3	0930	231	11489.	5943.3	1600.4
1	0745	32	0.	.0	1585.0	*	2	0845	132	1847.	1698.8	1593.5	*	3	0945	232	10926.	5847.8	1600.2
1	0800	33	583.	.0	1585.0	*	2	0900	133	1867.	1746.8	1593.6	*	3	1000	233	10401.	5757.4	1600.1
1	0815	34	0.	.0	1585.0	*	2	0915	134	1887.	1796.0	1593.7	*	3	1015	234	9909.	5671.8	1600.0
1	0830	35	583.	.0	1585.0	*	2	0930	135	1907.	1846.4	1593.8	*	3	1030	235	9450.	5590.6	1599.9
1	0845	36	0.	.0	1585.0	*	2	0945	136	1928.	1897.9	1593.9	*	3	1045	236	9020.	5513.5	1599.8
1	0900	37	583.	.0	1585.0	*	2	1000	137	1948.	1950.6	1594.0	*	3	1100	237	8618.	5440.3	1599.7
1	0915	38	0.	.0	1585.0	*	2	1015	138	1969.	2004.3	1594.1	*	3	1115	238	8242.	5370.9	1599.6
1	0930	39	583.	.0	1585.0	*	2	1030	139	1990.	2059.1	1594.3	*	3	1130	239	7890.	5305.0	1599.5
1	0945	40	0.	.0	1585.0	*	2	1045	140	2011.	2114.7	1594.4	*	3	1145	240	7561.	5242.5	1599.5
1	1000	41	583.	.0	1585.0	*	2	1100	141	2033.	2171.2	1594.5	*	3	1200	241	7254.	5183.3	1599.4
1	1015	42	0.	.0	1585.0	*	2	1115	142	2054.	2228.5	1594.6	*	3	1215	242	6968.	5127.1	1599.3
1	1030	43	583.	.0	1585.0	*	2	1130	143	2076.	2286.4	1594.7	*	3	1230	243	6701.	5074.0	1599.2
1	1045	44	583.	.0	1585.0	*	2	1145	144	2097.	2345.1	1594.8	*	3	1245	244	6453.	5023.7	1599.2
1	1100	45	583.	.0	1585.0	*	2	1200	145	2119.	2404.5	1595.0	*	3	1300	245	6222.	4976.3	1599.1
1	1115	46	583.	.0	1585.0	*	2	1215	146	2140.	2464.5	1595.1	*	3	1315	246	6007.	4931.4	1599.0
1	1130	47	583.	.0	1585.0	*	2	1230	147	2162.	2525.3	1595.2	*	3	1330	247	5807.	4889.0	1599.0
1	1145	48	583.	.0	1585.0	*	2	1245	148	2183.	2586.6	1595.3	*	3	1345	248	5621.	4849.0	1598.9
1	1200	49	583.	.0	1585.0	*	2	1300	149	2205.	2648.6	1595.4	*	3	1400	249	5448.	4811.2	1598.9
1	1215	50	583.	.0	1585.0	*	2	1315	150	2227.	2711.3	1595.5	*	3	1415	250	5287.	4775.5	1598.8
1	1230	51	584.	.0	1585.0	*	2	1330	151	2249.	2774.8	1595.7	*	3	1430	251	5137.	4741.6	1598.8
1	1245	52	629.	.4	1585.4	*	2	1345	152	2270.	2839.0	1595.8	*	3	1445	252	4997.	4709.5	1598.7
1	1300	53	645.	.9	1585.5	*	2	1400	153	2292.	2904.2	1595.9	*	3	1500	253	4865.	4679.0	1598.7
1	1315	54	664.	1.9	1585.7	*	2	1415	154	2314.	2970.3	1596.0	*	3	1515	254	4742.	4649.8	1598.6
1	1330	55	682.	3.3	1585.8	*	2	1430	155	2337.	3037.5	1596.1	*	3	1530	255	4626.	4622.0	1598.6
1	1345	56	699.	5.3	1585.9	*	2	1445	156	2359.	3105.9	1596.2	*	3	1545	256	4517.	4595.5	1598.6
1	1400	57	715.	7.7	1586.1	*	2	1500	157	2382.	3175.8	1596.4	*	3	1600	257	4415.	4570.3	1598.5
1	1415	58	731.	10.6	1586.2	*	2	1515	158	2405.	3247.2	1596.5	*	3	1615	258	4319.	4546.2	1598.5
1	1430	59	746.	14.1	1586.3	*	2	1530	159	2428.	3320.4	1596.6	*	3	1630	259	4228.	4523.1	1598.5
1	1445	60	761.	18.1	1586.4	*	2	1545	160	2452.	3395.6	1596.7	*	3	1645	260	4143.	4500.9	1598.4
1	1500	61	775.	22.6	1586.5	*	2	1600	161	2477.	3473.1	1596.9	*	3	1700	261	4061.	4479.5	1598.4
1	1515	62	789.	27.6	1586.6	*	2	1615	162	2502.	3553.3	1597.0	*	3	1715	262	3983.	4458.6	1598.4
1	1530	63	803.	33.2	1586.7	*	2	1630	163	2527.	3636.2	1597.1	*	3	1730	263	3907.	4438.2	1598.3
1	1545	64	816.	39.2	1586.8	*	2	1645	164	2554.	3722.3	1597.3	*	3	1745	264	3835.	4418.3	1598.3
1	1600	65	829.	45.8	1586.9	*	2	1700	165	2582.	3811.7	1597.4	*	3	1800	265	3766.	4398.9	1598.3
1	1615	66	842.	53.0	1587.0	*	2	1715	166	2610.	3904.8	1597.5	*	3	1815	266	3699.	4379.8	1598.3
1	1630	67	855.	60.7	1587.1	*	2	1730	167	2686.	4001.5	1597.7	*	3	1830	267	3634.	4361.1	1598.2
1	1645	68	868.	69.0	1587.2	*	2	1745	168	2877.	4100.5	1597.8	*	3	1845	268	3571.	4342.5	1598.2
1	1700	69	881.	78.0	1587.3	*	2	1800	169	3133.	4200.6	1598.0	*	3	1900	269	3510.	4324.0	1598.2
1	1715	70	893.	87.5	1587.4	*	2	1815	170	3436.	4301.3	1598.1	*	3	1915	270	3449.	4305.4	1598.1
1	1730	71	905.	97.7	1587.5	*	2	1830	171	3777.	4402.2	1598.3	*	3	1930	271	3390.	4286.8	1598.1
1	1745	72	918.	108.5	1587.6	*	2	1845	172	4152.	4503.4	1598.4	*	3	1945	272	3331.	4268.0	1598.1
1	1800	73	931.	119.8	1587.7	*	2	1900	173	4555.	4604.9	1598.6	*	3	2000	273	3273.	4249.1	1598.1
1	1815	74	944.	131.7	1587.8	*	2	1915	174	4986.	4707.0	1598.7	*	3	2015	274	3217.	4229.9	1598.0
1	1830	75	957.	144.0	1587.9	*	2	1930	175	5442.	4809.9	1598.9	*	3	2030	275	3160.	4210.5	1598.0
1	1845	76	970.	156.8	1588.0	*	2	1945	176	5922.	4913.6	1599.0	*	3	2045	276	3105.	4190.6	1598.0
1	1900	77	983.	170.1	1588.0	*	2	2000	177	6426.	5018.3	1599.2	*	3	2100	277	3050.	4170.5	1597.9
1	1915	78	997.	184.0	1588.1	*	2	2015	178	6955.	5124.4	1599.3	*	3	2115	278	2997.	4149.9	1597.9

1	1930	79	1011.	198.3	1588.2	*	2	2030	179	7508.	5232.3	1599.4	*	3	2130	279	2944.	4128.8	1597.9
1	1945	80	1024.	213.1	1588.3	*	2	2045	180	8087.	5342.1	1599.6	*	3	2145	280	2893.	4107.3	1597.8
1	2000	81	1038.	228.3	1588.4	*	2	2100	181	8694.	5454.3	1599.7	*	3	2200	281	2843.	4085.2	1597.8
1	2015	82	1052.	243.9	1588.5	*	2	2115	182	9332.	5569.6	1599.9	*	3	2215	282	2795.	4062.5	1597.8
1	2030	83	1065.	259.9	1588.6	*	2	2130	183	9998.	5687.4	1600.0	*	3	2230	283	2750.	4039.2	1597.7
1	2045	84	1079.	276.3	1588.7	*	2	2145	184	10711.	5811.0	1600.2	*	3	2245	284	2708.	4015.4	1597.7
1	2100	85	1093.	293.2	1588.8	*	2	2200	185	11484.	5942.4	1600.4	*	3	2300	285	2670.	3990.8	1597.7
1	2115	86	1107.	310.6	1588.9	*	2	2215	186	12331.	6084.0	1600.5	*	3	2315	286	2639.	3965.6	1597.6
1	2130	87	1121.	328.5	1589.0	*	2	2230	187	13272.	6238.3	1600.7	*	3	2330	287	2620.	3939.5	1597.6
1	2145	88	1135.	346.9	1589.1	*	2	2245	188	14319.	6407.3	1600.9	*	3	2345	288	2612.	3912.2	1597.6
1	2200	89	1149.	365.7	1589.2	*	2	2300	189	15491.	6593.1	1601.2	*	4	0000	289	2604.	3883.9	1597.5
1	2215	90	1163.	385.0	1589.3	*	2	2315	190	16795.	6796.7	1601.4	*	4	0015	290	2595.	3854.3	1597.5
1	2230	91	1177.	404.8	1589.4	*	2	2330	191	18233.	7017.6	1601.7	*	4	0030	291	2585.	3823.7	1597.4
1	2245	92	1191.	425.0	1589.5	*	2	2345	192	19794.	7254.1	1601.9	*	4	0045	292	2576.	3791.9	1597.4
1	2300	93	1206.	445.7	1589.6	*	3	0000	193	21462.	7503.4	1602.2	*	4	0100	293	2565.	3758.9	1597.3
1	2315	94	1220.	466.9	1589.7	*	3	0015	194	27225.	7725.6	1602.5	*	4	0115	294	2555.	3724.7	1597.3
1	2330	95	1235.	488.7	1589.7	*	3	0030	195	34669.	7856.4	1602.6	*	4	0130	295	2544.	3689.2	1597.2
1	2345	96	1250.	510.9	1589.8	*	3	0045	196	38610.	7915.5	1602.7	*	4	0145	296	2533.	3652.5	1597.1
2	0000	97	1265.	533.8	1589.9	*	3	0100	197	41080.	7950.4	1602.7	*	4	0200	297	2521.	3614.7	1597.1
2	0015	98	1280.	557.3	1590.0	*	3	0115	198	42856.	7974.7	1602.7	*	4	0215	298	2509.	3575.7	1597.0
2	0030	99	1295.	581.4	1590.1	*	3	0130	199	44440.	7995.8	1602.8	*	4	0230	299	2496.	3535.7	1597.0
2	0045	100	1311.	606.1	1590.2	*	3	0145	200	45668.	8011.8	1602.8	*	4	0245	300	2483.	3494.8	1596.9
						*							*						

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PEAK OUTFLOW IS 46978. AT TIME 50.50 HOURS

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	74.75-HR
+ (CFS)	(HR)					
		(CFS)				
+ 46978.	50.50		38676.	16783.	6619.	6377.
		(INCHES)	7.540	13.088	15.486	15.489
		(AC-FT)	19178.	33289.	39389.	39395.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	74.75-HR
+ (AC-FT)	(HR)				
8029.	50.50	7903.	6115.	3042.	2930.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	74.75-HR
+ (FEET)	(HR)				
1602.80	50.50	1602.66	1600.50	1594.32	1593.98

CUMULATIVE AREA = 47.69 SQ MI

1 STATION RESR

(I) INFLOW, (O) OUTFLOW

0. 10000. 20000. 30000. 40000. 50000. 0. 0. 0. 0. 0. 0. 0.

(S) STORAGE

0. 0. 0. 0. 0. 0. 0. 4000. 8000. 0. 0. 0. 0.

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DAHRMN PER
 10000  1IO--------.---------.---------.---------.---------.---------S---------.---------.---------.---------.---------.---------.
 10015  2I        .         .         .         .         .         S         .         .         .         .         .         .
 10030  3I        .         .         .         .         .         S         .         .         .         .         .         .
 10045  4I        .         .         .         .         .         S         .         .         .         .         .         .
 10100  5I        .         .         .         .         .         S         .         .         .         .         .         .
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10115  6I       .    .    .    .    .    S    .    .    .    .    .    .
10130  7I       .    .    .    .    .    S    .    .    .    .    .    .
10145  8I       .    .    .    .    .    S    .    .    .    .    .    .
10200  9I       .    .    .    .    .    S    .    .    .    .    .    .
10215  10I      .    .    .    .    .    S    .    .    .    .    .    .
10230  11I . . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10245  12I      .    .    .    .    .    S    .    .    .    .    .    .
10300  13I      .    .    .    .    .    S    .    .    .    .    .    .
10315  14I      .    .    .    .    .    S    .    .    .    .    .    .
10330  15I      .    .    .    .    .    S    .    .    .    .    .    .
10345  16I      .    .    .    .    .    S    .    .    .    .    .    .
10400  17IO     .    .    .    .    .    S    .    .    .    .    .    .
10415  18I      .    .    .    .    .    S    .    .    .    .    .    .
10430  19IO     .    .    .    .    .    S    .    .    .    .    .    .
10445  20I      .    .    .    .    .    S    .    .    .    .    .    .
10500  21IO. . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10515  22I      .    .    .    .    .    S    .    .    .    .    .    .
10530  23IO     .    .    .    .    .    S    .    .    .    .    .    .
10545  24I      .    .    .    .    .    S    .    .    .    .    .    .
10600  25IO     .    .    .    .    .    S    .    .    .    .    .    .
10615  26I      .    .    .    .    .    S    .    .    .    .    .    .
10630  27IO     .    .    .    .    .    S    .    .    .    .    .    .
10645  28I      .    .    .    .    .    S    .    .    .    .    .    .
10700  29IO     .    .    .    .    .    S    .    .    .    .    .    .
10715  30I      .    .    .    .    .    S    .    .    .    .    .    .
10730  31IO. . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
10745  32I      .    .    .    .    .    S    .    .    .    .    .    .
10800  33IO     .    .    .    .    .    S    .    .    .    .    .    .
10815  34I      .    .    .    .    .    S    .    .    .    .    .    .
10830  35IO     .    .    .    .    .    S    .    .    .    .    .    .
10845  36I      .    .    .    .    .    S    .    .    .    .    .    .
10900  37IO     .    .    .    .    .    S    .    .    .    .    .    .
10915  38I      .    .    .    .    .    S    .    .    .    .    .    .
10930  39IO     .    .    .    .    .    S    .    .    .    .    .    .
10945  40I      .    .    .    .    .    S    .    .    .    .    .    .
11000  41IO. . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
11015  42I      .    .    .    .    .    S    .    .    .    .    .    .
11030  43IO     .    .    .    .    .    S    .    .    .    .    .    .
11045  44IO     .    .    .    .    .    S    .    .    .    .    .    .
11100  45IO     .    .    .    .    .    S    .    .    .    .    .    .
11115  46IO     .    .    .    .    .    S    .    .    .    .    .    .
11130  47IO     .    .    .    .    .    S    .    .    .    .    .    .
11145  48IO     .    .    .    .    .    S    .    .    .    .    .    .
11200  49.I     .    .    .    .    .    S    .    .    .    .    .    .
11215  50.I     .    .    .    .    .    S    .    .    .    .    .    .
11230  51.I. . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
11245  52.I     .    .    .    .    .    S    .    .    .    .    .    .
11300  53.I     .    .    .    .    .    S    .    .    .    .    .    .
11315  54.I     .    .    .    .    .    S    .    .    .    .    .    .
11330  55.I     .    .    .    .    .    S    .    .    .    .    .    .
11345  56.I     .    .    .    .    .    S    .    .    .    .    .    .
11400  57.I     .    .    .    .    .    S    .    .    .    .    .    .
11415  58.I     .    .    .    .    .    S    .    .    .    .    .    .
11430  59.I     .    .    .    .    .    S    .    .    .    .    .    .
11445  60.I     .    .    .    .    .    S    .    .    .    .    .    .
11500  61.I. . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
11515  62.I     .    .    .    .    .    S    .    .    .    .    .    .
11530  63.I     .    .    .    .    .    S    .    .    .    .    .    .
11545  64.I     .    .    .    .    .    S    .    .    .    .    .    .
11600  65.I     .    .    .    .    .    S    .    .    .    .    .    .
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11615  66.I      .     .     .     .     .     S     .     .     .     .     .     .
11630  67.I      .     .     .     .     .     S     .     .     .     .     .     .
11645  68.I      .     .     .     .     .     S     .     .     .     .     .     .
11700  69.I      .     .     .     .     .     S     .     .     .     .     .     .
11715  70.I      .     .     .     .     .     S     .     .     .     .     .     .
11730  71.I.....................................S.....................................
11745  72.I      .     .     .     .     .     S     .     .     .     .     .     .
11800  73.I      .     .     .     .     .     S     .     .     .     .     .     .
11815  74.0I     .     .     .     .     .     S     .     .     .     .     .     .
11830  75.0I     .     .     .     .     .     S     .     .     .     .     .     .
11845  76.0I     .     .     .     .     .     S     .     .     .     .     .     .
11900  77.0I     .     .     .     .     .     S     .     .     .     .     .     .
11915  78.0I     .     .     .     .     .     S     .     .     .     .     .     .
11930  79.0I     .     .     .     .     .     S     .     .     .     .     .     .
11945  80.0I     .     .     .     .     .     .S    .     .     .     .     .     .
12000  81.0I.....................................S.....................................
12015  82.0I     .     .     .     .     .     .S    .     .     .     .     .     .
12030  83.0I     .     .     .     .     .     .S    .     .     .     .     .     .
12045  84.0I     .     .     .     .     .     .S    .     .     .     .     .     .
12100  85.0I     .     .     .     .     .     .S    .     .     .     .     .     .
12115  86.0I     .     .     .     .     .     .S    .     .     .     .     .     .
12130  87.0I     .     .     .     .     .     .S    .     .     .     .     .     .
12145  88.0I     .     .     .     .     .     .S    .     .     .     .     .     .
12200  89.0I     .     .     .     .     .     .S    .     .     .     .     .     .
12215  90.0I     .     .     .     .     .     .S    .     .     .     .     .     .
12230  91.0I.....................................S.....................................
12245  92.0I     .     .     .     .     .     .S    .     .     .     .     .     .
12300  93.0I     .     .     .     .     .     .S    .     .     .     .     .     .
12315  94.0I     .     .     .     .     .     .S    .     .     .     .     .     .
12330  95.0I     .     .     .     .     .     .S    .     .     .     .     .     .
12345  96.0I     .     .     .     .     .     .S    .     .     .     .     .     .
20000  97.0I     .     .     .     .     .     .S    .     .     .     .     .     .
20015  98.0I     .     .     .     .     .     .S    .     .     .     .     .     .
20030  99.0I     .     .     .     .     .     .S    .     .     .     .     .     .
20045 100.0 I     .     .     .     .     .     . S   .     .     .     .     .     .
20100 101.0.I.....................................S.....................................
20115 102.0 I     .     .     .     .     .     . S   .     .     .     .     .     .
20130 103.0 I     .     .     .     .     .     . S   .     .     .     .     .     .
20145 104.0 I     .     .     .     .     .     . S   .     .     .     .     .     .
20200 105.0 I     .     .     .     .     .     . S   .     .     .     .     .     .
20215 106.0 I     .     .     .     .     .     . S   .     .     .     .     .     .
20230 107.0 I     .     .     .     .     .     . S   .     .     .     .     .     .
20245 108.0 I     .     .     .     .     .     . S   .     .     .     .     .     .
20300 109.0 I     .     .     .     .     .     . S   .     .     .     .     .     .
20315 110.0 I     .     .     .     .     .     . S   .     .     .     .     .     .
20330 111.0.I.....................................S.....................................
20345 112. 0I     .     .     .     .     .     . S   .     .     .     .     .     .
20400 113. 0I     .     .     .     .     .     . S   .     .     .     .     .     .
20415 114. 0I     .     .     .     .     .     .  S  .     .     .     .     .     .
20430 115. 0I     .     .     .     .     .     .  S  .     .     .     .     .     .
20445 116. 0I     .     .     .     .     .     .  S  .     .     .     .     .     .
20500 117. 0I     .     .     .     .     .     .  S  .     .     .     .     .     .
20515 118. 0I     .     .     .     .     .     .  S  .     .     .     .     .     .
20530 119. 0I     .     .     .     .     .     .  S  .     .     .     .     .     .
20545 120. 0I     .     .     .     .     .     .  S  .     .     .     .     .     .
20600 121. 0I.....................................  S.....................................
20615 122. 0I     .     .     .     .     .     .  S  .     .     .     .     .     .
20630 123. 0 I    .     .     .     .     .     .  S  .     .     .     .     .     .
20645 124. 0 I    .     .     .     .     .     .  S  .     .     .     .     .     .
20700 125. 0 I    .     .     .     .     .     .  S  .     .     .     .     .     .
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20715 126. 0 I    .       .       .       .       .       .  S    .       .       .       .       .       .
20730 127. 0 I    .       .       .       .       .       .  S    .       .       .       .       .       .
20745 128. 0 I    .       .       .       .       .       .  S    .       .       .       .       .       .
20800 129. 0 I    .       .       .       .       .       .  S    .       .       .       .       .       .
20815 130. 0 I    .       .       .       .       .       .  S    .       .       .       .       .       .
20830 131. 0 I.......................................S.......................................
20845 132. 0 I    .       .       .       .       .       .  S    .       .       .       .       .       .
20900 133. 0 I    .       .       .       .       .       .  S    .       .       .       .       .       .
20915 134. 0 I    .       .       .       .       .       .  S    .       .       .       .       .       .
20930 135. 0 I    .       .       .       .       .       .   S   .       .       .       .       .       .
20945 136. 0 I    .       .       .       .       .       .   S   .       .       .       .       .       .
21000 137. 0  I   .       .       .       .       .       .   S   .       .       .       .       .       .
21015 138. 0  I   .       .       .       .       .       .   S   .       .       .       .       .       .
21030 139. 0  I   .       .       .       .       .       .   S   .       .       .       .       .       .
21045 140. 0  I   .       .       .       .       .       .   S   .       .       .       .       .       .
21100 141. 0 .I.......................................S.......................................
21115 142. 0  I   .       .       .       .       .       .    S  .       .       .       .       .       .
21130 143. 0  I   .       .       .       .       .       .    S  .       .       .       .       .       .
21145 144. 0  I   .       .       .       .       .       .    S  .       .       .       .       .       .
21200 145. 0  I   .       .       .       .       .       .    S  .       .       .       .       .       .
21215 146. 0  I   .       .       .       .       .       .    S  .       .       .       .       .       .
21230 147. 0  I   .       .       .       .       .       .    S  .       .       .       .       .       .
21245 148. 0  I   .       .       .       .       .       .    S  .       .       .       .       .       .
21300 149. 0  I   .       .       .       .       .       .     S .       .       .       .       .       .
21315 150. 0  I   .       .       .       .       .       .     S .       .       .       .       .       .
21330 151. 0 .I.......................................S.......................................
21345 152. 0  I   .       .       .       .       .       .     S .       .       .       .       .       .
21400 153. 0  I   .       .       .       .       .       .     S .       .       .       .       .       .
21415 154. 0   I  .       .       .       .       .       .     S .       .       .       .       .       .
21430 155. 0   I  .       .       .       .       .       .      S.       .       .       .       .       .
21445 156. 0   I  .       .       .       .       .       .      S.       .       .       .       .       .
21500 157. 0   I  .       .       .       .       .       .      S.       .       .       .       .       .
21515 158. 0   I  .       .       .       .       .       .      S.       .       .       .       .       .
21530 159. 0   I  .       .       .       .       .       .      S.       .       .       .       .       .
21545 160. 0   I  .       .       .       .       .       .      S.       .       .       .       .       .
21600 161. 0 . I.......................................S.......................................
21615 162.  0  I  .       .       .       .       .       .      S.       .       .       .       .       .
21630 163.  0   I .       .       .       .       .       .      S.       .       .       .       .       .
21645 164.  0   I .       .       .       .       .       .      S.       .       .       .       .       .
21700 165.  0   I .       .       .       .       .       .       S       .       .       .       .       .
21715 166.  0   I .       .       .       .       .       .       S       .       .       .       .       .
21730 167.  0   I .       .       .       .       .       .       S       .       .       .       .       .
21745 168.  0    I.       .       .       .       .       .       S       .       .       .       .       .
21800 169.  0    I.       .       .       .       .       .       .S      .       .       .       .       .
21815 170.  0    I.       .       .       .       .       .       .S      .       .       .       .       .
21830 171. . 0 . .I.......................................S.......................................
21845 172.   0   I.       .       .       .       .       .       .S      .       .       .       .       .
21900 173.    0  I.       .       .       .       .       .       . S     .       .       .       .       .
21915 174.    0   I       .       .       .       .       .       . S     .       .       .       .       .
21930 175.    0   I       .       .       .       .       .       . S     .       .       .       .       .
21945 176.     0  .I      .       .       .       .       .       . S     .       .       .       .       .
22000 177.     0  . I     .       .       .       .       .       .  S    .       .       .       .       .
22015 178.      0 . I     .       .       .       .       .       .  S    .       .       .       .       .
22030 179.       0 .  I   .       .       .       .       .       .  S    .       .       .       .       .
22045 180.       0 .  I   .       .       .       .       .       .  S    .       .       .       .       .
22100 181. . . .0. . I.......................................S.......................................
22115 182.        0.   I  .       .       .       .       .       .  S    .       .       .       .       .
22130 183.        0    I  .       .       .       .       .       .  S    .       .       .       .       .
22145 184.        .0    I .       .       .       .       .       .   S   .       .       .       .       .
22200 185.        .0     I.       .       .       .       .       .   S   .       .       .       .       .
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22215 186.         . 0       I         .         .         .         .         .    S    .         .         .         .         .
22230 187.         .  0      .I        .         .         .         .         .     S   .         .         .         .         .
22245 188.         .   0     .  I      .         .         .         .         .     S   .         .         .         .         .
22300 189.         .    0    .    I    .         .         .         .         .     S   .         .         .         .         .
22315 190.         .      0  .      I  .         .         .         .         .      S  .         .         .         .         .
22330 191. . . . . . . . . 0 . . . . .I. . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . . . .
22345 192.         .         0         . I       .         .         .         .       S .         .         .         .         .
30000 193.         .         .0        .   I     .         .         .         .        S.         .         .         .         .
30015 194.         .         .      0  .     I   .         .         .         .        S.         .         .         .         .
30030 195.         .         .         .     0 I .         .         .         .         S         .         .         .         .
30045 196.         .         .         .        0.I        .         .         .         S         .         .         .         .
30100 197.         .         .         .         .0 I      .         .         .         S         .         .         .         .
30115 198.         .         .         .         .  0I     .         .         .         S         .         .         .         .
30130 199.         .         .         .         .   0 I   .         .         .         S         .         .         .         .
30145 200.         .         .         .         .     I   .         .         .         S         .         .         .         .
30200 201. . . . . . . . . . . . . . . . . . . . . . . 0I. . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . . .
30215 202.         .         .         .         .      I  .         .         .         S         .         .         .         .
30230 203.         .         .         .         .      I  .         .         .         S         .         .         .         .
30245 204.         .         .         .         .      I  .         .         .         S         .         .         .         .
30300 205.         .         .         .         .     I   .         .         .         S         .         .         .         .
30315 206.         .         .         .         .    I0   .         .         .         S         .         .         .         .
30330 207.         .         .         .         .   I0    .         .         .         S         .         .         .         .
30345 208.         .         .         .         . I0      .         .         .         S         .         .         .         .
30400 209.         .         .         .         I0        .         .         .         S         .         .         .         .
30415 210.         .         .         .       I0.         .         .         .         S         .         .         .         .
30430 211. . . . . . . . . . . . . . . . . .I.0. . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . . .
30445 212.         .         .         . I 0     .         .         .         .         S         .         .         .         .
30500 213.         .         .         I 0       .         .         .         .         S         .         .         .         .
30515 214.         .         .      I 0.         .         .         .         .        S.         .         .         .         .
30530 215.         .         .   I  0  .         .         .         .         .        S.         .         .         .         .
30545 216.         .         . I  0    .         .         .         .         .        S.         .         .         .         .
30600 217.         .         I  0      .         .         .         .         .        S.         .         .         .         .
30615 218.         .       I . 0       .         .         .         .         .        S.         .         .         .         .
30630 219.         .     I   .0        .         .         .         .         .        S.         .         .         .         .
30645 220.         .   I     0         .         .         .         .         .       S .         .         .         .         .
30700 221. . . . . . .I. . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . . . .
30715 222.         . I     0 .         .         .         .         .         .       S .         .         .         .         .
30730 223.         .I      0 .         .         .         .         .         .      S  .         .         .         .         .
30745 224.         I      0  .         .         .         .         .         .      S  .         .         .         .         .
30800 225.        I.     0   .         .         .         .         .         .      S  .         .         .         .         .
30815 226.        I.    0    .         .         .         .         .         .     S   .         .         .         .         .
30830 227.       I .   0     .         .         .         .         .         .     S   .         .         .         .         .
30845 228.       I .  0      .         .         .         .         .         .     S   .         .         .         .         .
30900 229.      I  .  0      .         .         .         .         .         .    S    .         .         .         .         .
30915 230.      I  . 0       .         .         .         .         .         .    S    .         .         .         .         .
30930 231. . . .I. .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . . . . . . . . . . . . . . . . . .
30945 232.     I   .0        .         .         .         .         .         .    S    .         .         .         .         .
31000 233.     I   0         .         .         .         .         .         .   S     .         .         .         .         .
31015 234.     I   0         .         .         .         .         .         .   S     .         .         .         .         .
31030 235.     I  0.         .         .         .         .         .         .   S     .         .         .         .         .
31045 236.    I   0.         .         .         .         .         .         .   S     .         .         .         .         .
31100 237.    I   0.         .         .         .         .         .         .   S     .         .         .         .         .
31115 238.    I  0 .         .         .         .         .         .         .  S      .         .         .         .         .
31130 239.    I  0 .         .         .         .         .         .         .  S      .         .         .         .         .
31145 240.    I  0 .         .         .         .         .         .         .  S      .         .         .         .         .
31200 241. . I .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . . . . . . . . . . . . . . . . . . .
31215 242.   I  0  .         .         .         .         .         .         .  S      .         .         .         .         .
31230 243.   I  0  .         .         .         .         .         .         .  S      .         .         .         .         .
31245 244.   I 0   .         .         .         .         .         .         .  S      .         .         .         .         .
31300 245.   I 0   .         .         .         .         .         .         . S       .         .         .         .         .
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31315 246.   I 0  .        .        .        .        .        .       . S     .        .        .        .        .
31330 247.   I 0  .        .        .        .        .        .       . S     .        .        .        .        .
31345 248.   I 0  .        .        .        .        .        .       . S     .        .        .        .        .
31400 249.   IO   .        .        .        .        .        .       . S     .        .        .        .        .
31415 250.   IO   .        .        .        .        .        .       . S     .        .        .        .        .
31430 251. . IO. . . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . . . . .
31445 252.  I 0  .        .        .        .        .        .       . S     .        .        .        .        .
31500 253.  I 0  .        .        .        .        .        .       . S     .        .        .        .        .
31515 254.  I 0  .        .        .        .        .        .       . S     .        .        .        .        .
31530 255.  I 0  .        .        .        .        .        .       . S     .        .        .        .        .
31545 256.  I 0  .        .        .        .        .        .       .S      .        .        .        .        .
31600 257.  IO   .        .        .        .        .        .       .S      .        .        .        .        .
31615 258.  IO   .        .        .        .        .        .       .S      .        .        .        .        .
31630 259.  IO   .        .        .        .        .        .       .S      .        .        .        .        .
31645 260.  IO   .        .        .        .        .        .       .S      .        .        .        .        .
31700 261. .IO . . . . . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . . . . . . . . . . . . . . . . . .
31715 262.  IO   .        .        .        .        .        .       .S      .        .        .        .        .
31730 263.  IO   .        .        .        .        .        .       .S      .        .        .        .        .
31745 264.  IO   .        .        .        .        .        .       .S      .        .        .        .        .
31800 265.  IO   .        .        .        .        .        .       .S      .        .        .        .        .
31815 266.  IO   .        .        .        .        .        .       .S      .        .        .        .        .
31830 267.  IO   .        .        .        .        .        .       .S      .        .        .        .        .
31845 268.  IO   .        .        .        .        .        .       .S      .        .        .        .        .
31900 269.  IO   .        .        .        .        .        .       .S      .        .        .        .        .
31915 270.  I    .        .        .        .        .        .       .S      .        .        .        .        .
31930 271. IO. . . . . . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . . . . . . . . . . . . . . . . . .
31945 272. IO    .        .        .        .        .        .       .S      .        .        .        .        .
32000 273. IO    .        .        .        .        .        .       .S      .        .        .        .        .
32015 274. IO    .        .        .        .        .        .       .S      .        .        .        .        .
32030 275. IO    .        .        .        .        .        .       .S      .        .        .        .        .
32045 276. IO    .        .        .        .        .        .       S       .        .        .        .        .
32100 277. IO    .        .        .        .        .        .       S       .        .        .        .        .
32115 278. IO    .        .        .        .        .        .       S       .        .        .        .        .
32130 279. IO    .        .        .        .        .        .       S       .        .        .        .        .
32145 280. IO    .        .        .        .        .        .       S       .        .        .        .        .
32200 281. IO. . . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . . . . .
32215 282. IO    .        .        .        .        .        .       S       .        .        .        .        .
32230 283. IO    .        .        .        .        .        .       S       .        .        .        .        .
32245 284. IO    .        .        .        .        .        .       S       .        .        .        .        .
32300 285.I 0    .        .        .        .        .        .       S       .        .        .        .        .
32315 286.I 0    .        .        .        .        .        .       S       .        .        .        .        .
32330 287.I 0    .        .        .        .        .        .       S       .        .        .        .        .
32345 288.I 0    .        .        .        .        .        .       S       .        .        .        .        .
40000 289.I 0    .        .        .        .        .        .       S       .        .        .        .        .
40015 290.I 0    .        .        .        .        .        .       S       .        .        .        .        .
40030 291.I.0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . . . . .
40045 292.I 0    .        .        .        .        .        .      S.       .        .        .        .        .
40100 293.I 0    .        .        .        .        .        .      S.       .        .        .        .        .
40115 294.I 0    .        .        .        .        .        .      S.       .        .        .        .        .
40130 295.I 0    .        .        .        .        .        .      S.       .        .        .        .        .
40145 296.I 0    .        .        .        .        .        .      S.       .        .        .        .        .
40200 297.I 0    .        .        .        .        .        .      S.       .        .        .        .        .
40215 298.I 0    .        .        .        .        .        .      S.       .        .        .        .        .
40230 299.IO     .        .        .        .        .        .      S.       .        .        .        .        .
40245 300I-0-------.--------.--------.--------.--------.--------.--------S.--------.--------.--------.--------.--------.
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WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

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WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN       0. TO   381479.
               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 *** TIME INTERVAL IS GREATER THAN .29*LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN       0. TO   330361.
               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    1925. TO   567262.
               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 *** TIME INTERVAL IS GREATER THAN .29*LAG

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN    9058. TO   419002.
               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 *** TIME INTERVAL IS GREATER THAN .29*LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN       0. TO    50710.
               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 *** TIME INTERVAL IS GREATER THAN .29*LAG


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          ***************
          *             *
 481 KK   *     RESV    *
          *             *
          ***************

 483 KO         OUTPUT CONTROL VARIABLES
                     IPRNT          1  PRINT CONTROL
                     IPLOT          2  PLOT CONTROL
                     QSCAL         0.  HYDROGRAPH PLOT SCALE

              HYDROGRAPH ROUTING DATA
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484 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

485 SA            AREA         .0     65.0    200.0    400.0    600.0    800.0   1000.0   1200.0

486 SE        ELEVATION    1564.20  1565.00  1566.60  1569.50  1571.80  1574.20  1576.10  1579.20

487 SL        LOW-LEVEL OUTLET
                   ELEVL    1561.50  ELEVATION AT CENTER OF OUTLET
                   CAREA      15.90  CROSS-SECTIONAL AREA
                    COQL        .70  COEFFICIENT
                    EXPL       1.50  EXPONENT OF HEAD

488 SS        SPILLWAY
                    CREL    1574.80  SPILLWAY CREST ELEVATION
                   SPWID     600.00  SPILLWAY WIDTH
                    COQW       3.00  WEIR COEFFICIENT
                    EXPW       1.50  EXPONENT OF HEAD

489 ST        TOP OF DAM
                   TOPEL    1579.50  ELEVATION AT TOP OF DAM
                  DAMWID   28829.00  DAM WIDTH
                    COQD       3.30  WEIR COEFFICIENT
                    EXPD       1.50  EXPONENT OF HEAD
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COMPUTED STORAGE-ELEVATION DATA

STORAGE	.00	17.33	219.47	1072.90	2215.18	3889.36	5595.86	9001.12
ELEVATION	1564.20	1565.00	1566.60	1569.50	1571.80	1574.20	1576.10	1579.20

COMPUTED OUTFLOW-ELEVATION DATA

(EXCLUDING FLOW OVER DAM)

OUTFLOW	.00	579.78	813.08	1101.82	1451.91	1869.30	2359.81	2929.45	3584.08	4329.62
ELEVATION	1564.20	1564.98	1565.86	1566.84	1567.92	1569.10	1570.37	1571.75	1573.23	1574.80
OUTFLOW	4490.64	4809.33	5388.79	6306.65	7639.98	9465.85	11863.04	14908.50	18681.66	23259.61
ELEVATION	1574.94	1575.12	1575.37	1575.70	1576.10	1576.57	1577.12	1577.74	1578.43	1579.20

COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

(INCLUDING FLOW OVER DAM)

STORAGE	.00	16.14	17.33	99.16	219.47	269.37	536.29	918.36	1072.90	1453.39
OUTFLOW	396.01	579.78	584.48	813.08	1028.07	1101.82	1451.91	1869.30	2019.78	2359.81
ELEVATION	1564.20	1564.98	1565.00	1565.86	1566.60	1566.84	1567.92	1569.10	1569.50	1570.37
STORAGE	2185.56	2215.18	3151.59	3889.36	4387.56	4508.02	4666.85	4896.32	5202.67	5593.78
OUTFLOW	2929.45	2950.72	3584.08	4039.92	4329.62	4490.64	4809.33	5388.79	6306.65	7639.98
ELEVATION	1571.75	1571.80	1573.23	1574.20	1574.80	1574.94	1575.12	1575.37	1575.70	1576.10
STORAGE	6074.04	6646.43	7318.59	8100.04	9001.12					

OUTFLOW	9465.85	11863.04	14908.50	18681.66	23259.61
ELEVATION	1576.57	1577.12	1577.74	1578.43	1579.20

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HYDROGRAPH AT STATION RESV

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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
1		0000	1	396.	.0	1564.2	*	2		0100	101	1844.	893.0	1569.0	*	3		0200	201	57275.	9925.7	1580.0
1		0015	2	0.	.0	1564.2	*	2		0115	102	1869.	917.8	1569.1	*	3		0215	202	56737.	9919.2	1579.9
1		0030	3	0.	.0	1564.2	*	2		0130	103	1894.	942.8	1569.2	*	3		0230	203	55545.	9904.5	1579.9
1		0045	4	0.	.0	1564.2	*	2		0145	104	1919.	967.9	1569.2	*	3		0245	204	53749.	9882.1	1579.9
1		0100	5	0.	.0	1564.2	*	2		0200	105	1943.	993.3	1569.3	*	3		0300	205	51163.	9849.0	1579.9
1		0115	6	0.	.0	1564.2	*	2		0215	106	1968.	1019.1	1569.4	*	3		0315	206	48329.	9811.6	1579.9
1		0130	7	0.	.0	1564.2	*	2		0230	107	1993.	1045.1	1569.4	*	3		0330	207	45126.	9767.6	1579.8
1		0145	8	0.	.0	1564.2	*	2		0245	108	2019.	1071.6	1569.5	*	3		0345	208	41592.	9716.3	1579.8
1		0200	9	0.	.0	1564.2	*	2		0300	109	2044.	1098.4	1569.6	*	3		0400	209	37883.	9658.8	1579.7
1		0215	10	0.	.0	1564.2	*	2		0315	110	2069.	1125.6	1569.6	*	3		0415	210	34239.	9596.8	1579.7
1		0230	11	396.	.0	1564.2	*	2		0330	111	2095.	1153.0	1569.7	*	3		0430	211	30836.	9531.4	1579.6
1		0245	12	0.	.0	1564.2	*	2		0345	112	2120.	1180.8	1569.8	*	3		0445	212	27841.	9462.5	1579.6
1		0300	13	396.	.0	1564.2	*	2		0400	113	2146.	1209.1	1569.8	*	3		0500	213	25527.	9387.3	1579.5
1		0315	14	0.	.0	1564.2	*	2		0415	114	2172.	1237.8	1569.9	*	3		0515	214	24770.	9290.6	1579.4
1		0330	15	396.	.0	1564.2	*	2		0430	115	2198.	1267.1	1570.0	*	3		0530	215	24100.	9162.6	1579.3
1		0345	16	0.	.0	1564.2	*	2		0445	116	2225.	1297.5	1570.0	*	3		0545	216	23317.	9012.3	1579.2
1		0400	17	396.	.0	1564.2	*	2		0500	117	2253.	1328.0	1570.1	*	3		0600	217	22468.	8848.0	1579.1
1		0415	18	0.	.0	1564.2	*	2		0515	118	2282.	1362.0	1570.2	*	3		0615	218	21585.	8676.1	1578.9
1		0430	19	396.	.0	1564.2	*	2		0530	119	2311.	1396.3	1570.3	*	3		0630	219	20695.	8501.4	1578.8
1		0445	20	0.	.0	1564.2	*	2		0545	120	2341.	1431.8	1570.3	*	3		0645	220	19818.	8327.7	1578.6
1		0500	21	396.	.0	1564.2	*	2		0600	121	2372.	1468.3	1570.4	*	3		0700	221	18965.	8157.1	1578.5
1		0515	22	0.	.0	1564.2	*	2		0615	122	2404.	1505.7	1570.5	*	3		0715	222	18143.	7991.1	1578.3
1		0530	23	396.	.0	1564.2	*	2		0630	123	2436.	1544.0	1570.6	*	3		0730	223	17356.	7830.4	1578.2
1		0545	24	0.	.0	1564.2	*	2		0645	124	2468.	1583.2	1570.6	*	3		0745	224	16603.	7675.1	1578.1
1		0600	25	396.	.0	1564.2	*	2		0700	125	2501.	1623.4	1570.7	*	3		0800	225	15886.	7525.4	1577.9
1		0615	26	0.	.0	1564.2	*	2		0715	126	2534.	1664.7	1570.8	*	3		0815	226	15202.	7381.1	1577.8
1		0630	27	396.	.0	1564.2	*	2		0730	127	2568.	1707.0	1570.9	*	3		0830	227	14551.	7242.0	1577.7
1		0645	28	0.	.0	1564.2	*	2		0745	128	2602.	1750.3	1571.0	*	3		0845	228	13932.	7108.0	1577.5
1		0700	29	396.	.0	1564.2	*	2		0800	129	2637.	1794.7	1571.1	*	3		0900	229	13343.	6979.0	1577.4
1		0715	30	0.	.0	1564.2	*	2		0815	130	2672.	1840.1	1571.1	*	3		0915	230	12784.	6854.9	1577.3
1		0730	31	396.	.0	1564.2	*	2		0830	131	2708.	1886.6	1571.2	*	3		0930	231	12253.	6735.3	1577.2
1		0745	32	0.	.0	1564.2	*	2		0845	132	2744.	1934.1	1571.3	*	3		0945	232	11749.	6620.3	1577.1
1		0800	33	396.	.0	1564.2	*	2		0900	133	2780.	1982.6	1571.4	*	3		1000	233	11272.	6509.8	1577.0
1		0815	34	396.	.0	1564.2	*	2		0915	134	2817.	2032.2	1571.5	*	3		1015	234	10821.	6403.7	1576.9
1		0830	35	396.	.0	1564.2	*	2		0930	135	2855.	2082.7	1571.6	*	3		1030	235	10395.	6302.0	1576.8
1		0845	36	396.	.0	1564.2	*	2		0945	136	2892.	2134.1	1571.7	*	3		1045	236	9994.	6204.6	1576.7
1		0900	37	438.	.2	1564.4	*	2		1000	137	2930.	2186.4	1571.8	*	3		1100	237	9616.	6111.5	1576.6
1		0915	38	465.	1.0	1564.5	*	2		1015	138	2968.	2239.3	1571.8	*	3		1115	238	9261.	6022.6	1576.5
1		0930	39	487.	2.2	1564.6	*	2		1030	139	3006.	2292.9	1571.9	*	3		1130	239	8929.	5937.9	1576.4
1		0945	40	508.	3.9	1564.7	*	2		1045	140	3044.	2347.2	1572.0	*	3		1145	240	8617.	5857.2	1576.4
1		1000	41	528.	6.3	1564.8	*	2		1100	141	3083.	2401.8	1572.1	*	3		1200	241	8326.	5780.4	1576.3
1		1015	42	548.	9.4	1564.9	*	2		1115	142	3121.	2456.7	1572.2	*	3		1215	242	8053.	5707.2	1576.2
1		1030	43	567.	13.1	1564.9	*	2		1130	143	3159.	2512.0	1572.3	*	3		1230	243	7798.	5637.5	1576.1
1		1045	44	585.	17.4	1565.0	*	2		1145	144	3197.	2567.6	1572.4	*	3		1245	244	7559.	5571.1	1576.1
1		1100	45	603.	22.4	1565.1	*	2		1200	145	3235.	2623.4	1572.5	*	3		1300	245	7334.	5507.8	1576.0
1		1115	46	623.	27.9	1565.2	*	2		1215	146	3273.	2679.3	1572.5	*	3		1315	246	7124.	5447.4	1576.0
1		1130	47	643.	34.0	1565.2	*	2		1230	147	3311.	2735.5	1572.6	*	3		1330	247	6926.	5389.8	1575.9
1		1145	48	663.	40.4	1565.3	*	2		1245	148	3349.	2791.9	1572.7	*	3		1345	248	6740.	5334.7	1575.8
1		1200	49	684.	47.2	1565.4	*	2		1300	149	3387.	2848.5	1572.8	*	3		1400	249	6564.	5281.9	1575.8

1	1215	50	704.	54.4	1565.5	*	2	1315	150	3424.	2905.6	1572.9	*	3	1415	250	6399.	5231.3	1575.7
1	1230	51	724.	62.0	1565.5	*	2	1330	151	3462.	2963.2	1573.0	*	3	1430	251	6243.	5182.7	1575.7
1	1245	52	745.	69.9	1565.6	*	2	1345	152	3500.	3021.4	1573.0	*	3	1445	252	6096.	5136.1	1575.6
1	1300	53	765.	78.1	1565.7	*	2	1400	153	3538.	3080.5	1573.1	*	3	1500	253	5957.	5091.2	1575.6
1	1315	54	785.	86.7	1565.8	*	2	1415	154	3577.	3140.7	1573.2	*	3	1515	254	5827.	5048.1	1575.5
1	1330	55	806.	95.7	1565.8	*	2	1430	155	3616.	3202.2	1573.3	*	3	1530	255	5704.	5006.8	1575.5
1	1345	56	826.	105.1	1565.9	*	2	1445	156	3657.	3265.3	1573.4	*	3	1545	256	5588.	4967.0	1575.4
1	1400	57	846.	114.9	1566.0	*	2	1500	157	3698.	3330.2	1573.5	*	3	1600	257	5479.	4928.6	1575.4
1	1415	58	867.	125.2	1566.1	*	2	1515	158	3740.	3397.2	1573.6	*	3	1615	258	5375.	4891.5	1575.4
1	1430	59	887.	135.8	1566.1	*	2	1530	159	3783.	3466.7	1573.7	*	3	1630	259	5278.	4855.5	1575.3
1	1445	60	908.	146.8	1566.2	*	2	1545	160	3827.	3538.9	1573.8	*	3	1645	260	5185.	4820.4	1575.3
1	1500	61	928.	158.2	1566.3	*	2	1600	161	3874.	3614.1	1573.8	*	3	1700	261	5096.	4786.1	1575.3
1	1515	62	948.	169.8	1566.3	*	2	1615	162	3921.	3692.5	1574.0	*	3	1715	262	5012.	4752.4	1575.2
1	1530	63	968.	181.7	1566.4	*	2	1630	163	3971.	3774.4	1574.1	*	3	1730	263	4931.	4719.3	1575.2
1	1545	64	988.	194.1	1566.5	*	2	1645	164	4022.	3860.0	1574.2	*	3	1745	264	4854.	4686.6	1575.1
1	1600	65	1009.	206.8	1566.5	*	2	1700	165	4076.	3949.8	1574.3	*	3	1800	265	4781.	4654.3	1575.1
1	1615	66	1029.	220.1	1566.6	*	2	1715	166	4131.	4044.0	1574.4	*	3	1815	266	4711.	4622.2	1575.1
1	1630	67	1050.	233.9	1566.7	*	2	1730	167	4189.	4143.1	1574.5	*	3	1830	267	4645.	4590.2	1575.0
1	1645	68	1071.	248.3	1566.7	*	2	1745	168	4250.	4247.8	1574.6	*	3	1845	268	4582.	4558.1	1575.0
1	1700	69	1093.	263.1	1566.8	*	2	1800	169	4313.	4358.8	1574.8	*	3	1900	269	4522.	4525.7	1575.0
1	1715	70	1115.	278.5	1566.9	*	2	1815	170	4439.	4476.4	1574.9	*	3	1915	270	4465.	4492.9	1574.9
1	1730	71	1137.	294.2	1567.0	*	2	1830	171	4664.	4599.6	1575.0	*	3	1930	271	4414.	4459.6	1574.9
1	1745	72	1160.	310.4	1567.0	*	2	1845	172	4952.	4727.8	1575.2	*	3	1945	272	4368.	4425.6	1574.8
1	1800	73	1183.	326.8	1567.1	*	2	1900	173	5292.	4860.7	1575.3	*	3	2000	273	4332.	4390.7	1574.8
1	1815	74	1206.	343.6	1567.2	*	2	1915	174	5678.	4998.0	1575.5	*	3	2015	274	4311.	4354.7	1574.8
1	1830	75	1229.	360.7	1567.2	*	2	1930	175	6108.	5139.9	1575.6	*	3	2030	275	4290.	4317.5	1574.7
1	1845	76	1252.	378.0	1567.3	*	2	1945	176	6579.	5286.4	1575.8	*	3	2045	276	4268.	4279.0	1574.7
1	1900	77	1275.	395.4	1567.4	*	2	2000	177	7090.	5437.7	1575.9	*	3	2100	277	4245.	4239.2	1574.6
1	1915	78	1298.	413.1	1567.5	*	2	2015	178	7641.	5594.0	1576.1	*	3	2115	278	4221.	4198.1	1574.6
1	1930	79	1321.	430.8	1567.5	*	2	2030	179	8232.	5755.4	1576.3	*	3	2130	279	4197.	4155.9	1574.5
1	1945	80	1344.	448.6	1567.6	*	2	2045	180	8869.	5922.5	1576.4	*	3	2145	280	4171.	4112.5	1574.5
1	2000	81	1366.	466.5	1567.7	*	2	2100	181	9550.	6095.0	1576.6	*	3	2200	281	4145.	4067.8	1574.4
1	2015	82	1389.	484.5	1567.7	*	2	2115	182	10278.	6273.7	1576.8	*	3	2215	282	4118.	4022.0	1574.4
1	2030	83	1411.	502.7	1567.8	*	2	2130	183	11060.	6460.2	1576.9	*	3	2230	283	4091.	3975.0	1574.3
1	2045	84	1434.	521.0	1567.9	*	2	2145	184	11904.	6655.8	1577.1	*	3	2245	284	4062.	3927.0	1574.2
1	2100	85	1456.	539.7	1567.9	*	2	2200	185	12834.	6866.0	1577.3	*	3	2300	285	4033.	3878.0	1574.2
1	2115	86	1479.	558.6	1568.0	*	2	2215	186	13868.	7094.2	1577.5	*	3	2315	286	4003.	3828.2	1574.1
1	2130	87	1501.	577.9	1568.1	*	2	2230	187	15022.	7342.9	1577.8	*	3	2330	287	3973.	3777.6	1574.1
1	2145	88	1524.	597.6	1568.1	*	2	2245	188	16309.	7614.0	1578.0	*	3	2345	288	3942.	3726.3	1574.0
1	2200	89	1548.	617.8	1568.2	*	2	2300	189	17740.	7909.1	1578.3	*	4	0000	289	3910.	3674.2	1573.9
1	2215	90	1571.	638.4	1568.3	*	2	2315	190	19321.	8228.5	1578.5	*	4	0015	290	3878.	3621.5	1573.9
1	2230	91	1595.	659.4	1568.3	*	2	2330	191	21053.	8571.8	1578.8	*	4	0030	291	3845.	3567.9	1573.8
1	2245	92	1619.	681.0	1568.4	*	2	2345	192	22935.	8938.5	1579.1	*	4	0045	292	3812.	3513.7	1573.7
1	2300	93	1643.	703.0	1568.5	*	3	0000	193	24968.	9328.2	1579.5	*	4	0100	293	3778.	3458.7	1573.6
1	2315	94	1668.	725.5	1568.5	*	3	0015	194	36688.	9639.1	1579.7	*	4	0115	294	3743.	3402.8	1573.6
1	2330	95	1693.	748.4	1568.6	*	3	0030	195	46466.	9786.2	1579.8	*	4	0130	295	3708.	3346.1	1573.5
1	2345	96	1718.	771.7	1568.7	*	3	0045	196	50788.	9844.1	1579.9	*	4	0145	296	3671.	3288.7	1573.4
2	0000	97	1743.	795.4	1568.8	*	3	0100	197	53411.	9877.8	1579.9	*	4	0200	297	3635.	3230.7	1573.3
2	0015	98	1768.	819.4	1568.8	*	3	0115	198	55126.	9899.3	1579.9	*	4	0215	298	3597.	3172.0	1573.3
2	0030	99	1793.	843.7	1568.9	*	3	0130	199	56437.	9915.5	1579.9	*	4	0230	299	3559.	3112.7	1573.2
2	0045	100	1819.	868.3	1569.0	*	3	0145	200	57175.	9924.5	1580.0	*	4	0245	300	3520.	3052.8	1573.1
						*							*						

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PEAK OUTFLOW IS 57275. AT TIME 50.00 HOURS

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	74.75-HR
+ (CFS)	(HR)				

		(CFS)				
+ 57275.	50.00		42454.	18430.	7595.	7318.
		(INCHES)	7.573	13.150	16.258	16.263
		(AC-FT)	21052.	36554.	45194.	45206.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	74.75-HR
+ (AC-FT)	(HR)				
9926.	50.00	9669.	7055.	3432.	3306.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	74.75-HR
+ (FEET)	(HR)				
1579.95	50.00	1579.75	1577.41	1572.16	1571.87

CUMULATIVE AREA = 52.12 SQ MI

1 STATION RESV

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                    (I) INFLOW,   (O) OUTFLOW
        0.    10000.   20000.   30000.   40000.   50000.   60000.      0.      0.      0.      0.      0.      0.
                                                                                (S) STORAGE
        0.       0.       0.       0.       0.       0.       0.   4000.   8000.  12000.      0.      0.      0.
DAHRMN PER
 10000   1I---------.---------.---------.---------.---------.---------S---------.---------.---------.---------.---------.---------.
 10015   2I         .         .         .         .         .         S         .         .         .         .         .         .
 10030   3I         .         .         .         .         .         S         .         .         .         .         .         .
 10045   4I         .         .         .         .         .         S         .         .         .         .         .         .
 10100   5I         .         .         .         .         .         S         .         .         .         .         .         .
 10115   6I         .         .         .         .         .         S         .         .         .         .         .         .
 10130   7I         .         .         .         .         .         S         .         .         .         .         .         .
 10145   8I         .         .         .         .         .         S         .         .         .         .         .         .
 10200   9I         .         .         .         .         .         S         .         .         .         .         .         .
 10215  10I         .         .         .         .         .         S         .         .         .         .         .         .
 10230  11I . . . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10245  12I         .         .         .         .         .         S         .         .         .         .         .         .
 10300  13I         .         .         .         .         .         S         .         .         .         .         .         .
 10315  14I         .         .         .         .         .         S         .         .         .         .         .         .
 10330  15I         .         .         .         .         .         S         .         .         .         .         .         .
 10345  16I         .         .         .         .         .         S         .         .         .         .         .         .
 10400  17I         .         .         .         .         .         S         .         .         .         .         .         .
 10415  18I         .         .         .         .         .         S         .         .         .         .         .         .
 10430  19I         .         .         .         .         .         S         .         .         .         .         .         .
 10445  20I         .         .         .         .         .         S         .         .         .         .         .         .
 10500  21I . . . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10515  22I         .         .         .         .         .         S         .         .         .         .         .         .
 10530  23I         .         .         .         .         .         S         .         .         .         .         .         .
 10545  24I         .         .         .         .         .         S         .         .         .         .         .         .
 10600  25I         .         .         .         .         .         S         .         .         .         .         .         .
 10615  26I         .         .         .         .         .         S         .         .         .         .         .         .
 10630  27I         .         .         .         .         .         S         .         .         .         .         .         .
 10645  28I         .         .         .         .         .         S         .         .         .         .         .         .
 10700  29I         .         .         .         .         .         S         .         .         .         .         .         .
 10715  30I         .         .         .         .         .         S         .         .         .         .         .         .
 10730  31I . . . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10745  32I         .         .         .         .         .         S         .         .         .         .         .         .
 10800  33I         .         .         .         .         .         S         .         .         .         .         .         .
 10815  34I         .         .         .         .         .         S         .         .         .         .         .         .
 10830  35I         .         .         .         .         .         S         .         .         .         .         .         .
 10845  36I         .         .         .         .         .         S         .         .         .         .         .         .
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10900  37I      .    .    .    .    .    S    .    .    .    .    .    .
10915  38OI     .    .    .    .    .    S    .    .    .    .    .    .
10930  39OI     .    .    .    .    .    S    .    .    .    .    .    .
10945  40.I     .    .    .    .    .    S    .    .    .    .    .    .
11000  41.I.....................................S.....................
11015  42.I     .    .    .    .    .    S    .    .    .    .    .    .
11030  43.I     .    .    .    .    .    S    .    .    .    .    .    .
11045  44.I     .    .    .    .    .    S    .    .    .    .    .    .
11100  45.I     .    .    .    .    .    S    .    .    .    .    .    .
11115  46.I     .    .    .    .    .    S    .    .    .    .    .    .
11130  47.I     .    .    .    .    .    S    .    .    .    .    .    .
11145  48.I     .    .    .    .    .    S    .    .    .    .    .    .
11200  49.I     .    .    .    .    .    S    .    .    .    .    .    .
11215  50.I     .    .    .    .    .    S    .    .    .    .    .    .
11230  51.I.....................................S.....................
11245  52.I     .    .    .    .    .    S    .    .    .    .    .    .
11300  53.I     .    .    .    .    .    S    .    .    .    .    .    .
11315  54.I     .    .    .    .    .    S    .    .    .    .    .    .
11330  55.I     .    .    .    .    .    S    .    .    .    .    .    .
11345  56.I     .    .    .    .    .    S    .    .    .    .    .    .
11400  57.I     .    .    .    .    .    S    .    .    .    .    .    .
11415  58.I     .    .    .    .    .    S    .    .    .    .    .    .
11430  59.I     .    .    .    .    .    S    .    .    .    .    .    .
11445  60.I     .    .    .    .    .    S    .    .    .    .    .    .
11500  61.I.....................................S.....................
11515  62.OI    .    .    .    .    .    S    .    .    .    .    .    .
11530  63.OI    .    .    .    .    .    S    .    .    .    .    .    .
11545  64.OI    .    .    .    .    .    S    .    .    .    .    .    .
11600  65.OI    .    .    .    .    .    .S   .    .    .    .    .    .
11615  66.OI    .    .    .    .    .    .S   .    .    .    .    .    .
11630  67.OI    .    .    .    .    .    .S   .    .    .    .    .    .
11645  68.OI    .    .    .    .    .    .S   .    .    .    .    .    .
11700  69.OI    .    .    .    .    .    .S   .    .    .    .    .    .
11715  70.OI    .    .    .    .    .    .S   .    .    .    .    .    .
11730  71.OI.....................................S.....................
11745  72.OI    .    .    .    .    .    .S   .    .    .    .    .    .
11800  73.OI    .    .    .    .    .    .S   .    .    .    .    .    .
11815  74.OI    .    .    .    .    .    .S   .    .    .    .    .    .
11830  75.OI    .    .    .    .    .    .S   .    .    .    .    .    .
11845  76.OI    .    .    .    .    .    .S   .    .    .    .    .    .
11900  77.OI    .    .    .    .    .    .S   .    .    .    .    .    .
11915  78.OI    .    .    .    .    .    .S   .    .    .    .    .    .
11930  79.OI    .    .    .    .    .    .S   .    .    .    .    .    .
11945  80.OI    .    .    .    .    .    .S   .    .    .    .    .    .
12000  81.OI.....................................S.....................
12015  82.OI    .    .    .    .    .    .S   .    .    .    .    .    .
12030  83.OI    .    .    .    .    .    .S   .    .    .    .    .    .
12045  84.OI    .    .    .    .    .    .S   .    .    .    .    .    .
12100  85.OI    .    .    .    .    .    .S   .    .    .    .    .    .
12115  86.OI    .    .    .    .    .    .S   .    .    .    .    .    .
12130  87. I    .    .    .    .    .    .S   .    .    .    .    .    .
12145  88. I    .    .    .    .    .    .S   .    .    .    .    .    .
12200  89. OI   .    .    .    .    .    . S  .    .    .    .    .    .
12215  90. OI   .    .    .    .    .    . S  .    .    .    .    .    .
12230  91. OI.....................................S.....................
12245  92. OI   .    .    .    .    .    . S  .    .    .    .    .    .
12300  93. OI   .    .    .    .    .    . S  .    .    .    .    .    .
12315  94. OI   .    .    .    .    .    . S  .    .    .    .    .    .
12330  95. OI   .    .    .    .    .    . S  .    .    .    .    .    .
12345  96. OI   .    .    .    .    .    . S  .    .    .    .    .    .
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20000  97. OI     .         .         .         .         .         .S        .         .         .         .         .         .
20015  98. OI     .         .         .         .         .         .S        .         .         .         .         .         .
20030  99. OI     .         .         .         .         .         .S        .         .         .         .         .         .
20045 100. OI     .         .         .         .         .         .S        .         .         .         .         .         .
20100 101. OI.    .         .         .         .         .         .S        .         .         .         .         .         .
20115 102. OI     .         .         .         .         .         .S        .         .         .         .         .         .
20130 103. OI     .         .         .         .         .         .S        .         .         .         .         .         .
20145 104. OI     .         .         .         .         .         .S        .         .         .         .         .         .
20200 105. OI     .         .         .         .         .         .S        .         .         .         .         .         .
20215 106. OI     .         .         .         .         .         . S       .         .         .         .         .         .
20230 107. OI     .         .         .         .         .         . S       .         .         .         .         .         .
20245 108. OI     .         .         .         .         .         . S       .         .         .         .         .         .
20300 109. OI     .         .         .         .         .         . S       .         .         .         .         .         .
20315 110. OI     .         .         .         .         .         . S       .         .         .         .         .         .
20330 111. OI.    .         .         .         .         .         .S.       .         .         .         .         .         .
20345 112. OI     .         .         .         .         .         . S       .         .         .         .         .         .
20400 113. O I    .         .         .         .         .         . S       .         .         .         .         .         .
20415 114. O I    .         .         .         .         .         . S       .         .         .         .         .         .
20430 115. O I    .         .         .         .         .         . S       .         .         .         .         .         .
20445 116. O I    .         .         .         .         .         . S       .         .         .         .         .         .
20500 117. O I    .         .         .         .         .         . S       .         .         .         .         .         .
20515 118. O I    .         .         .         .         .         . S       .         .         .         .         .         .
20530 119. O I    .         .         .         .         .         . S       .         .         .         .         .         .
20545 120. O I    .         .         .         .         .         .  S      .         .         .         .         .         .
20600 121. O I    .         .         .         .         .         .  S      .         .         .         .         .         .
20615 122. O I    .         .         .         .         .         .  S      .         .         .         .         .         .
20630 123. O I    .         .         .         .         .         .  S      .         .         .         .         .         .
20645 124. O I    .         .         .         .         .         .  S      .         .         .         .         .         .
20700 125.  OI    .         .         .         .         .         .  S      .         .         .         .         .         .
20715 126.  O I   .         .         .         .         .         .  S      .         .         .         .         .         .
20730 127.  O I   .         .         .         .         .         .  S      .         .         .         .         .         .
20745 128.  O I   .         .         .         .         .         .  S      .         .         .         .         .         .
20800 129.  O I   .         .         .         .         .         .  S      .         .         .         .         .         .
20815 130.  O I   .         .         .         .         .         .   S     .         .         .         .         .         .
20830 131. .O.I.  .         .         .         .         .         .   S.    .         .         .         .         .         .
20845 132.  O I   .         .         .         .         .         .   S     .         .         .         .         .         .
20900 133.  O I   .         .         .         .         .         .   S     .         .         .         .         .         .
20915 134.  O I   .         .         .         .         .         .   S     .         .         .         .         .         .
20930 135.  O I   .         .         .         .         .         .   S     .         .         .         .         .         .
20945 136.  O I   .         .         .         .         .         .   S     .         .         .         .         .         .
21000 137.  O I   .         .         .         .         .         .   S     .         .         .         .         .         .
21015 138.  O  I  .         .         .         .         .         .    S    .         .         .         .         .         .
21030 139.  O  I  .         .         .         .         .         .    S    .         .         .         .         .         .
21045 140.  O  I  .         .         .         .         .         .    S    .         .         .         .         .         .
21100 141. .O. I  .         .         .         .         .         .    S    .         .         .         .         .         .
21115 142.  O  I  .         .         .         .         .         .    S    .         .         .         .         .         .
21130 143.  O  I  .         .         .         .         .         .    S    .         .         .         .         .         .
21145 144.  O  I  .         .         .         .         .         .    S    .         .         .         .         .         .
21200 145.  O  I  .         .         .         .         .         .     S   .         .         .         .         .         .
21215 146.  O  I  .         .         .         .         .         .     S   .         .         .         .         .         .
21230 147.  O  I  .         .         .         .         .         .     S   .         .         .         .         .         .
21245 148.  O  I  .         .         .         .         .         .     S   .         .         .         .         .         .
21300 149.  O  I  .         .         .         .         .         .     S   .         .         .         .         .         .
21315 150.  O  I  .         .         .         .         .         .     S   .         .         .         .         .         .
21330 151. .O. I  .         .         .         .         .         .     S.  .         .         .         .         .         .
21345 152.   O I  .         .         .         .         .         .      S  .         .         .         .         .         .
21400 153.   O I  .         .         .         .         .         .      S  .         .         .         .         .         .
21415 154.   O  I .         .         .         .         .         .      S  .         .         .         .         .         .
21430 155.   O  I .         .         .         .         .         .      S  .         .         .         .         .         .
21445 156.   O  I .         .         .         .         .         .      S  .         .         .         .         .         .
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21500 157.   0  I  .         .         .         .         .         .       S .         .         .         .         .         .
21515 158.   0  I  .         .         .         .         .         .       S .         .         .         .         .         .
21530 159.   0  I  .         .         .         .         .         .        S.         .         .         .         .         .
21545 160.   0  I  .         .         .         .         .         .        S.         .         .         .         .         .
21600 161....0...I............................................................S...................................................
21615 162.   0   I .         .         .         .         .         .        S.         .         .         .         .         .
21630 163.   0   I .         .         .         .         .         .        S.         .         .         .         .         .
21645 164.   0   I .         .         .         .         .         .         S         .         .         .         .         .
21700 165.   0    I.         .         .         .         .         .         S         .         .         .         .         .
21715 166.   0    I.         .         .         .         .         .         S         .         .         .         .         .
21730 167.   0    I.         .         .         .         .         .         S         .         .         .         .         .
21745 168.   0    I.         .         .         .         .         .         .S        .         .         .         .         .
21800 169.   0     I         .         .         .         .         .         .S        .         .         .         .         .
21815 170.   0     I         .         .         .         .         .         .S        .         .         .         .         .
21830 171.....0.....I...........................................................S.................................................
21845 172.    0    .I        .         .         .         .         .         . S       .         .         .         .         .
21900 173.    0    . I       .         .         .         .         .         . S       .         .         .         .         .
21915 174.     0   . I       .         .         .         .         .         . S       .         .         .         .         .
21930 175.     0   .  I      .         .         .         .         .         .  S      .         .         .         .         .
21945 176.      0  .   I     .         .         .         .         .         .  S      .         .         .         .         .
22000 177.      0  .    I    .         .         .         .         .         .   S     .         .         .         .         .
22015 178.       0 .    I    .         .         .         .         .         .   S     .         .         .         .         .
22030 179.       0 .     I   .         .         .         .         .         .   S     .         .         .         .         .
22045 180.        0.      I  .         .         .         .         .         .    S    .         .         .         .         .
22100 181..........0.......I........................................................S.............................................
22115 182.         0        I.         .         .         .         .         .     S   .         .         .         .         .
22130 183.         .0        I         .         .         .         .         .     S   .         .         .         .         .
22145 184.         . 0       . I       .         .         .         .         .      S  .         .         .         .         .
22200 185.         .  0      .   I     .         .         .         .         .      S  .         .         .         .         .
22215 186.         .   0     .    I    .         .         .         .         .       S .         .         .         .         .
22230 187.         .    0    .       I .         .         .         .         .       S .         .         .         .         .
22245 188.         .     0   .         I         .         .         .         .        S.         .         .         .         .
22300 189.         .       0 .         .  I      .         .         .         .         S         .         .         .         .
22315 190.         .        0.         .    I    .         .         .         .         .S        .         .         .         .
22330 191.....................0................I..........................................S.......................................
22345 192.         .         .  0      .         .I        .         .         .         . S       .         .         .         .
30000 193.         .         .    0    .         .   I     .         .         .         .  S      .         .         .         .
30015 194.         .         .         .      0  .      I  .         .         .         .   S     .         .         .         .
30030 195.         .         .         .         .     0   I         .         .         .   S     .         .         .         .
30045 196.         .         .         .         .         ..0 I      .         .         .    S    .         .         .         .
30100 197.         .         .         .         .         .  0 I    .         .         .    S    .         .         .         .
30115 198.         .         .         .         .         .    0I   .         .         .    S    .         .         .         .
30130 199.         .         .         .         .         .     0I  .         .         .    S    .         .         .         .
30145 200.         .         .         .         .         .      I  .         .         .    S    .         .         .         .
30200 201.........................................................I...........................S...................................
30215 202.         .         .         .         .         .     I0  .         .         .    S    .         .         .         .
30230 203.         .         .         .         .         .   I 0   .         .         .    S    .         .         .         .
30245 204.         .         .         .         .         . I 0     .         .         .    S    .         .         .         .
30300 205.         .         .         .         .        I.0        .         .         .    S    .         .         .         .
30315 206.         .         .         .         .     I 0 .         .         .         .    S    .         .         .         .
30330 207.         .         .         .         .  I 0    .         .         .         .   S     .         .         .         .
30345 208.         .         .         .        I. 0       .         .         .         .   S     .         .         .         .
30400 209.         .         .         .    I  0 .         .         .         .         .   S     .         .         .         .
30415 210.         .         .         .I  0     .         .         .         .         .   S     .         .         .         .
30430 211............................I..0....................................................S....................................
30445 212.         .         .   I   0 .         .         .         .         .         .   S     .         .         .         .
30500 213.         .         . I   0   .         .         .         .         .         .  S      .         .         .         .
30515 214.         .        I.    0    .         .         .         .         .         .  S      .         .         .         .
30530 215.         .      I  .   0     .         .         .         .         .         .  S      .         .         .         .
30545 216.         .     I   .  0      .         .         .         .         .         .  S      .         .         .         .
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30600 217.        .  I    . 0     .       .       .       .       .       . S     .       .       .       .
30615 218.        . I     . 0     .       .       .       .       .       . S     .       .       .       .
30630 219.        . I     .0      .       .       .       .       .       .S      .       .       .       .
30645 220.        .I      0       .       .       .       .       .       .S      .       .       .       .
30700 221. . . . .I. . .0. . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . .
30715 222.        I      0 .      .       .       .       .       .       S       .       .       .       .
30730 223.        I     0 .       .       .       .       .       .       S       .       .       .       .
30745 224.       I.     0 .       .       .       .       .       .      S.       .       .       .       .
30800 225.       I.    0  .       .       .       .       .       .      S.       .       .       .       .
30815 226.      I .   0   .       .       .       .       .       .     S .       .       .       .       .
30830 227.      I .   0   .       .       .       .       .       .     S .       .       .       .       .
30845 228.      I .  0    .       .       .       .       .       .     S .       .       .       .       .
30900 229.     I  . 0     .       .       .       .       .       .    S  .       .       .       .       .
30915 230.     I  . 0     .       .       .       .       .       .    S  .       .       .       .       .
30930 231. . . .I. . 0 . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . . . . . . . . . . . . . . . . . .
30945 232.    I   . 0     .       .       .       .       .       .    S  .       .       .       .       .
31000 233.    I   .0      .       .       .       .       .       .   S   .       .       .       .       .
31015 234.    I   .0      .       .       .       .       .       .   S   .       .       .       .       .
31030 235.    I   0       .       .       .       .       .       .   S   .       .       .       .       .
31045 236.   I    0       .       .       .       .       .       .   S   .       .       .       .       .
31100 237.   I    0       .       .       .       .       .       .  S    .       .       .       .       .
31115 238.   I   0.       .       .       .       .       .       .  S    .       .       .       .       .
31130 239.   I   0.       .       .       .       .       .       .  S    .       .       .       .       .
31145 240.   I   0.       .       .       .       .       .       .  S    .       .       .       .       .
31200 241. . .I. 0 . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . . . . .
31215 242.   I  0 .       .       .       .       .       .       .  S    .       .       .       .       .
31230 243.   I  0 .       .       .       .       .       .       .  S    .       .       .       .       .
31245 244.  I   0 .       .       .       .       .       .       .  S    .       .       .       .       .
31300 245.  I  0  .       .       .       .       .       .       .  S    .       .       .       .       .
31315 246.  I  0  .       .       .       .       .       .       .  S    .       .       .       .       .
31330 247.  I  0  .       .       .       .       .       .       . S     .       .       .       .       .
31345 248.  I  0  .       .       .       .       .       .       . S     .       .       .       .       .
31400 249.  I  0  .       .       .       .       .       .       . S     .       .       .       .       .
31415 250.  I 0   .       .       .       .       .       .       . S     .       .       .       .       .
31430 251. . I 0 . . . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . . . . . . . . . . . . . . . . . .
31445 252.  I 0   .       .       .       .       .       .       . S     .       .       .       .       .
31500 253.  I 0   .       .       .       .       .       .       . S     .       .       .       .       .
31515 254.  I 0   .       .       .       .       .       .       . S     .       .       .       .       .
31530 255.  I 0   .       .       .       .       .       .       . S     .       .       .       .       .
31545 256.  I 0   .       .       .       .       .       .       .S      .       .       .       .       .
31600 257.  IO    .       .       .       .       .       .       .S      .       .       .       .       .
31615 258.  IO    .       .       .       .       .       .       .S      .       .       .       .       .
31630 259.  IO    .       .       .       .       .       .       .S      .       .       .       .       .
31645 260.  IO    .       .       .       .       .       .       .S      .       .       .       .       .
31700 261. .I.0. . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . . . . .
31715 262.  I 0   .       .       .       .       .       .       .S      .       .       .       .       .
31730 263.  I 0   .       .       .       .       .       .       .S      .       .       .       .       .
31745 264.  I 0   .       .       .       .       .       .       .S      .       .       .       .       .
31800 265.  I 0   .       .       .       .       .       .       .S      .       .       .       .       .
31815 266.  I 0   .       .       .       .       .       .       .S      .       .       .       .       .
31830 267.  I 0   .       .       .       .       .       .       .S      .       .       .       .       .
31845 268.  I 0   .       .       .       .       .       .       .S      .       .       .       .       .
31900 269.  I 0   .       .       .       .       .       .       .S      .       .       .       .       .
31915 270.  IO    .       .       .       .       .       .       .S      .       .       .       .       .
31930 271. .IO . . . . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . . . . . . . . . . . . . . . . . .
31945 272.  IO    .       .       .       .       .       .       .S      .       .       .       .       .
32000 273.  IO    .       .       .       .       .       .       .S      .       .       .       .       .
32015 274.  IO    .       .       .       .       .       .       .S      .       .       .       .       .
32030 275. I 0    .       .       .       .       .       .       .S      .       .       .       .       .
32045 276. I 0    .       .       .       .       .       .       .S      .       .       .       .       .
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32100 277. I 0   .         .         .         .         .         .        .S         .         .         .         .         .
32115 278. I 0   .         .         .         .         .         .         S         .         .         .         .         .
32130 279. I 0   .         .         .         .         .         .         S         .         .         .         .         .
32145 280. I 0   .         .         .         .         .         .         S         .         .         .         .         .
32200 281. I 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . . . . . . . . . . . . . . . . . . . .
32215 282. I 0   .         .         .         .         .         .         S         .         .         .         .         .
32230 283. I 0   .         .         .         .         .         .         S         .         .         .         .         .
32245 284. I 0   .         .         .         .         .         .         S         .         .         .         .         .
32300 285. I 0   .         .         .         .         .         .         S         .         .         .         .         .
32315 286. I 0   .         .         .         .         .         .         S         .         .         .         .         .
32330 287. I 0   .         .         .         .         .         .        S.         .         .         .         .         .
32345 288.I  0   .         .         .         .         .         .        S.         .         .         .         .         .
40000 289.I  0   .         .         .         .         .         .        S.         .         .         .         .         .
40015 290.I  0   .         .         .         .         .         .        S.         .         .         .         .         .
40030 291.I. 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . . . . . . . . . . . . . . . . . . . .
40045 292.I  0   .         .         .         .         .         .        S.         .         .         .         .         .
40100 293.I  0   .         .         .         .         .         .        S.         .         .         .         .         .
40115 294.I  0   .         .         .         .         .         .        S.         .         .         .         .         .
40130 295.I  0   .         .         .         .         .         .       S .         .         .         .         .         .
40145 296.I  0   .         .         .         .         .         .       S .         .         .         .         .         .
40200 297.I  0   .         .         .         .         .         .       S .         .         .         .         .         .
40215 298.I  0   .         .         .         .         .         .       S .         .         .         .         .         .
40230 299.I  0   .         .         .         .         .         .       S .         .         .         .         .         .
40245 300.I--0----.---------.---------.---------.---------.---------.-------S-.---------.---------.---------.---------.---------.
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1
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RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT	SUBR1	2150.	48.00	1424.	579.	238.	1.56		
+	ROUTED TO	RR2a	2138.	48.25	1424.	579.	238.	1.56		
+									1815.78	48.25
+	ROUTED TO	RR2-1	2105.	49.25	1422.	579.	238.	1.56		
+	ROUTED TO	RR2-2	2082.	50.25	1419.	579.	238.	1.56		
+	ROUTED TO	RR2-3	2061.	51.25	1417.	579.	237.	1.56		
+	HYDROGRAPH AT	SUBR2	9866.	49.00	7290.	3112.	1278.	8.43		
+	2 COMBINED AT	HCR2	11040.	49.25	8551.	3689.	1516.	9.99		
+	HYDROGRAPH AT	SUBR3	1524.	48.00	1007.	409.	169.	1.10		

ROUTED TO

+		RR4a	1513.	48.25	1006.	409.	169.	1.10	
+								1832.88	48.25
	ROUTED TO								
+		RR4-1	1493.	49.00	1005.	409.	169.	1.10	
	ROUTED TO								
+		RR4-2	1478.	49.75	1003.	409.	169.	1.10	
	HYDROGRAPH AT								
+		SUBR4	3551.	48.25	2409.	987.	405.	2.67	
	2 COMBINED AT								
+		HCR4	4691.	48.50	3361.	1396.	574.	3.77	
	HYDROGRAPH AT								
+		SUBR5	3861.	48.00	2506.	1013.	426.	2.71	
	ROUTED TO								
+		RR6	3820.	48.25	2505.	1013.	426.	2.71	
	HYDROGRAPH AT								
+		SUBR6	5804.	48.00	3840.	1564.	655.	4.19	
	2 COMBINED AT								
+		HCR6	9587.	48.25	6345.	2577.	1081.	6.90	
	ROUTED TO								
+		RR7	9506.	48.75	6340.	2577.	1081.	6.90	
	HYDROGRAPH AT								
+		SUBR7	3798.	48.00	2466.	997.	417.	2.67	
	2 COMBINED AT								
+		HCR7	12762.	48.25	8735.	3572.	1498.	9.57	
	ROUTED TO								
+		RR8-1	12634.	49.00	8726.	3572.	1498.	9.57	
	ROUTED TO								
+		RR8-2	12536.	49.75	8715.	3572.	1498.	9.57	
	HYDROGRAPH AT								
+		SUBR8	2720.	48.25	1817.	740.	303.	2.00	
	2 COMBINED AT								
+		HCR8	14233.	49.50	10401.	4310.	1801.	11.57	
	ROUTED TO								
+		RR9a	14231.	49.50	10398.	4310.	1800.	11.57	
+								1837.56	49.50
	ROUTED TO								
+		RR9	14166.	50.00	10392.	4310.	1800.	11.57	
	HYDROGRAPH AT								
+		SUBR9	369.	48.00	238.	95.	39.	.26	
	2 COMBINED AT								
+		HCR9	14257.	50.00	10574.	4405.	1838.	11.83	

	HYDROGRAPH AT								
+		SUBR10	4524.	48.25	3044.	1248.	520.	3.35	
	HYDROGRAPH AT								
+		SUBR11	5342.	48.25	3562.	1453.	605.	3.90	
	2 COMBINED AT								
+		HCR11	9865.	48.25	6605.	2701.	1125.	7.25	
	ROUTED TO								
+		RR12	9790.	48.75	6599.	2701.	1125.	7.25	
	HYDROGRAPH AT								
+		SUBR12	6117.	48.00	4071.	1658.	687.	4.46	
	2 COMBINED AT								
+		HCR12	15591.	48.25	10632.	4359.	1812.	11.71	
	ROUTED TO								
+		RR13a	15578.	48.50	10632.	4359.	1810.	11.71	
+									1828.49 48.50
	ROUTED TO								
+		RR13	15484.	48.75	10628.	4359.	1810.	11.71	
	HYDROGRAPH AT								
+		SUBR13	1727.	48.25	1156.	472.	196.	1.27	
	2 COMBINED AT								
+		HCR13a	17035.	48.75	11767.	4831.	2006.	12.98	
	2 COMBINED AT								
+		HCR13b	29981.	49.00	22061.	9232.	3844.	24.81	
	ROUTED TO								
+		RR14	29766.	50.25	22023.	9231.	3841.	24.81	
	HYDROGRAPH AT								
+		SUBR14	3854.	48.00	2562.	1040.	425.	2.82	
	2 COMBINED AT								
+		HCR14a	31149.	50.00	24089.	10267.	4265.	27.63	
	2 COMBINED AT								
+		HCR14b	34548.	50.00	27205.	11660.	4840.	31.40	
	ROUTED TO								
+		RR15-1	34443.	50.50	27181.	11660.	4837.	31.40	
	ROUTED TO								
+		RR15-2	34319.	51.25	27135.	11659.	4832.	31.40	
	HYDROGRAPH AT								
+		SUBR15	7845.	48.75	5572.	2328.	956.	6.30	
	2 COMBINED AT								
+		HCR15a	37903.	50.75	31743.	13978.	5788.	37.70	
	2 COMBINED AT								

+		HCR15b	47190.	50.25	39951.	17664.	7304.	47.69	
	DIVERSION TO								
+		DVR16	130.	50.25	130.	130.	118.	47.69	
	HYDROGRAPH AT								
+		HDR16	47060.	50.25	39821.	17534.	7185.	47.69	
	ROUTED TO								
+		RESR	46978.	50.50	38676.	16783.	6619.	47.69	
+									1602.80 50.50
	HYDROGRAPH AT								
+		SUBV1	4277.	48.00	2791.	1131.	473.	3.03	
	HYDROGRAPH AT								
+		SUBV2	4720.	48.00	3066.	1236.	507.	3.34	
	ROUTED TO								
+		RV3	4682.	48.25	3065.	1236.	507.	3.34	
	HYDROGRAPH AT								
+		SUBV3	571.	48.00	369.	149.	62.	.40	
	3 COMBINED AT								
+		HCV3	9468.	48.00	6218.	2516.	1042.	6.77	
	ROUTED TO								
+		RV4	9384.	48.50	6213.	2516.	1042.	6.77	
	HYDROGRAPH AT								
+		SUBV4	2611.	48.00	1702.	689.	286.	1.85	
	2 COMBINED AT								
+		HCV4	11862.	48.25	7903.	3204.	1328.	8.62	
	ROUTED TO								
+		RV5	11773.	48.75	7897.	3204.	1328.	8.62	
	HYDROGRAPH AT								
+		SUBV5	2353.	48.00	1528.	617.	256.	1.66	
	2 COMBINED AT								
+		HCV5	13466.	48.50	9369.	3820.	1584.	10.28	
	ROUTED TO								
+		RV6a	13453.	48.50	9364.	3820.	1583.	10.28	
+									1747.33 48.50
	ROUTED TO								
+		RV6-1	13435.	49.50	9357.	3820.	1583.	10.28	
	ROUTED TO								
+		RV6-2	13376.	50.25	9345.	3820.	1581.	10.28	
	HYDROGRAPH AT								
+		SUBV6	4735.	48.25	3196.	1297.	519.	3.59	
	2 COMBINED AT								
+		HCV6	15728.	50.00	12207.	5115.	2100.	13.87	

	HYDROGRAPH AT								
+		SUBV7	2328.	48.00	1546.	631.	264.	1.69		
	HYDROGRAPH AT								
+		SUBV8	1042.	48.00	675.	272.	114.	.73		
	2 COMBINED AT								
+		HCV8	3370.	48.00	2216.	903.	378.	2.42		
	ROUTED TO								
+		RV9	3345.	48.25	2215.	903.	378.	2.42		
	HYDROGRAPH AT								
+		SUBV9	1351.	48.00	877.	354.	147.	.95		
	2 COMBINED AT								
+		HCV9	4668.	48.00	3086.	1257.	526.	3.37		
	ROUTED TO								
+		RV10a	4458.	48.25	3044.	1256.	486.	3.37		
+									1777.85	48.25
	ROUTED TO								
+		RV10-1	4430.	49.25	3041.	1256.	486.	3.37		
	ROUTED TO								
+		RV10-2	4389.	50.00	3038.	1256.	486.	3.37		
	ROUTED TO								
+		RV10-3	4361.	51.00	3035.	1256.	485.	3.37		
	HYDROGRAPH AT								
+		SUBV10	6779.	48.75	4844.	2035.	844.	5.48		
	2 COMBINED AT								
+		HCV10	9440.	49.25	7588.	3287.	1329.	8.85		
	HYDROGRAPH AT								
+		SUBV11	594.	48.25	400.	164.	69.	.44		
	ROUTED TO								
+		RV12a	592.	48.25	396.	164.	69.	.44		
+									1780.88	48.25
	ROUTED TO								
+		RV12-1	582.	49.50	395.	164.	69.	.44		
	ROUTED TO								
+		RV12-2	577.	50.50	394.	164.	69.	.44		
	HYDROGRAPH AT								
+		SUBV12	4195.	48.50	2957.	1233.	511.	3.32		
	2 COMBINED AT								
+		HCV12	4492.	48.75	3292.	1397.	580.	3.76		
	HYDROGRAPH AT								
+		SUBV13	3146.	48.25	2132.	877.	367.	2.35		

	ROUTED TO								
+		RV14a	3127.	48.50	2123.	877.	367.	2.35	
+								1794.17	48.50
	ROUTED TO								
+		RV14-1	3117.	49.25	2120.	877.	367.	2.35	
	ROUTED TO								
+		RV14-2	3078.	50.25	2117.	877.	367.	2.35	
	ROUTED TO								
+		RV14-3	3046.	51.00	2114.	877.	366.	2.35	
	HYDROGRAPH AT								
+		SUBV14	4915.	49.00	3580.	1518.	630.	4.09	
	2 COMBINED AT								
+		HCV14	6634.	49.75	5458.	2393.	996.	6.44	
	HYDROGRAPH AT								
+		SUBV15	2295.	48.00	1506.	612.	256.	1.64	
	ROUTED TO								
+		RV16a	2276.	48.25	1501.	612.	256.	1.64	
+								1792.79	48.25
	ROUTED TO								
+		RV16	2261.	48.50	1500.	612.	256.	1.64	
	HYDROGRAPH AT								
+		SUBV16	1086.	48.00	704.	284.	119.	.76	
	2 COMBINED AT								
+		HCV16	3230.	48.00	2177.	896.	375.	2.40	
	HYDROGRAPH AT								
+		SUBV17	5631.	48.00	3722.	1515.	634.	4.06	
	ROUTED TO								
+		RV18	5519.	49.00	3716.	1515.	634.	4.06	
	HYDROGRAPH AT								
+		SUBV18	6828.	48.25	4600.	1888.	791.	5.06	
	2 COMBINED AT								
+		HCV18	11945.	48.50	8273.	3402.	1425.	9.12	
	ROUTED TO								
+		RV19	11895.	48.75	8272.	3402.	1425.	9.12	
	HYDROGRAPH AT								
+		SUBV19	3887.	48.00	2544.	1032.	430.	2.77	
	2 COMBINED AT								
+		HCV19	15070.	48.50	10721.	4433.	1855.	11.89	
	ROUTED TO								
+		RV20a	15047.	48.50	10717.	4433.	1853.	11.89	
+								1803.79	48.50

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        ROUTED TO
+                    RV20     14967.  49.25      10705.      4433.      1853.      11.89

        HYDROGRAPH AT
+                   SUBV20      681.  48.00        442.       179.        74.        .48

        2 COMBINED AT
+                   HCV20a    15339.  49.25      11092.      4611.      1927.      12.37

        2 COMBINED AT
+                   HCV20b    17913.  49.00      13173.      5505.      2301.      14.77

        ROUTED TO
+                    RV21     17691.  50.25      13141.      5504.      2299.      14.77

        HYDROGRAPH AT
+                   SUBV21     5248.  49.00       3850.      1640.       677.       4.43

        2 COMBINED AT
+                   HCV21a    22037.  50.00      16867.      7144.      2976.      19.20

        5 COMBINED AT
+                   HCV21b    57349.  49.75      45273.     19333.      7981.      52.12

        HYDROGRAPH AT
+                   HCV22a      130.  11.25        130.       130.       118.        .00

        2 COMBINED AT
+                   HCV22b    57479.  49.75      45403.     19463.      8100.      52.12

        ROUTED TO
+                    RESV     57275.  50.00      42454.     18430.      7595.      52.12
+                                                                                          1579.95      50.00
1                          SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION    RESR


    PLAN  1 ..............                INITIAL VALUE    SPILLWAY CREST    TOP OF DAM
                          ELEVATION        1585.00          1597.60          1602.30
                          STORAGE             0.              3944.            7575.
                          OUTFLOW           583.              2622.           21945.


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

                 1.00    1602.80       .50       8029.     46978.      6.00       50.50       .00
1                          SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION    RESV


    PLAN  1 ..............                INITIAL VALUE    SPILLWAY CREST    TOP OF DAM
                          ELEVATION        1564.20          1574.80          1579.50
                          STORAGE             0.              4388.            9364.
                          OUTFLOW           396.              4330.           25157.


                RATIO    MAXIMUM     MAXIMUM    MAXIMUM    MAXIMUM    DURATION    TIME OF    TIME OF
                  OF    RESERVOIR    DEPTH     STORAGE    OUTFLOW    OVER TOP   MAX OUTFLOW  FAILURE
                  PMF   W.S.ELEV   OVER DAM     AC-FT       CFS       HOURS       HOURS      HOURS
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1.00	1579.95	.45	9926.	57275.	5.00	50.00	.00

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

FCDP100 - Powerline
100-year

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

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THIS HEC-1 VERSION CONTAINS ALL OPTIONS EXCEPT ECONOMICS, AND THE NUMBER OF PLANS ARE REDUCED TO 3

1 HEC-1 INPUT PAGE 1

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

  1           ID    WEEKES WASH - POWERLINE F.R.S  ANALYSIS
  2           ID    CONVERSION OF MODEL FROM TR-20
  3           ID                100-YEAR, 24-HOUR STORM: SCS EXCESS & HYDROGRAPH
  4           ID                DEVELOPMENT, MUSKINGUM ROUTING
  5           ID       CONDITIONS:   1: 100-YR, 24-HR STORM IS CONTAINED WITHIN THE BREAKOUT
  6           ID                        POINT OF WEEKES WASH AT JUNCTION ROAD.
  7           ID                     2: EXISTING CONDITIONS
  8           ID                     3: SUPERSTITION FREEWAY IN PLACE.
  9           ID                     4: ADJUSTED WATERSHED AREAS.
 10           ID                     5: BREAKOUT CURVE FOR NORTH DIVERSION DAM.
 11           ID                     6: NO MODIFICATIONS TO POWERLINE F.R.S.
 12           ID       FILE = FCDP100.FCDP1000
              *DIAGRAM
 13           IT     10      0      0    200
 14           IO      5

 15           KK     15  WATERSHED 15
 16           KM     HYDROGRAPH FOR WATERSHED 15
 17           PB   3.85
 18           IN     15
 19           PC      0   .002   .005   .008   .011   .014   .017   .020   .023   .026
 20           PC   .029   .032   .035   .038   .041   .044   .048   .052   .056   .060
 21           PC   .064   .068   .072   .076   .080   .085   .090   .095   .100   .105
 22           PC   .110   .115   .120   .126   .133   .140   .147   .155   .163   .172
 23           PC   .181   .191   .203   .218   .236   .257   .283   .387   .663   .707
 24           PC   .735   .758   .766   .791   .804   .815   .825   .834   .842   .849
 25           PC   .856   .863   .869   .875   .881   .887   .893   .898   .903   .908
 26           PC   .913   .918   .922   .926   .930   .934   .938   .942   .946   .950
 27           PC   .953   .956   .959   .962   .965   .968   .971   .974   .977   .980
 28           PC   .983   .986   .992   .995   .998  1.000  1.000  1.000  1.000  1.000
 29           BA   1.76
 30           LS      0     80
 31           UD    .18

 32           KK    R15 ROUTE HYDROGRAPH FROM WS 15
 33           KM    ROUTE HYDROGRAPH FROM WATERSHED 15
 34           RM      1    .11     .3

 35           KK     14 WATERSHED 14
 36           KM    HYDROGRAPH FOR WATERSHED 14
 37           BA   1.11
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 38          LS      0      79
 39          UD    .15

 40          KK     16 WATERSHED 16
 41          KM    HYDROGRAPH FOR WATERSHED 16
 42          BA   2.16
 43          LS      0      82
 44          UD    .35
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


 45          KK    114 CONCENTRATION PT. 114 (INCLUDES WATERSHEDS 14, 15, & 16)
 46          KM    COMBINE ALL THREE HYDROGRAPHS AT CP 114
 47          HC      3

 48          KK   R114 ROUTE CP 114
 49          KM    ROUTE HYDROGRAPH FROM CP114 TO CP 113
 50          RM      1    .17      .3

 51          KK     13 WATERSHED 13
 52          KM    HYDROGRAPH FOR WATERSHED 13
 53          BA   1.29
 54          LS      0      83
 55          UD   .126

 56          KK    113 CONCENTRATION PT 113 FOR HYDROGRAPHS CP 114 AND WS 13
 57          KM    COMBINE HYDROGRAPHS CP 114 AND WS 13
 58          HC      2

 59          KK   R113 ROUTE CP 113 TO CP 112
 60          KM    ROUTE HYDROGRAPH FOR CP 113
 61          RM      1    .19      .3

 62          KK     12 WATERSHED 12
 63          KM    HYDROGRAPH FOR WATERSHED 12
 64          BA   1.32
 65          LS      0      86
 66          UD    .27

 67          KK    112 CONCENTRATION PT. 112 FOR HYDROGRAPHS FROM CP 113 AND WS 12.
 68          KM    COMBINE HYDROGRAPH FROM CP 113 AND WS 12
 69          HC      2

 70          KK   R112 ROUTE CP 112 TO CP 111
 71          KM    ROUTE HYDROGRAPH CP 112 TO CP 111
 72          RM      1    .07      .3

 73          KK     11 WATERSHED 11
 74          KM    HYDROGRAPH FOR WATERSHED 11
 75          BA    .70
 76          LS      0      82
 77          UD   .186

 78          KK     17 WATERSHED 17
 79          KM    HYDROGRAPH FOR WATERSHED 17
 80          BA    .37
 81          LS      0      79
 82          UD   .138
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 83          KK      10   WATERSHED 10
 84          KM      HYDROGRAPH FOR WATERSHED 10
 85          BA     .54
 86          LS       0      85
 87          UD     .14
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


 88          KK     111 CONCENTRATION PT. 111
 89          KM     COMBINE HYDROGRAPHS FROM CP 112. WS 11. AND WS 17
 90          HC       4

 91          KK   RD111 ROUTE CP 111 TO PT AT WHICH BREAKOUT WOULD OCCUR.
 92          KM     ROUTE HYDROGRAPH CP111 TO THE POINT AT WHICH THE BREAKOUT OCCURS.
 93          RM       5     .64      .3

 94          KK      2A  WATERSHED 2A
 95          KM      HYDROGRAPH FOR WATERSHED 2A
 96          BA    1.09
 97          LS       0      74
 98          UD     .22

 99          KK    CP2A  CONCENTRATION POINT 2A
100          KM    COMBINE ROUTED HYDROGRAPH FROM CP 111 AND WATERSHED 2A.
101          HC       2

102          KK  DIVERT    POINT OF DIVERSION FOR WEEKES WASH
103          DT    FLOW
104          DI       0    6500    7000    9000   10000   15000
105          DQ       0       0     260    1300    1880    4600

106          KK    RR2A ROUTE REMAINING HYDROGRAPH TO SUPERSTITION FREWAY
107          KM     ROUTE THE REMAINING HYDROGRAPH TO DETENTION NORTH OF SUPERSTITION FREEWAY
108          RM       2     .42      .3

109          KK     2BE WATERSHED 2B EAST
110          KM     HYDROGRAPH FOR WATERSHED 2B EAST
111          BA    1.22
112          LS       0      79
113          UD     .48

114          KK    102B  CONCENTRATION POINT NORTH OF FREEWAY
115          KM     CONCENTRATION POINT NORTH OF SUPERSTITION FREEWAY AT DETENTION AREA
116          HC       2

117          KK  DET2BE   ROUTE THROUGH FREEWAY  (WEEKES WASH DETENTION BASIN)
118          KM      ROUTE FLOW THROUGH WEEKES WASH DETENTION BASIN AND THEN FREEWAY
119          RS       1    ELEV    1636
120          SV       0     6.0    13.0    29.0    47.0    69.0    93.0   122.0   153.0   184.0
121          SV     217     239
122          SE    1636    1637    1638    1640    1642    1644    1646    1648    1650    1652
123          SE    1654    1655
124          SQ       0      22     194     584    1050    1604    2236    2900    3534    4408
125          SQ    4622    4860
126          ST    1650     320     2.2     1.5

127          KK   FRWAY
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 128        KM   DIVERT ALL FLOW THAT GO UNDER THE ROAD
 129        DT  SPILL
 130        DI      0    3665    5000   10000   15000
 131        DQ      0       0    1335    6335   11335
1                                   HEC-1 INPUT                                          PAGE  4

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


 132        KK   CHAN  ROUTE FLOWS THROUGH THE CHANNEL
 133        KM    ROUTE FLOW THROUGH THE IMPROVED CHANNEL
 134        RM      1      .1      .3

 135        KK   WASH   ROUTE FLOWS THROUGH THE WASH
 136        KM     ROUTE FLOWS THROUGH THE NATURAL WASH SYSTEM
 137        RM      2     .50      .3

 138        KK  RSPILL
 139        KM    RETRIEVE FLOW DEIVERTED FROM THE EMERGENCY SPILLWAY
 140        DR  SPILL

 141        KK  IDAHO
 142        KM   ROUTE THE RETRIEVED FLOW DOWN IDAYO ROAD.
 143        RM      1      .1      .3

 144        KK     WW
 145        KM   COMBINE ALL THE FLOW FROM THE FREEWAY
 146        HC      2

 147        KK    RWW
 148        KM   ROUTE THE FLOW TO POWERLINE F.R.S.
 149        RM      4     .98      .3

 150        KK   2BWW  WATERSHED 2B WEST, WEST
 151        KM     HYDROGRAPH FOR WATERSHED 2B WEST, WEST
 152        BA    .45
 153        LS      0      77
 154        UD     .4

 155        KK   2BWE  WATERSHED 2B WEST, EAST
 156        KM    RUNOFF FROM EAST OF IDAHO ROAD 2B WEST, EAST
 157        KO      1
 158        BA    .70
 159        LS      0      77
 160        UD     .3

 161        KK  DET2BW  ROUTE THROUGH THE DETENTION NORTH OF THE FREEWAY  (N. DIVERSION DAM)
 162        KM     ROUTE FLOWS THROUGH THE DETENTION NORTH OF THE SUPERSTITION FREEWAY
 163        RS      1    ELEV  1623.5
 164        SV      0      .6     8.3    17.5    28.2    36.0    48.6
 165        SE  1623.5  1624.0  1626.0  1628.0  1630.0  1632.0  1634.0
 166        SQ      0       0      31      93     135     169     208
 167        ST  1630.0     110     2.2     1.5

 168        KK   COO4  COMBINE FLOWS JUST NORTH OF FREEWAY
 169        KM   COMBINE THE FLOWS JUST NORTH OF THE FREEWAY
 170        HC      2
1                                   HEC-1 INPUT                                          PAGE  5

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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171          KK   NDIV
172          DT   EXIT
173          DI      0    1218    5000   10000
174          DQ      0       0    3782    8782

175          KK  NDROUT  ROUTE THROUGH THE FREEWAY
176          KM   ROUTE COMBINED FLOW THROUGH 3 BBL. 6 X 8 BOX CULVERTS
177          RS      1    ELEV  1622.6
178          SV      0     .02     .16    1.12    4.17   25.42
179          SE  1622.6  1623.0  1624.0  1626.0  1628.0  1630.0
180          SQ      0       0     101     372     738    1111
181          ST  1630.0    2875     2.2     1.5

182          KK   R2BW  ROUTE TO CP102
183          KM    ROUTE THE FLOWS FROM DETENTION POND TO CP102 (POWERLINE F.R.S.)
184          RM      2     .40      .3

185          KK    2BS  WATERSHED 2B SOUTH OF SUPERTITION FREEWAY
186          KM    HYDROGRAPH FOR WATERSHED 2B SOUTH
187          BA   1.91
188          LS      0      75
189          UD    .32

190          KK    102 CONCENTRATION PT. 102, WEEKES WASH WATERSHED AT POWERLINE FRS.
191          KM    COMBINE HYDROGRAPHS FROM CP D111 AND WS 2 (WE ARE NOW AT POWERLINE DAM)
192          HC      3

193          KK      5 WATERSHED 5 ( BEGINNING OF SIPHON DRAW WATERSHED)
194          KM    HYDROGRAPH FOR WS 5 (BEGINNING OF THE WATERSHED FOR SIPHON DRAW TO THE DAM)
195          BA   5.65
196          LS      0      81
197          UD    .71

198          KK     R5 ROUTE HYDROGRAPH FROM WS 5 TO CP 104
199          KM     ROUTE HYDROGRAPH FOR WS 5 TO CP 104
200          RM      1     .07      .3

201          KK      4 WATERSHED 4
202          KM     HYDROGRAPH FOR WATERSHED 4
203          BA  11.85
204          LS      0      82
205          UD   1.30

206          KK    104  CONCENTRATION POINT 104
207          KM    COMBINE HYDROGRAPHS AT CP 104
208          HC      2

209          KK   R104
210          KM   ROUTE CP 104 TO 106
211          RM      2     .50      .3
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


212          KK      7  WATERSHED 7
213          KM   HYDROGRAPH FOR WATERSHED 7
214          BA    .61
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215        LS      0      79
216        UD     .3

217        KK      6 WATERSHED 6
218        KM     HYDROGRAPH FOR WATERSHED 6
219        BA   7.86
220        LS      0      79
221        UD   1.08

222        KK    106 CONCENTRATION PT. 106. HYDROGRAPHS FROM R 5. WS 4. & WS 6
223        KM     COMBINE HYDROGRAPHS FROM R5. WS 4. AND WS 6
224        HC      3

225        KK   R106 ROUTE THE HYDROGRAPH FROM CP 106 TO WHERE NEXT WASH ENTERS.
226        KM     ROUTE HYDROGRAPH FROM CP 104 TO WHERE OTHER WASH ENTERS
227        RM      1     .27      .3

228        KK     3N WATERSHED 3N
229        KM     HYDROGRAPH FOR WATERSHED 3N
230        BA   2.89
231        LS      0      81
232        UD    .41

233        KK   CULV   ROUTE FLOWS THROUGH CULVERTS
234        KM    ROUTE FLOWS THROUGH THE CULVERTS
235        RS    1.0    ELEV    1665
236        SV      0     .15     .60     1.5     3.1     5.6     9.1    13.7   19.45   26.35
237        SE   1665  1665.5    1666  1666.5    1667  1667.5    1668  1668.5    1669  1669.5
238        SQ      0     119     375     688    1063    1462    1938    2375    2875    3375

239        KK  RCULV  ROUTE FLOWS TO W103
240        KM    ROUTE THE FLOWS TO CONCENTRATION POINT W103
241        RM      2      .5      .3

242        KK     3S  WATERSHED 3 SOUTH
243        KM     HYDROGRAPH FOR WATERSHED 3 SOUTH
244        BA   2.39
245        LS      0      74
246        UD   .436

247        KK    103
248        HC      2

249        KK     3A   WATERSHED 3A
250        KM    HYDROGRAPH FOR WATERSHED 3A
251        BA   1.20
252        LS      0      75
253        UD     .4
```



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


254        KK  CP103
255        KM    CONCENTRATION POINT FOR WEST FORK OF SIPHON DRAW
256        HC      2

257        KK   W103 CONCTRATION PT. W103 WHERE UNNAMED WASH ENTERS.
258        KM     COMBINE HYDROGRAPHS FROM CP 104 AND WS 3 - SIPHON DRAW WATERSHED
259        HC      2
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260          KK   RW103 ROUTE RESULTING HYDROGRAPH TO POWELINE DAM STRUCTURE
261          KM      ROUTE THE HYDROGRAPH TO POWERLINE DAM
262          RW       1     .16      .3

263          KK     PLD CONCENTRATION PT. AT POWERLINE DAM
264          KM     COMBINE HYDROGRAPHS FROM WEEKES WASH SUB-BASIN AND SIPHON DRAW SUB-BASIN
265          KO       3
266          HC       2

267          KK     RES RESERVOIR ROUTING THROUGH THE STRUCTURE
268          KM     RESERVOIR RATING CURVE
269          RS       1    ELEV  1568.2
270          SV       0     175     380     700    1100    1600    2175    2875    3675    4200
271          SV    4600    5525    6725    7925
272          SQ       0      75      92     106     119     130     141     150     159     165
273          SQ    1228    7360   16800   27280
274          SE  1568.1  1568.2  1570.0  1572.1  1574.1  1576.1  1578.1  1580.1  1582.1  1583.3
275          SE  1584.1  1586.1  1588.1  1590.1
276          SS  1583.3       0       0       0
277          ST  1589.1   13358     2.2     1.5
278          ZZ
```

1

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                SCHEMATIC DIAGRAM OF STREAM NETWORK
 INPUT
  LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

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

    15          15
                V
                V
    32         R15
                .
                .
    35          .          14
                .           .
                .           .
    40          .           .          16
                .           .           .
                .           .           .
    45        114.......................
                V
                V
    48       R114
                .
                .
    51          .          13
                .           .
                .           .
    56        113............
                V
                V
    59       R113
                .
                .
    62          .          12
                .           .
                .           .
    67        112............
```

```
            V
            V
70       R112
            .
            .
73          .        11
            .         .
            .         .
78          .         .        17
            .         .         .
            .         .         .
83          .         .         .        10
            .         .         .         .
            .         .         .         .
88       111.................................
            V
            V
91      RD111
            .
            .
94          .        2A
            .         .
            .         .
99      CP2A............
            .
            .
103         .-------)   FLOW
102     DIVERT
            V
            V
106      RR2A
            .
            .
109         .       28E
            .         .
            .         .
114     102B............
            V
            V
117     DET28E
            .
            .
129         .-------)  SPILL
127      FRWAY
            V
            V
132      CHAN
            V
            V
135      WASH
            .
            .
140         .         .(-------  SPILL
138         .     RSPILL
            .         V
            .         V
141         .      IDAHO
            .         .
            .         .
144        WW............
```

```
            V
            V
147       RWW
            .
            .
150         .       2BWW
            .         .
            .         .
155         .         .       2BWE
            .         .         V
            .         .         V
161         .         .     DET2BW
            .         .         .
            .         .         .
168         .       C004............
            .         .
            .         .
172         .         .-------->   EXIT
171         .       NDIV
            .         V
            .         V
175         .     NDROUT
            .         V
            .         V
182         .       R2BW
            .         .
            .         .
185         .         .        2BS
            .         .         .
            .         .         .
190       102........................
            .
            .
193         .         5
            .         V
            .         V
198         .        R5
            .         .
            .         .
201         .         .         4
            .         .         .
            .         .         .
206         .       104............
            .         V
            .         V
209         .       R104
            .         .
            .         .
212         .         .         7
            .         .         .
            .         .         .
217         .         .         .         6
            .         .         .         .
            .         .         .         .
222         .       106........................
            .         V
            .         V
225         .       R106
            .         .
            .         .
```

```
228          .          .          3N
             .          .           V
             .          .           V
233          .          .        CULV
             .          .           V
             .          .           V
239          .          .       RCULV
             .          .           .
             .          .           .
242          .          .           .         3S
             .          .           .          .
             .          .           .          .
247          .          .         103............
             .          .           .
             .          .           .
249          .          .           .         3A
             .          .           .          .
             .          .           .          .
254          .          .       CP103............
             .          .           .
             .          .           .
257          .        W103............
             .           V
             .           V
260          .       RW103
             .          .
             .          .
263        PLD............
            V
            V
267        RES
```

(***) 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
                                                     ****


                 WEEKES WASH - POWERLINE F.R.S  ANALYSIS
                 CONVERSION OF MODEL FROM TR-20
                            100-YEAR, 24-HOUR STORM; SCS EXCESS & HYDROGRAPH
                            DEVELOPMENT, MUSKINGUM ROUTING
                   CONDITIONS:   1: 100-YR, 24-HR STORM IS CONTAINED WITHIN THE BREAKOUT
                                    POINT OF WEEKES WASH AT JUNCTION ROAD.
                                 2: EXISTING CONDITIONS
                                 3: SUPERSTITION FREEWAY IN PLACE.
                                 4: ADJUSTED WATERSHED AREAS.
                                 5: BREAKOUT CURVE FOR NORTH DIVERSION DAM.
                                 6: NO MODIFICATIONS TO POWERLINE F.R.S.
                   FILE = FCOP100,FCOP1000

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

   IT         HYDROGRAPH TIME DATA
```

```
                NMIN        10  MINUTES IN COMPUTATION INTERVAL
               IDATE     1   0  STARTING DATE
               ITIME      0000  STARTING TIME
                  NQ       200  NUMBER OF HYDROGRAPH ORDINATES
              NDDATE     2   0  ENDING DATE
              NDTIME      0910  ENDING TIME

          COMPUTATION INTERVAL     .17 HOURS
              TOTAL TIME BASE   33.17 HOURS

     ENGLISH UNITS

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

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WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG


*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***


      ***************
      *             *
155 KK  *     2BWE    *      WATERSHED 2B WEST. EAST
      *             *
      ***************

157 KO      OUTPUT CONTROL VARIABLES
                IPRNT          1  PRINT CONTROL
                IPLOT          0  PLOT CONTROL
                QSCAL         0.  HYDROGRAPH PLOT SCALE

          SUBBASIN RUNOFF DATA

158 BA      SUBBASIN CHARACTERISTICS
                TAREA        .70  SUBBASIN AREA

            PRECIPITATION DATA

 17 PB          STORM       3.85  BASIN TOTAL PRECIPITATION

 19 PI        INCREMENTAL PRECIPITATION PATTERN
```

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.02	.02	.07
.13	.18	.03	.02	.02	.02	.01	.01	.02	.01
.01	.01	.01	.01	.01	.01	.01	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00							

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159 LS          SCS LOSS RATE
                     STRTL        .60  INITIAL ABSTRACTION
                    CRVNBR      77.00  CURVE NUMBER
                     RTIMP        .00  PERCENT IMPERVIOUS AREA

160 UD          SCS DIMENSIONLESS UNITGRAPH
                      TLAG        .30  LAG

                                                    ***

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

                                          UNIT HYDROGRAPH
                                      11 END-OF-PERIOD ORDINATES
          325.     864.     762.     385.     193.      94.      46.      23.      11.       6.
            2.
```

****

HYDROGRAPH AT STATION 2BWE

****

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	*	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
								*								
1		0000	1	.00	.00	.00	0.	*	1		1640	101	.01	.00	.01	30.
1		0010	2	.01	.01	.00	0.	*	1		1650	102	.01	.00	.01	28.
1		0020	3	.01	.01	.00	0.	*	1		1700	103	.01	.00	.01	27.
1		0030	4	.01	.01	.00	0.	*	1		1710	104	.01	.00	.01	26.
1		0040	5	.01	.01	.00	0.	*	1		1720	105	.01	.00	.01	26.
1		0050	6	.01	.01	.00	0.	*	1		1730	106	.01	.00	.01	26.
1		0100	7	.01	.01	.00	0.	*	1		1740	107	.01	.00	.01	26.
1		0110	8	.01	.01	.00	0.	*	1		1750	108	.01	.00	.01	26.
1		0120	9	.01	.01	.00	0.	*	1		1800	109	.01	.00	.01	24.
1		0130	10	.01	.01	.00	0.	*	1		1810	110	.01	.00	.01	23.
1		0140	11	.01	.01	.00	0.	*	1		1820	111	.01	.00	.01	22.
1		0150	12	.01	.01	.00	0.	*	1		1830	112	.01	.00	.01	21.
1		0200	13	.01	.01	.00	0.	*	1		1840	113	.01	.00	.01	21.
1		0210	14	.01	.01	.00	0.	*	1		1850	114	.01	.00	.01	21.
1		0220	15	.01	.01	.00	0.	*	1		1900	115	.01	.00	.01	21.
1		0230	16	.01	.01	.00	0.	*	1		1910	116	.01	.00	.01	21.
1		0240	17	.01	.01	.00	0.	*	1		1920	117	.01	.00	.01	21.
1		0250	18	.01	.01	.00	0.	*	1		1930	118	.01	.00	.01	21.
1		0300	19	.01	.01	.00	0.	*	1		1940	119	.01	.00	.01	21.

1	0310	20	.01	.01	.00	0.	*	1	1950	120	.01	.00	.01	21.
1	0320	21	.01	.01	.00	0.	*	1	2000	121	.01	.00	.01	20.
1	0330	22	.01	.01	.00	0.	*	1	2010	122	.01	.00	.01	18.
1	0340	23	.01	.01	.00	0.	*	1	2020	123	.01	.00	.01	17.
1	0350	24	.01	.01	.00	0.	*	1	2030	124	.01	.00	.01	16.
1	0400	25	.01	.01	.00	0.	*	1	2040	125	.01	.00	.01	16.
1	0410	26	.01	.01	.00	0.	*	1	2050	126	.01	.00	.01	16.
1	0420	27	.01	.01	.00	0.	*	1	2100	127	.01	.00	.01	16.
1	0430	28	.01	.01	.00	0.	*	1	2110	128	.01	.00	.01	16.
1	0440	29	.01	.01	.00	0.	*	1	2120	129	.01	.00	.01	16.
1	0450	30	.01	.01	.00	0.	*	1	2130	130	.01	.00	.01	16.
1	0500	31	.01	.01	.00	0.	*	1	2140	131	.01	.00	.01	16.
1	0510	32	.01	.01	.00	0.	*	1	2150	132	.01	.00	.01	16.
1	0520	33	.01	.01	.00	0.	*	1	2200	133	.01	.00	.01	16.
1	0530	34	.01	.01	.00	0.	*	1	2210	134	.01	.00	.01	16.
1	0540	35	.01	.01	.00	0.	*	1	2220	135	.01	.00	.01	16.
1	0550	36	.01	.01	.00	0.	*	1	2230	136	.01	.00	.01	16.
1	0600	37	.01	.01	.00	0.	*	1	2240	137	.01	.00	.01	16.
1	0610	38	.01	.01	.00	0.	*	1	2250	138	.01	.00	.01	17.
1	0620	39	.01	.01	.00	0.	*	1	2300	139	.02	.00	.01	20.
1	0630	40	.01	.01	.00	0.	*	1	2310	140	.01	.00	.01	23.
1	0640	41	.01	.01	.00	0.	*	1	2320	141	.01	.00	.01	22.
1	0650	42	.01	.01	.00	0.	*	1	2330	142	.01	.00	.01	19.
1	0700	43	.01	.01	.00	0.	*	1	2340	143	.01	.00	.00	17.
1	0710	44	.01	.01	.00	0.	*	1	2350	144	.00	.00	.00	14.
1	0720	45	.01	.01	.00	0.	*	2	0000	145	.00	.00	.00	10.
1	0730	46	.01	.01	.00	0.	*	2	0010	146	.00	.00	.00	5.
1	0740	47	.01	.01	.00	0.	*	2	0020	147	.00	.00	.00	3.
1	0750	48	.01	.01	.00	0.	*	2	0030	148	.00	.00	.00	1.
1	0800	49	.01	.01	.00	0.	*	2	0040	149	.00	.00	.00	1.
1	0810	50	.02	.02	.00	0.	*	2	0050	150	.00	.00	.00	0.
1	0820	51	.02	.02	.00	0.	*	2	0100	151	.00	.00	.00	0.
1	0830	52	.02	.02	.00	0.	*	2	0110	152	.00	.00	.00	0.
1	0840	53	.02	.02	.00	0.	*	2	0120	153	.00	.00	.00	0.
1	0850	54	.02	.02	.00	0.	*	2	0130	154	.00	.00	.00	0.
1	0900	55	.02	.02	.00	0.	*	2	0140	155	.00	.00	.00	0.
1	0910	56	.02	.02	.00	0.	*	2	0150	156	.00	.00	.00	0.
1	0920	57	.02	.02	.00	0.	*	2	0200	157	.00	.00	.00	0.
1	0930	58	.02	.02	.00	0.	*	2	0210	158	.00	.00	.00	0.
1	0940	59	.02	.02	.00	0.	*	2	0220	159	.00	.00	.00	0.
1	0950	60	.02	.02	.00	1.	*	2	0230	160	.00	.00	.00	0.
1	1000	61	.02	.02	.00	2.	*	2	0240	161	.00	.00	.00	0.
1	1010	62	.03	.02	.00	3.	*	2	0250	162	.00	.00	.00	0.
1	1020	63	.03	.03	.00	4.	*	2	0300	163	.00	.00	.00	0.
1	1030	64	.03	.03	.00	5.	*	2	0310	164	.00	.00	.00	0.
1	1040	65	.04	.03	.00	7.	*	2	0320	165	.00	.00	.00	0.
1	1050	66	.04	.04	.01	10.	*	2	0330	166	.00	.00	.00	0.
1	1100	67	.05	.04	.01	13.	*	2	0340	167	.00	.00	.00	0.
1	1110	68	.05	.04	.01	18.	*	2	0350	168	.00	.00	.00	0.
1	1120	69	.06	.05	.01	23.	*	2	0400	169	.00	.00	.00	0.
1	1130	70	.07	.05	.02	30.	*	2	0410	170	.00	.00	.00	0.
1	1140	71	.27	.18	.08	58.	*	2	0420	171	.00	.00	.00	0.
1	1150	72	.49	.27	.21	163.	*	2	0430	172	.00	.00	.00	0.
1	1200	73	.71	.30	.41	391.	*	2	0440	173	.00	.00	.00	0.
1	1210	74	.11	.04	.07	575.	*	2	0450	174	.00	.00	.00	0.
1	1220	75	.09	.03	.06	493.	*	2	0500	175	.00	.00	.00	0.
1	1230	76	.07	.02	.05	330.	*	2	0510	176	.00	.00	.00	0.
1	1240	77	.06	.02	.04	231.	*	2	0520	177	.00	.00	.00	0.
1	1250	78	.04	.01	.03	167.	*	2	0530	178	.00	.00	.00	0.
1	1300	79	.02	.01	.01	120.	*	2	0540	179	.00	.00	.00	0.

1	1310	80	.06	.02	.04	93.	*	2	0550	180	.00	.00	.00	0.
1	1320	81	.05	.01	.03	93.	*	2	0600	181	.00	.00	.00	0.
1	1330	82	.03	.01	.02	92.	*	2	0610	182	.00	.00	.00	0.
1	1340	83	.03	.01	.02	80.	*	2	0620	183	.00	.00	.00	0.
1	1350	84	.03	.01	.02	67.	*	2	0630	184	.00	.00	.00	0.
1	1400	85	.03	.01	.02	59.	*	2	0640	185	.00	.00	.00	0.
1	1410	86	.02	.01	.02	54.	*	2	0650	186	.00	.00	.00	0.
1	1420	87	.02	.01	.02	50.	*	2	0700	187	.00	.00	.00	0.
1	1430	88	.02	.01	.01	46.	*	2	0710	188	.00	.00	.00	0.
1	1440	89	.02	.01	.01	43.	*	2	0720	189	.00	.00	.00	0.
1	1450	90	.02	.01	.01	39.	*	2	0730	190	.00	.00	.00	0.
1	1500	91	.02	.00	.01	37.	*	2	0740	191	.00	.00	.00	0.
1	1510	92	.02	.00	.01	36.	*	2	0750	192	.00	.00	.00	0.
1	1520	93	.02	.00	.01	35.	*	2	0800	193	.00	.00	.00	0.
1	1530	94	.02	.00	.01	34.	*	2	0810	194	.00	.00	.00	0.
1	1540	95	.02	.00	.01	33.	*	2	0820	195	.00	.00	.00	0.
1	1550	96	.02	.00	.01	31.	*	2	0830	196	.00	.00	.00	0.
1	1600	97	.02	.00	.01	31.	*	2	0840	197	.00	.00	.00	0.
1	1610	98	.02	.00	.01	31.	*	2	0850	198	.00	.00	.00	0.
1	1620	99	.02	.00	.01	31.	*	2	0900	199	.00	.00	.00	0.
1	1630	100	.02	.00	.01	31.	*	2	0910	200	.00	.00	.00	0.
							*							

****

TOTAL RAINFALL = 3.85, TOTAL LOSS = 2.15, TOTAL EXCESS = 1.70

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	33.17-HR
+ (CFS)	(HR)					
		(CFS)				
+ 575.	12.17		104.	32.	23.	23.
		(INCHES)	1.381	1.696	1.696	1.696
		(AC-FT)	52.	63.	63.	63.

CUMULATIVE AREA = .70 SQ MI

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 0. TO 1462.
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 *** TIME INTERVAL IS GREATER THAN .29*LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

*** ***

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          **************
          *            *
263 KK    *      PLD   *     CONCENTRATION PT. AT POWERLINE DAM
          *            *
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265 KO        OUTPUT CONTROL VARIABLES
                   IPRNT          3  PRINT CONTROL
                   IPLOT          0  PLOT CONTROL
                   QSCAL         0.  HYDROGRAPH PLOT SCALE

266 HC        HYDROGRAPH COMBINATION
                   ICOMP          2  NUMBER OF HYDROGRAPHS TO COMBINE

                                                   ***

    ***           ***           ***           ***           ***

                     HYDROGRAPH AT STATION     PLD

 PEAK FLOW    TIME                      MAXIMUM AVERAGE FLOW
                                  6-HR      24-HR      72-HR    33.17-HR
+  (CFS)      (HR)
                          (CFS)
+  12073. /   14.50               7556.      2438.      1764.      1764.
                         (INCHES)  1.493     1.926      1.926      1.926
                          (AC-FT)  3747.     4836.      4836.      4836.

                     CUMULATIVE AREA =   47.07 SQ MI

1
                                        RUNOFF SUMMARY
                                   FLOW IN CUBIC FEET PER SECOND
                                  TIME IN HOURS,  AREA IN SQUARE MILES

                                 PEAK  TIME OF   AVERAGE FLOW FOR MAXIMUM PERIOD    BASIN   MAXIMUM   TIME OF
        OPERATION      STATION   FLOW   PEAK                                        AREA    STAGE    MAX STAGE
+                                                  6-HOUR    24-HOUR    72-HOUR

        HYDROGRAPH AT
+                          15   1890.  12.00        295.       91.       66.      1.76

        ROUTED TO
+                         R15   1886.  12.17        295.       91.       66.      1.76

        HYDROGRAPH AT
+                          14   1280.  12.00        179.       55.       40.      1.11

        HYDROGRAPH AT
+                          16   1979.  12.17        391.      121.       87.      2.16

        3 COMBINED AT
+                         114   4890.  12.17        865.      266.      193.      5.03

        ROUTED TO
+                        R114   4521.  12.33        865.      266.      193.      5.03

        HYDROGRAPH AT
+                          13   1922.  12.00        242.       75.       54.      1.29

        2 COMBINED AT
+                         113   5124.  12.33       1106.      341.      247.      6.32

        ROUTED TO
```

+		R113	4890.	12.50	1106.	341.	247.	6.32	
	HYDROGRAPH AT								
+		12	1646.	12.17	275.	86.	62.	1.32	
	2 COMBINED AT								
+		112	5838.	12.33	1379.	427.	309.	7.64	
	ROUTED TO								
+		R112	5795.	12.50	1379.	427.	309.	7.64	
	HYDROGRAPH AT								
+		11	801.	12.00	127.	39.	28.	.70	
	HYDROGRAPH AT								
+		17	447.	12.00	60.	18.	13.	.37	
	HYDROGRAPH AT								
+		10	820.	12.00	109.	34.	24.	.54	
	4 COMBINED AT								
+		111	6573.	12.33	1673.	518.	375.	9.25	
	ROUTED TO								
+		RD111	6139.	13.00	1671.	518.	375.	9.25	
	HYDROGRAPH AT								
+		2A	869.	12.17	142.	44.	32.	1.09	
	2 COMBINED AT								
+		CP2A	6266.	13.00	1811.	561.	406.	10.34	
	DIVERSION TO								
+		FLOW	0.	13.00	0.	0.	0.	10.34	
	HYDROGRAPH AT								
+		DIVERT	6266.	13.00	1811.	561.	406.	10.34	
	ROUTED TO								
+		RR2A	5865.	13.50	1808.	561.	406.	10.34	
	HYDROGRAPH AT								
+		2BE	839.	12.33	196.	60.	44.	1.22	
	2 COMBINED AT								
+		102B	6067.	13.50	1999.	622.	450.	11.56	
	ROUTED TO								
+		DET2BE	5828.	13.67	1982.	621.	450.	11.56	
+									1651.69 13.67
	DIVERSION TO								
+		SPILL	2163.	13.33	199.	50.	36.	11.56	
	HYDROGRAPH AT								
+		FRWAY	3665.	13.33	1783.	572.	414.	11.56	
	ROUTED TO								
+		CHAN	3693.	13.50	1782.	572.	414.	11.56	

	ROUTED TO								
+		WASH	3646.	14.50	1777.	572.	414.	11.56	
	HYDROGRAPH AT								
+		RSPILL	2163.	13.67	199.	50.	36.	.00	
	ROUTED TO								
+		IDAHO	2123.	13.67	199.	50.	36.	.00	
	2 COMBINED AT								
+		WW	5225.	13.83	1977.	621.	450.	11.56	
	ROUTED TO								
+		RWW	4308.	14.83	1967.	621.	450.	11.56	
	HYDROGRAPH AT								
+		2BWW	312.	12.33	67.	21.	15.	.45	
	HYDROGRAPH AT								
+		2BWE	575.	12.17	104.	32.	23.	.70	
	ROUTED TO								
+		DET2BW	129.	13.00	88.	31.	23.	.70	
+									1629.73 13.00
	2 COMBINED AT								
+		C004	411.	12.33	153.	52.	38.	1.15	
	DIVERSION TO								
+		EXIT	0.	12.33	0.	0.	0.	1.15	
	HYDROGRAPH AT								
+		NDIV	411.	12.33	153.	52.	38.	1.15	
	ROUTED TO								
+		NDROUT	394.	12.33	153.	52.	38.	1.15	
+									1626.12 12.33
	ROUTED TO								
+		R2BW	365.	12.83	152.	52.	38.	1.15	
	HYDROGRAPH AT								
+		2BS	1357.	12.17	260.	80.	58.	1.91	
	3 COMBINED AT								
+		102	4555.	14.83	2226.	753.	545.	14.62	
	HYDROGRAPH AT								
+		5	3314.	12.67	980.	303.	219.	5.65	
	ROUTED TO								
+		R5	3323.	12.67	980.	303.	219.	5.65	
	HYDROGRAPH AT								
+		4	4788.	13.33	2102.	661.	479.	11.85	
	2 COMBINED AT								
+		104	7366.	13.00	3079.	965.	698.	17.50	
	ROUTED TO								

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+                    R104     7028.  13.50      3071.      965.      698.     17.50

     HYDROGRAPH AT
+                      7      549.  12.17        98.       30.       22.       .61

     HYDROGRAPH AT
+                      6     3185.  13.00      1247.      389.      282.      7.86

     3 COMBINED AT
+                    106     9954.  13.33      4396.     1384.     1002.     25.97

     ROUTED TO
+                    R106    9691.  13.67      4390.     1384.     1002.     25.97

     HYDROGRAPH AT
+                     3N     2367.  12.33       503.      155.      112.      2.89

     ROUTED TO
+                   CULV     2197.  12.33       503.      155.      112.      2.89
+                                                                          1668.30      12.33

     ROUTED TO
+                  RCULV     1930.  12.83       502.      155.      112.      2.89

     HYDROGRAPH AT
+                     3S     1367.  12.33       311.       96.       69.      2.39

     2 COMBINED AT
+                    103     2635.  12.83       813.      251.      181.      5.28

     HYDROGRAPH AT
+                     3A      755.  12.33       163.       50.       36.      1.20

     2 COMBINED AT
+                   CP103    3079.  12.67       976.      301.      218.      6.48

     2 COMBINED AT
+                   W103    11015.  13.50      5335.     1685.     1219.     32.45

     ROUTED TO
+                  RW103    10946.  13.67      5330.     1685.     1219.     32.45

     2 COMBINED AT
+                     PLD   12073.  14.50      7556.     2438.     1764.     47.07

     ROUTED TO
+                     RES     894.  25.17       797.      373.      288.     47.07
+                                                                          1583.85      25.17
1                    SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION   DET2BE


PLAN  1 ..............                INITIAL VALUE    SPILLWAY CREST    TOP OF DAM
                          ELEVATION       1636.00          1650.00         1650.00
                          STORAGE            0.              153.            153.
                          OUTFLOW            0.             3534.           3534.


              RATIO    MAXIMUM     MAXIMUM    MAXIMUM    MAXIMUM    DURATION    TIME OF    TIME OF
               OF     RESERVOIR    DEPTH     STORAGE    OUTFLOW    OVER TOP   MAX OUTFLOW  FAILURE
               PMF     W.S.ELEV   OVER DAM    AC-FT       CFS       HOURS       HOURS      HOURS
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1.00	1651.69	1.69	179.	5828.	1.00	13.67	.00

1 SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION DET2BW

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1623.50	1630.00	1630.00
STORAGE	0.	28.	28.
OUTFLOW	0.	135.	135.

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	1629.73	.00	27.	129.	.00	13.00	.00

1 SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION NDROUT

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1622.60	1630.00	1630.00
STORAGE	0.	25.	25.
OUTFLOW	0.	1111.	1111.

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	1626.12	.00	1.	394.	.00	12.33	.00

1 SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION RES

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1568.20	1583.30	1589.10
STORAGE	175.	4200.	7325.
OUTFLOW	75.	165.	22040.

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	1583.85	.00	4474.	894.	.00	25.17	.00

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

FCDP6 - Powerline
PMF - 6-hour PMP

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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
                                        ****


        THIS HEC-1 VERSION CONTAINS ALL OPTIONS EXCEPT ECONOMICS. AND THE NUMBER OF PLANS ARE REDUCED TO 3
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  1           ID    WEEKES WASH - POWERLINE F.R.S  ANALYSIS
  2           ID    CONVERSION OF MODEL FROM TR-20
  3           ID                FULL PMF :SCS EXCESS & HYDROGRAPH
  4           ID                DEVELOPMENT. MUSKINGUM ROUTING
  5           ID       CONDITIONS:   1: 6-HOUR PMP STORM IS CONTAINED WITHIN THE BREAKOUT
  6           ID                        POINT OF WEEKES WASH AT JUNCTION ROAD.
  7           ID                     2: EXISTING CONDITIONS. PMP SAME AS FOR VINEYARD AND
  8           ID                        RITTENHOUSE FRS'S. JULY 27. 1989 RUN.
  9           ID                     3. SUPERSTITION FREEWAY IN PLACE.
 10           ID                     4: ADJUSTED WATERSHED AREAS.
 11           ID                     5: BREAKOUT CURVE FOR NORTH DIVERSION DAM.
 12           ID                     6: NO MODIFICATIONS TO POWERLINE F.R.S.
 13           ID       TIME INCREMENT = 5 MINUTES
 14           ID       FILE = FCDP6. FCDP60
 15           IT      5      0      0    150
 16           IO      5

 17           KK     15  WATERSHED 15
 18           KM     HYDROGRAPH FOR WATERSHED 15
 19           PB    7.60
 20           IN     15
 21           PI    .05    .05    .05    .05    .15    .15    .15    .15    .30    .30
 22           PI    .30    .30   2.30   1.10    .60    .50    .18    .18    .18    .18
 23           PI    .10    .10    .10    .10
 24           BA    1.76
 25           LS      0     94
 26           UD    .18

 27           KK    R15 ROUTE HYDROGRAPH FROM WS 15
 28           KM    ROUTE HYDROGRAPH FROM WATERSHED 15
 29           RM      1    .11     .3

 30           KK     14 WATERSHED 14
 31           KM    HYDROGRAPH FOR WATERSHED 14
 32           BA    1.11
 33           LS      0     93
 34           UD    .15

 35           KK     16 WATERSHED 16
 36           KM    HYDROGRAPH FOR WATERSHED 16
 37           BA    2.16
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 38          LS      0      95
 39          UD    .35

 40          KK    114 CONCENTRATION PT. 114 (INCLUDES WATERSHEDS 14. 15. & 16)
 41          KM    COMBINE ALL THREE HYDROGRAPHS AT CP 114
 42          HC      3

 43          KK   R114 ROUTE CP 114
 44          KM    ROUTE HYDROGRAPH FROM CP114 TO CP 113
 45          RM      1     .17      .3
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


 46          KK     13 WATERSHED 13
 47          KM    HYDROGRAPH FOR WATERSHED 13
 48          BA   1.29
 49          LS      0      96
 50          UD   .126

 51          KK    113 CONCENTRATION PT 113 FOR HYDROGRAPHS CP 114 AND WS 13
 52          KM    COMBINE HYDROGRAPHS CP 114 AND WS 13
 53          HC      2

 54          KK   R113 ROUTE CP 113 TO CP 112
 55          KM    ROUTE HYDROGRAPH FOR CP 113
 56          RM      1     .19      .3

 57          KK     12 WATERSHED 12
 58          KM    HYDROGRAPH FOR WATERSHED 12
 59          BA   1.32
 60          LS      0      97
 61          UD    .27

 62          KK    112 CONCENTRATION PT. 112 FOR HYDROGRAPHS FROM CP 113 AND WS 12.
 63          KM    COMBINE HYDROGRAPH FROM CP 113 AND WS 12
 64          HC      2

 65          KK   R112 ROUTE CP 112 TO CP 111
 66          KM    ROUTE HYDROGRAPH CP 112 TO CP 111
 67          RM      1     .07      .3

 68          KK     11 WATERSHED 11
 69          KM    HYDROGRAPH FOR WATERSHED 11
 70          BA    .70
 71          LS      0      95
 72          UD   .186

 73          KK     17 WATERSHED 17
 74          KM    HYDROGRAPH FOR WATERSHED 17
 75          BA    .37
 76          LS      0      93
 77          UD   .138

 78          KK     10   WATERSHED 10
 79          KM     HYDROGRAPH FOR WATERSHED 10
 80          BA    .54
 81          LS      0      97
 82          UD    .14
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 83          KK     111 CONCENTRATION PT. 111
 84          KM     COMBINE HYDROGRAPHS FROM CP 112. WS 11. AND WS 17
 85          HC       4
1                                        HEC-1 INPUT                                          PAGE  3

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


 86          KK   RD111 ROUTE CP 111 TO PT AT WHICH BREAKOUT WOULD OCCUR.
 87          KM     ROUTE HYDROGRAPH CP111 TO THE POINT AT WHICH THE BREAKOUT OCCURS.
 88          RM       5     .64      .3

 89          KK      2A  WATERSHED 2A
 90          KM      HYDROGRAPH FOR WATERSHED 2A
 91          BA    1.09
 92          LS       0      90
 93          UD     .22

 94          KK    CP2A  CONCENTRATION POINT 2A
 95          KM    COMBINE ROUTED HYDROGRAPH FROM CP 111 AND WATERSHED 2A.
 96          HC       2

 97          KK    FLOW    POINT OF DIVERSION FOR WEEKES WASH
 98          KO       3
 99          OT  DIVERT
100          DI       0    6500    7000    9000   10000   15000
101          DQ       0       0     260    1300    1880    4600

102          KK    RR2A ROUTE REMAINING HYDROGRAPH TO SUPERSTITION FREWAY
103          KM     ROUTE THE REMAINING HYDROGRAPH TO DETENTION NORTH OF SUPERSTITION FREEWAY
104          RM       2     .42      .3

105          KK     2BE WATERSHED 2B EAST
106          KM     HYDROGRAPH FOR WATERSHED 2B EAST
107          BA    1.22
108          LS       0      93
109          UD     .48

110          KK    102B  CONCENTRATION POINT NORTH OF FREEWAY
111          KM     CONCENTRATION POINT NORTH OF SUPERSTITION FREEWAY AT DETENTION AREA
112          HC       2

113          KK  DET2BE   ROUTE THROUGH FREEWAY  (WEEKES WASH DETENTION BASIN)
114          KM      ROUTE FLOW THROUGH WEEKES WASH DETENTION BASIN AND THEN FREEWAY
115          KM      PRINCIPLE OUTLET IS 2-12 X 12 (FOOT) BOX CULVERTS
116          KM      INVERT IS AT 1636: EMERGENCY SPILLWAY CREST IS AT 1650.
117          RS       1    ELEV    1636
118          SV       0     6.0    13.0    29.0    47.0    69.0    93.0   122.0   153.0   184.0
119          SV     217     239
120          SE    1636    1637    1638    1640    1642    1644    1646    1648    1650    1652
121          SE    1654    1655
122          SQ       0      22     194     584    1050    1604    2236    2900    3534    4108
123          SQ    4622    4860
124          ST    1650     320     2.2     1.5

125          KK   FRWAY
126          KM    DIVERT ALL FLOWS FROM EMERGENCY SPILLWAY
127          OT   SPILL
128          DI       0    3665    5000   10000   15000
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 129        DQ      0      0    1335    6335   11335
1                                   HEC-1 INPUT                                          PAGE  4

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


 130        KK   CHAN  ROUTE FLOWS THROUGH THE CHANNEL
 131        KM    ROUTE FLOW THROUGH THE IMPROVED CHANNEL
 132        RM      1      .1      .3

 133        KK   WASH   ROUTE FLOWS THROUGH THE WASH
 134        KM     ROUTE FLOWS THROUGH THE NATURAL WASH SYSTEM
 135        RM      2     .50      .3

 136        KK  RSPILL
 137        KM   RETRIEVE FLOW DIVERTED FROM THE EMERGENCY SPILLWAY
 138        DR  SPILL

 139        KK  IDAHO
 140        KM   ROUTE THE RETRIEVED FLOW DOWN IDAHO RD.
 141        RM      1      .1      .3

 142        KK     WW
 143        KM    COMBINE ALL FLOWS FROM FREEWAY
 144        HC      2

 145        KK    RWW
 146        KM    ROUTE FLOWS TO POWERLINE F.R.S.
 147        RM      4     .98      .3

 148        KK   2BWW  WATERSHED 2B WEST, WEST
 149        KM     HYDROGRAPH FOR WATERSHED 2B WEST, WEST
 150        BA    .45
 151        LS      0      92
 152        UD     .4

 153        KK   2BWE  WATERSHED 2B WEST, EAST
 154        KM    RUNOFF FROM EAST OF IDAHO ROAD 2B WEST, EAST
 155        BA    .70
 156        LS      0      92
 157        UD     .3

 158        KK   16BW  ROUTE THROUGH THE DETENTION NORTH OF THE FREEWAY  (N. DIVERSION DAM)
 159        KM     ROUTE FLOWS THROUGH THE DETENTION NORTH OF THE SUPERSTITION FREEWAY
 160        RS      1    ELEV  1623.5
 161        SV      0      .6     8.3    17.5    28.2    36.0    48.6
 162        SE  1623.5  1624.0  1626.0  1628.0  1630.0  1632.0  1634.0
 163        SQ      0       0      31      93     135     169     208
 164        ST  1630.0     110     2.2     1.5

 165        KK   COO4  COMBINE FLOWS JUST NORTH OF FREEWAY
 166        KM   COMBINE THE FLOWS JUST NORTH OF THE FREEWAY
 167        HC      2

 168        KK   NDIV
 169        KM   DIVERSION OF FLOW OVER THE NORTH DIVERSION DAM.
 170        DT   EXIT
 171        DI      0    1218    5000   10000
 172        DQ      0       0    3782    8782
1                                   HEC-1 INPUT                                          PAGE  5
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 173        KK  NDROUT  ROUTE THROUGH THE FREEWAY
 174        KM    ROUTE COMBINED FLOW THROUGH 2 - 10  X 8  BOX CULVERTS
 175        RS      1    ELEV  1622.6
 176        SV      0    0.02    0.16    1.12    4.17   25.42
 177        SE  1622.6  1623.0  1624.0  1626.0  1628.0  1630.0
 178        SQ      0       0     101     372     738    1111
 179        ST  1630.0    2875     2.2     1.5

 180        KK    R2BW  ROUTE TO CP102
 181        KM    ROUTE THE FLOWS FROM DETENTION POND TO CP102 (POWERLINE F.R.S.)
 182        RM      2     .40      .3

 183        KK     2BS  WATERSHED 2B SOUTH OF SUPERTITION FREEWAY
 184        KM     HYDROGRAPH FOR WATERSHED 2B SOUTH
 185        BA    1.91
 186        LS      0      91
 187        UD     .32

 188        KK     102 CONCENTRATION PT. 102, WEEKES WASH WATERSHED AT POWERLINE FRS.
 189        KM     COMBINE HYDROGRAPHS FROM CP D111 AND WS 2 (WE ARE NOW AT POWERLINE DAM)
 190        HC      3

 191        KK      5 WATERSHED 5 ( BEGINNING OF SIPHON DRAW WATERSHED)
 192        KM     HYDROGRAPH FOR WS 5 (BEGINNING OF THE WATERSHED FOR SIPHON DRAW TO THE DAM)
 193        BA    5.65
 194        LS      0      95
 195        UD     .71

 196        KK      R5 ROUTE HYDROGRAPH FROM WS 5 TO CP 104
 197        KM      ROUTE HYDROGRAPH FOR WS 5 TO CP 104
 198        RM      1     .07      .3

 199        KK      4 WATERSHED 4
 200        KM      HYDROGRAPH FOR WATERSHED 4
 201        BA   11.85
 202        LS      0      95
 203        UD    1.30

 204        KK     104  CONCENTRATION POINT 104
 205        KM     COMBINE HYDROGRAPHS AT CP 104
 206        HC      2

 207        KK    R104
 208        KM    ROUTE CP 104 TO 106
 209        RM      2     .50      .3

 210        KK      7  WATERSHED 7
 211        KM    HYDROGRAPH FOR WATERSHED 7
 212        BA     .61
 213        LS      0      93
 214        UD      .3
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LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

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215        KK      6 WATERSHED 6
216        KM     HYDROGRAPH FOR WATERSHED 6
217        BA   7.86
218        LS      0      93
219        UD   1.08

220        KK    106 CONCENTRATION PT. 106. HYDROGRAPHS FROM R 5. WS 4. & WS 6
221        KM     COMBINE HYDROGRAPHS FROM R5. WS 4. AND WS 6
222        HC      3

223        KK   R106 ROUTE THE HYDROGRAPH FROM CP 106 TO WHERE NEXT WASH ENTERS.
224        KM     ROUTE HYDROGRAPH FROM CP 104 TO WHERE OTHER WASH ENTERS
225        RM      1     .27      .3

226        KK     3N WATERSHED 3N
227        KM     HYDROGRAPH FOR WATERSHED 3N
228        BA   2.89
229        LS      0      95
230        UD    .41

231        KK   CULV   ROUTE FLOWS THROUGH CULVERTS
232        KM    ROUTE FLOWS THROUGH THE CULVERTS
233        RS    1.0    ELEV    1665
234        SV      0     .15     .60     1.5     3.1     5.6     9.1    13.7   19.45   26.35
235        SE   1665  1665.5    1666  1666.5    1667  1667.5    1668  1668.5    1669  1669.5
236        SQ      0     119     375     688    1063    1462    1938    2375    2875    3375

237        KK  RCULV  ROUTE FLOWS TO W103
238        KM    ROUTE THE FLOWS TO CONCENTRATION POINT W103
239        RM      2      .5      .3

240        KK     3S  WATERSHED 3 SOUTH
241        KM     HYDROGRAPH FOR WATERSHED 3 SOUTH
242        BA   2.39
243        LS      0      90
244        UD   .436

245        KK    103
246        HC      2

247        KK     3A   WATERSHED 3A
248        KM    HYDROGRAPH FOR WATERSHED 3A
249        BA   1.20
250        LS      0      91
251        UD     .4

252        KK   CP103
253        KM    CONCENTRATION POINT FOR WEST FORK OF SIPHON DRAW
254        HC      2
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LINE       ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


255        KK   W103 CONCTRATION PT. W103 WHERE UNNAMED WASH ENTERS.
256        KM     COMBINE HYDROGRAPHS FROM CP 104 AND WS 3 - SIPHON DRAW WATERSHED
257        HC      2

258        KK  RW103 ROUTE RESULTING HYDROGRAPH TO POWELINE DAM STRUCTURE
259        KM     ROUTE THE HYDROGRAPH TO POWERLINE DAM
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260          RM      1     .16      .3

261          KK     PLD CONCENTRATION PT. AT POWERLINE DAM
262          KM     COMBINE HYDROGRAPHS FROM WEEKES WASH SUB-BASIN AND SIPHON DRAW SUB-BASIN
263          HC      2
264          KO      1      2

265          KK    RES RESERVOIR ROUTING THROUGH THE STRUCTURE
266          KM    RESERVOIR RATING CURVE
267          RS      1    ELEV  1568.2
268          SV      0     175     380     700    1100    1600    2175    2875    3675    4200
269          SV   4600    5525    6725    7925
270          SQ      0      75      92     106     119     130     141     150     159     165
271          SQ   1228    7360   16800   27280
272          SE 1568.1  1568.2  1570.0  1572.1  1574.1  1576.1  1578.1  1580.1  1582.1  1583.3
273          SE 1584.1  1586.1  1588.1  1590.1
274          SS 1583.3       0       0       0
275          ST 1589.1   13358     2.2     1.5
276          ZZ
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
                                                  ****


                    WEEKES WASH - POWERLINE F.R.S  ANALYSIS
                    CONVERSION OF MODEL FROM TR-20
                               FULL PMF :SCS EXCESS & HYDROGRAPH
                               DEVELOPMENT, MUSKINGUM ROUTING
                      CONDITIONS:   1: 6-HOUR PMP STORM IS CONTAINED WITHIN THE BREAKOUT
                                       POINT OF WEEKES WASH AT JUNCTION ROAD.
                                    2: EXISTING CONDITIONS. PMP SAME AS FOR VINEYARD AND
                                       RITTENHOUSE FRS'S. JULY 27, 1989 RUN.
                                    3. SUPERSTITION FREEWAY IN PLACE.
                                    4: ADJUSTED WATERSHED AREAS.
                                    5: BREAKOUT CURVE FOR NORTH DIVERSION DAM.
                                    6: NO MODIFICATIONS TO POWERLINE F.R.S.
                      TIME INCREMENT = 5 MINUTES
                      FILE = FCDP6, FCDP60

16 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      1    0  STARTING DATE
                   ITIME       0000  STARTING TIME
                      NQ        150  NUMBER OF HYDROGRAPH ORDINATES
                  NDDATE      1    0  ENDING DATE
                  NDTIME       1225  ENDING TIME

             COMPUTATION INTERVAL     .08 HOURS
                 TOTAL TIME BASE   12.42 HOURS

       ENGLISH UNITS
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WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG


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          ***************
          *             *
  97 KK   *     FLOW    *        POINT OF DIVERSION FOR WEEKES WASH
          *             *
          ***************

  98 KO         OUTPUT CONTROL VARIABLES
                     IPRNT          3  PRINT CONTROL
                     IPLOT          0  PLOT CONTROL
                     QSCAL         0.  HYDROGRAPH PLOT SCALE

     DT         DIVERSION
                     ISTAD     DIVERT  DIVERSION HYDROGRAPH IDENTIFICATION

     DI            INFLOW        .00   6500.00   7000.00   9000.00  10000.00  15000.00

     DQ      DIVERTED FLOW       .00      .00    260.00   1300.00   1880.00   4600.00

                                                                 ***

      ***           ***           ***           ***           ***

                        DIVERSION HYDROGRAPH   DIVERT

  PEAK FLOW     TIME                        MAXIMUM AVERAGE FLOW
                                     6-HR      24-HR      72-HR     12.42-HR
+   (CFS)       (HR)
                          (CFS)
+   10078.      4.42               1931.       933.       933.        933.
                        (INCHES)    1.737      1.737      1.737       1.737
                         (AC-FT)     958.       958.       958.        958.

                        CUMULATIVE AREA =   10.34 SQ MI

      ***           ***           ***           ***           ***

                        HYDROGRAPH AT STATION     FLOW
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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	12.42-HR
+ (CFS)	(HR)					
		(CFS)				
+ 14992.	4.42		5768.	2799.	2799.	2799.
		(INCHES)	5.187	5.207	5.207	5.207
		(AC-FT)	2860.	2872.	2872.	2872.

CUMULATIVE AREA = 10.34 SQ MI

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 0. TO 688.
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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          **************
          *            *
261 KK    *      PL    *    D CONCENTRATION PT. AT POWERLINE DAM
          *            *
          **************
```

264 KO OUTPUT CONTROL VARIABLES

IPRNT	1	PRINT CONTROL
IPLOT	2	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE

263 HC HYDROGRAPH COMBINATION

ICOMP	2	NUMBER OF HYDROGRAPHS TO COMBINE

***

****

HYDROGRAPH AT STATION PL
SUM OF 2 HYDROGRAPHS

****

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0000	1	0.	1		0310	39	10028.	1		0620	77	39550.	1		0930	115	2665.
1		0005	2	0.	1		0315	40	12415.	1		0625	78	37324.	1		0935	116	2412.
1		0010	3	0.	1		0320	41	15523.	1		0630	79	35135.	1		0940	117	2175.
1		0015	4	0.	1		0325	42	19090.	1		0635	80	33011.	1		0945	118	1955.
1		0020	5	0.	1		0330	43	22578.	1		0640	81	30966.	1		0950	119	1752.
1		0025	6	0.	1		0335	44	25641.	1		0645	82	29014.	1		0955	120	1565.
1		0030	7	0.	1		0340	45	28166.	1		0650	83	27160.	1		1000	121	1393.
1		0035	8	0.	1		0345	46	30241.	1		0655	84	25404.	1		1005	122	1237.
1		0040	9	0.	1		0350	47	32039.	1		0700	85	23743.	1		1010	123	1096.
1		0045	10	0.	1		0355	48	33686.	1		0705	86	22173.	1		1015	124	967.
1		0050	11	0.	1		0400	49	35406.	1		0710	87	20688.	1		1020	125	852.
1		0055	12	0.	1		0405	50	37437.	1		0715	88	19282.	1		1025	126	748.
1		0100	13	0.	1		0410	51	39817.	1		0720	89	17945.	1		1030	127	656.
1		0105	14	1.	1		0415	52	42456.	1		0725	90	16679.	1		1035	128	574.
1		0110	15	5.	1		0420	53	45284.	1		0730	91	15488.	1		1040	129	502.

1	0115	16	18.	*	1	0425	54	48177.	*	1	0735	92	14379.	*	1	1045	130	438.
1	0120	17	46.	*	1	0430	55	51013.	*	1	0740	93	13356.	*	1	1050	131	382.
1	0125	18	91.	*	1	0435	56	53710.	*	1	0745	94	12418.	*	1	1055	132	333.
1	0130	19	160.	*	1	0440	57	56125.	*	1	0750	95	11562.	*	1	1100	133	290.
1	0135	20	253.	*	1	0445	58	58159.	*	1	0755	96	10783.	*	1	1105	134	253.
1	0140	21	373.	*	1	0450	59	59782.	*	1	0800	97	10074.	*	1	1110	135	221.
1	0145	22	518.	*	1	0455	60	60973.	*	1	0805	98	9426.	*	1	1115	136	193.
1	0150	23	691.	*	1	0500	61	61725.	*	1	0810	99	8831.	*	1	1120	137	169.
1	0155	24	889.	*	1	0505	62	62044.	*	1	0815	100	8281.	*	1	1125	138	148.
1	0200	25	1110.	*	1	0510	63	61962.	*	1	0820	101	7770.	*	1	1130	139	130.
1	0205	26	1364.	*	1	0515	64	61526.	*	1	0825	102	7291.	*	1	1135	140	115.
1	0210	27	1668.	*	1	0520	65	60791.	*	1	0830	103	6838.	*	1	1140	141	102.
1	0215	28	2042.	*	1	0525	66	59807.	*	1	0835	104	6409.	*	1	1145	142	91.
1	0220	29	2484.	*	1	0530	67	58621.	*	1	0840	105	5997.	*	1	1150	143	82.
1	0225	30	2989.	*	1	0535	68	57279.	*	1	0845	106	5602.	*	1	1155	144	74.
1	0230	31	3546.	*	1	0540	69	55753.	*	1	0850	107	5222.	*	1	1200	145	67.
1	0235	32	4143.	*	1	0545	70	54056.	*	1	0855	108	4854.	*	1	1205	146	61.
1	0240	33	4776.	*	1	0550	71	52220.	*	1	0900	109	4499.	*	1	1210	147	56.
1	0245	34	5439.	*	1	0555	72	50272.	*	1	0905	110	4158.	*	1	1215	148	52.
1	0250	35	6129.	*	1	0600	73	48238.	*	1	0910	111	3831.	*	1	1220	149	48.
1	0255	36	6844.	*	1	0605	74	46141.	*	1	0915	112	3517.	*	1	1225	150	45.
1	0300	37	7583.	*	1	0610	75	43986.	*	1	0920	113	3218.	*				
1	0305	38	8536.	*	1	0615	76	41780.	*	1	0925	114	2933.	*				
				*					*					*				

****

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	12.42-HR
+ (CFS)	(HR)					
		(CFS)				
+ 62044.	5.08		31327.	15734.	15734.	15734.
		(INCHES)	6.188	6.431	6.431	6.431
		(AC-FT)	15534.	16146.	16146.	16146.

CUMULATIVE AREA = 47.07 SQ MI

1 STATION PL

(O) OUTFLOW

```
        0.    10000.    20000.    30000.    40000.    50000.    60000.    70000.        0.        0.        0.        0.        0.
DAHRMN PER
 10000  10---------.---------.---------.---------.---------.---------.---------.---------.---------.---------.---------.---------.
 10005  20         .         .         .         .         .         .         .         .         .         .         .         .
 10010  30         .         .         .         .         .         .         .         .         .         .         .         .
 10015  40         .         .         .         .         .         .         .         .         .         .         .         .
 10020  50         .         .         .         .         .         .         .         .         .         .         .         .
 10025  60         .         .         .         .         .         .         .         .         .         .         .         .
 10030  70         .         .         .         .         .         .         .         .         .         .         .         .
 10035  80         .         .         .         .         .         .         .         .         .         .         .         .
 10040  90         .         .         .         .         .         .         .         .         .         .         .         .
 10045 100         .         .         .         .         .         .         .         .         .         .         .         .
 10050 110 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10055 120         .         .         .         .         .         .         .         .         .         .         .         .
 10100 130         .         .         .         .         .         .         .         .         .         .         .         .
 10105 140         .         .         .         .         .         .         .         .         .         .         .         .
 10110 150         .         .         .         .         .         .         .         .         .         .         .         .
 10115 160         .         .         .         .         .         .         .         .         .         .         .         .
 10120 170         .         .         .         .         .         .         .         .         .         .         .         .
 10125 180         .         .         .         .         .         .         .         .         .         .         .         .
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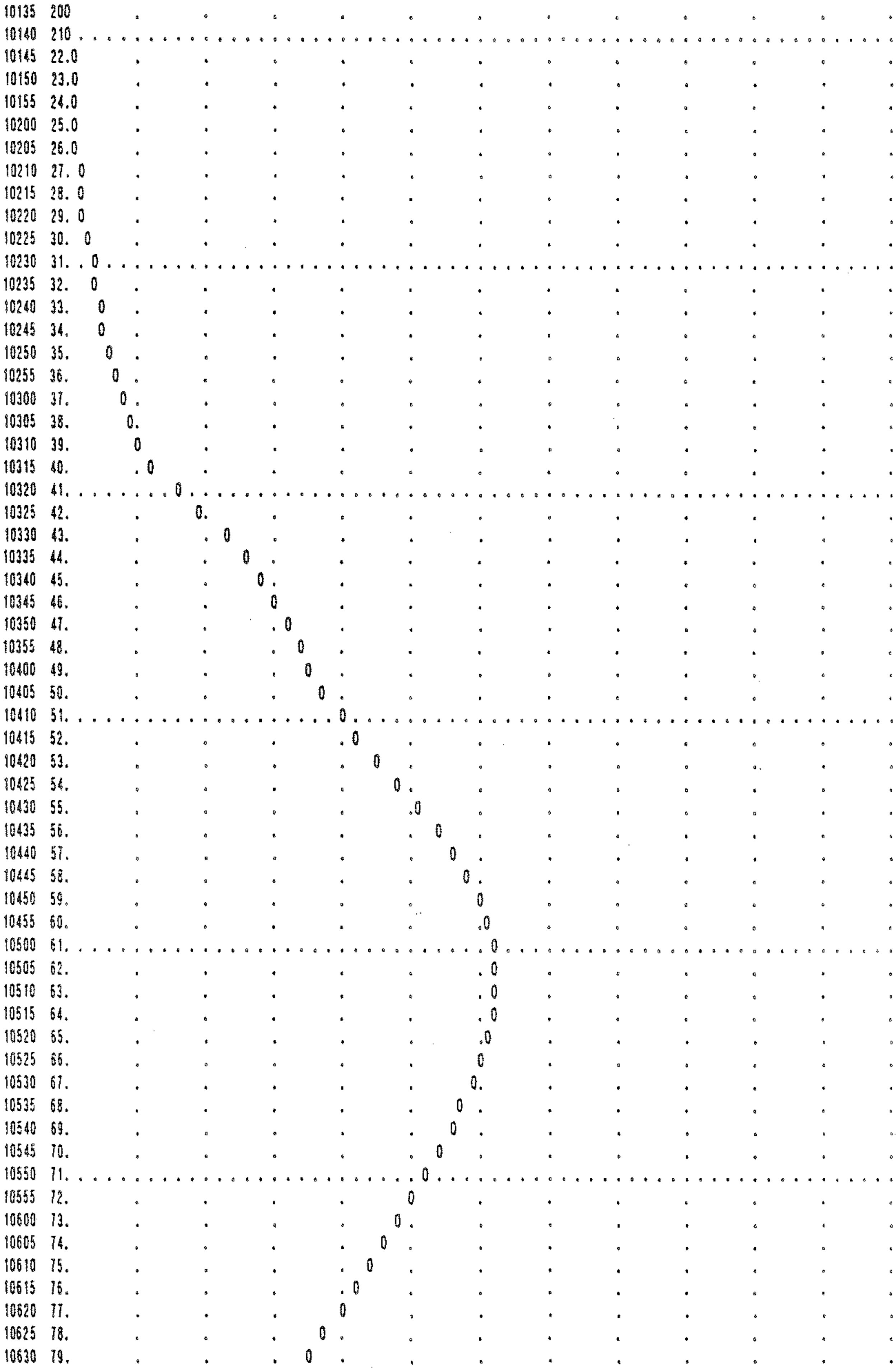
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10225 30.
10230 31.
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10240 33.
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10445 58.
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10635  80.         .         .         .  0      .         .         .         .         .         .         .         .         .
10640  81. ..............................0.........................................................................................
10645  82.         .         .        0.         .         .         .         .         .         .         .         .         .
10650  83.         .         .      0  .         .         .         .         .         .         .         .         .         .
10655  84.         .         .    0    .         .         .         .         .         .         .         .         .         .
10700  85.         .         .   0     .         .         .         .         .         .         .         .         .         .
10705  86.         .         . 0       .         .         .         .         .         .         .         .         .         .
10710  87.         .         .0        .         .         .         .         .         .         .         .         .         .
10715  88.         .        0.         .         .         .         .         .         .         .         .         .         .
10720  89.         .       0 .         .         .         .         .         .         .         .         .         .         .
10725  90.         .      0  .         .         .         .         .         .         .         .         .         .         .
10730  91. ..............0.........................................................................................................
10735  92.         .   0     .         .         .         .         .         .         .         .         .         .         .
10740  93.         .  0      .         .         .         .         .         .         .         .         .         .         .
10745  94.         . 0       .         .         .         .         .         .         .         .         .         .         .
10750  95.         . 0       .         .         .         .         .         .         .         .         .         .         .
10755  96.         .0        .         .         .         .         .         .         .         .         .         .         .
10800  97.         0         .         .         .         .         .         .         .         .         .         .         .
10805  98.        0.         .         .         .         .         .         .         .         .         .         .         .
10810  99.        0.         .         .         .         .         .         .         .         .         .         .         .
10815 100.       0 .         .         .         .         .         .         .         .         .         .         .         .
10820 101. .......0................................................................................................................
10825 102.      0  .         .         .         .         .         .         .         .         .         .         .         .
10830 103.      0  .         .         .         .         .         .         .         .         .         .         .         .
10835 104.     0   .         .         .         .         .         .         .         .         .         .         .         .
10840 105.     0   .         .         .         .         .         .         .         .         .         .         .         .
10845 106.     0   .         .         .         .         .         .         .         .         .         .         .         .
10850 107.    0    .         .         .         .         .         .         .         .         .         .         .         .
10855 108.    0    .         .         .         .         .         .         .         .         .         .         .         .
10900 109.   0     .         .         .         .         .         .         .         .         .         .         .         .
10905 110.   0     .         .         .         .         .         .         .         .         .         .         .         .
10910 111. ...0....................................................................................................................
10915 112.   0     .         .         .         .         .         .         .         .         .         .         .         .
10920 113.  0      .         .         .         .         .         .         .         .         .         .         .         .
10925 114.  0      .         .         .         .         .         .         .         .         .         .         .         .
10930 115.  0      .         .         .         .         .         .         .         .         .         .         .         .
10935 116. 0       .         .         .         .         .         .         .         .         .         .         .         .
10940 117. 0       .         .         .         .         .         .         .         .         .         .         .         .
10945 118. 0       .         .         .         .         .         .         .         .         .         .         .         .
10950 119. 0       .         .         .         .         .         .         .         .         .         .         .         .
10955 120. 0       .         .         .         .         .         .         .         .         .         .         .         .
11000 121.0.......................................................................................................................
11005 122.0        .         .         .         .         .         .         .         .         .         .         .         .
11010 123.0        .         .         .         .         .         .         .         .         .         .         .         .
11015 124.0        .         .         .         .         .         .         .         .         .         .         .         .
11020 125.0        .         .         .         .         .         .         .         .         .         .         .         .
11025 126.0        .         .         .         .         .         .         .         .         .         .         .         .
11030 127.0        .         .         .         .         .         .         .         .         .         .         .         .
11035 128.0        .         .         .         .         .         .         .         .         .         .         .         .
11040 129.0        .         .         .         .         .         .         .         .         .         .         .         .
11045 1300         .         .         .         .         .         .         .         .         .         .         .         .
11050 1310 ........................................................................................................................
11055 1320         .         .         .         .         .         .         .         .         .         .         .         .
11100 1330         .         .         .         .         .         .         .         .         .         .         .         .
11105 1340         .         .         .         .         .         .         .         .         .         .         .         .
11110 1350         .         .         .         .         .         .         .         .         .         .         .         .
11115 1360         .         .         .         .         .         .         .         .         .         .         .         .
11120 1370         .         .         .         .         .         .         .         .         .         .         .         .
11125 1380         .         .         .         .         .         .         .         .         .         .         .         .
11130 1390         .         .         .         .         .         .         .         .         .         .         .         .
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11135 1400        .         .         .         .         .         .         .         .         .         .         .         .
11140 1410 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
11145 1420        .         .         .         .         .         .         .         .         .         .         .         .
11150 1430        .         .         .         .         .         .         .         .         .         .         .         .
11155 1440        .         .         .         .         .         .         .         .         .         .         .         .
11200 1450        .         .         .         .         .         .         .         .         .         .         .         .
11205 1460        .         .         .         .         .         .         .         .         .         .         .         .
11210 1470        .         .         .         .         .         .         .         .         .         .         .         .
11215 1480        .         .         .         .         .         .         .         .         .         .         .         .
11220 1490        .         .         .         .         .         .         .         .         .         .         .         .
11225 1500---------.---------.---------.---------.---------.---------.---------.---------.---------.---------.---------.---------.
1
1
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RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT	15	7811.	3.33	1303.	630.	630.	1.76		
+	ROUTED TO	R15	7263.	3.50	1303.	630.	630.	1.76		
+	HYDROGRAPH AT	14	5157.	3.33	808.	390.	390.	1.11		
+	HYDROGRAPH AT	16	7509.	3.58	1626.	786.	786.	2.16		
+	3 COMBINED AT	114	18407.	3.50	3736.	1806.	1806.	5.03		
+	ROUTED TO	R114	17324.	3.67	3736.	1806.	1806.	5.03		
+	HYDROGRAPH AT	13	6288.	3.33	988.	477.	477.	1.29		
+	2 COMBINED AT	113	20640.	3.58	4721.	2284.	2284.	6.32		
+	ROUTED TO	R113	19453.	3.75	4720.	2284.	2284.	6.32		
+	HYDROGRAPH AT	12	5102.	3.50	1027.	497.	497.	1.32		
+	2 COMBINED AT	112	23064.	3.75	5745.	2780.	2780.	7.64		
+	ROUTED TO	R112	22898.	3.83	5744.	2780.	2780.	7.64		
+	HYDROGRAPH AT	11	3091.	3.33	527.	255.	255.	.70		

	HYDROGRAPH AT								
+		17	1745.	3.33	269.	130.	130.	.37	
	HYDROGRAPH AT								
+		10	2623.	3.33	420.	203.	203.	.54	
	4 COMBINED AT								
+		111	26008.	3.75	6958.	3369.	3369.	9.25	
	ROUTED TO								
+		RD111	24384.	4.42	6953.	3369.	3369.	9.25	
	HYDROGRAPH AT								
+		2A	4274.	3.42	752.	363.	363.	1.09	
	2 COMBINED AT								
+		CP2A	25069.	4.42	7700.	3732.	3732.	10.34	
	DIVERSION TO								
+		DIVERT	10078.	4.42	1931.	933.	933.	10.34	
	HYDROGRAPH AT								
+		FLOW	14992.	4.42	5768.	2799.	2799.	10.34	
	ROUTED TO								
+		RR2A	14420.	4.75	5761.	2799.	2799.	10.34	
	HYDROGRAPH AT								
+		2BE	3612.	3.75	887.	429.	429.	1.22	
	2 COMBINED AT								
+		102B	15418.	4.75	6635.	3228.	3228.	11.56	
	ROUTED TO								
+		DET2BE	15297.	4.83	6584.	3226.	3226.	11.56	
+									1655.95 4.83
	DIVERSION TO								
+		SPILL	11632.	3.50	3595.	1737.	1737.	11.56	
	HYDROGRAPH AT								
+		FRWAY	3665.	3.50	2989.	1489.	1489.	11.56	
	ROUTED TO								
+		CHAN	3665.	4.42	2988.	1489.	1489.	11.56	
	ROUTED TO								
+		WASH	3673.	7.08	2975.	1488.	1488.	11.56	
	HYDROGRAPH AT								
+		RSPILL	11632.	4.83	3595.	1737.	1737.	.00	
	ROUTED TO								
+		IDAHO	11575.	4.92	3595.	1737.	1737.	.00	
	2 COMBINED AT								
+		WW	15234.	4.92	6571.	3225.	3225.	11.56	
	ROUTED TO								
+		RWW	14309.	5.83	6549.	3224.	3224.	11.56	

	HYDROGRAPH AT								
+		2BWW	1428.	3.67	322.	155.	155.	.45		
	HYDROGRAPH AT								
+		2BWE	2518.	3.50	500.	242.	242.	.70		
	ROUTED TO								
+		16BW	2324.	3.58	473.	239.	239.	.70		
+									1634.24	3.58
	2 COMBINED AT								
+		C004	3748.	3.67	787.	394.	394.	1.15		
	DIVERSION TO								
+		EXIT	2530.	3.25	279.	135.	135.	1.15		
	HYDROGRAPH AT								
+		NDIV	1218.	3.25	508.	259.	259.	1.15		
	ROUTED TO								
+		NDROUT	1202.	4.42	507.	259.	259.	1.15		
+									1630.05	4.42
	ROUTED TO								
+		R2BW	1140.	4.75	507.	259.	259.	1.15		
	HYDROGRAPH AT								
+		2BS	6567.	3.50	1341.	648.	648.	1.91		
	3 COMBINED AT								
+		102	15458.	5.83	8006.	4131.	4131.	14.62		
	HYDROGRAPH AT								
+		5	14021.	4.00	4235.	2056.	2056.	5.65		
	ROUTED TO								
+		R5	13965.	4.08	4235.	2056.	2056.	5.65		
	HYDROGRAPH AT								
+		4	20674.	4.58	8726.	4313.	4313.	11.85		
	2 COMBINED AT								
+		104	31941.	4.33	12916.	6369.	6369.	17.50		
	ROUTED TO								
+		R104	30612.	4.83	12896.	6369.	6369.	17.50		
	HYDROGRAPH AT								
+		7	2219.	3.50	444.	215.	215.	.61		
	HYDROGRAPH AT								
+		6	15051.	4.42	5650.	2764.	2764.	7.86		
	3 COMBINED AT								
+		106	44513.	4.67	18941.	9348.	9348.	25.97		
	ROUTED TO								
+		R106	43483.	4.92	18924.	9348.	9348.	25.97		

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        HYDROGRAPH AT
+                    3N     9372.   3.67      2174.     1052.     1052.     2.89
        ROUTED TO
+                   CULV    8503.   3.83      2174.     1052.     1052.     2.89
+                                                                          1674.63      3.83
        ROUTED TO
+                  RCULV    7534.   4.33      2172.     1052.     1052.     2.89
        HYDROGRAPH AT
+                    3S     7134.   3.67      1647.      796.      796.     2.39
        2 COMBINED AT
+                   103    11756.   4.08      3818.     1848.     1848.     5.28
        HYDROGRAPH AT
+                    3A     3763.   3.67       842.      407.      407.     1.20
        2 COMBINED AT
+                  CP103    14234.  4.00      4660.     2256.     2256.     6.48
        2 COMBINED AT
+                  W103     50553.  4.83     23444.    11603.    11603.    32.45
        ROUTED TO
+                 RW103     50251.  5.00     23436.    11603.    11603.    32.45
        2 COMBINED AT
+                   PL     62044.  5.08     31327.    15734.    15734.    47.07
        ROUTED TO
+                  RES     53371.  5.75     22155.    11271.    11271.    47.07
+                                                                          1590.03      5.75
1                       SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION   DET2BE


  PLAN  1 ..............                INITIAL VALUE    SPILLWAY CREST    TOP OF DAM
                         ELEVATION        1636.00          1650.00          1650.00
                         STORAGE             0.              153.             153.
                         OUTFLOW             0.             3534.            3534.


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

            1.00     1655.95      5.95       260.    15297.     3.50        4.83        .00
1                       SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION    168W


  PLAN  1 ..............                INITIAL VALUE    SPILLWAY CREST    TOP OF DAM
                         ELEVATION        1623.50          1630.00          1630.00
                         STORAGE             0.               28.              28.
                         OUTFLOW             0.              135.             135.


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

1.00	1634.24	4.24	50.	2324.	3.33	3.58	.00

1 SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION NOROUT

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1622.60	1630.00	1630.00
STORAGE	0.	25.	25.
OUTFLOW	0.	1111.	1111.

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	1630.05	.05	26.	1202.	.25	4.42	.00

1 SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION RES

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1568.20	1583.30	1589.10
STORAGE	175.	4200.	7325.
OUTFLOW	75.	165.	22040.

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	1590.03	.93	7884.	53371.	2.17	5.75	.00

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

FCDP72 - Powerline
PMF - 72-hour PMP

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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
                                        ****


    THIS HEC-1 VERSION CONTAINS ALL OPTIONS EXCEPT ECONOMICS, AND THE NUMBER OF PLANS ARE REDUCED TO 3


                                    HEC-1 INPUT                                          PAGE  1

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

  1           ID    WEEKES WASH - POWERLINE F.R.S  ANALYSIS
  2           ID    CONVERSION OF MODEL FROM TR-20
  3           ID                72-HR FULL PMF :SCS EXCESS & HYDROGRAPH
  4           ID                DEVELOPMENT. MUSKINGUM ROUTING
  5           ID       CONDITIONS:   1: 100-YR. 24-HR STORM IS CONTAINED WITHIN THE BREAKOUT
  6           ID                        POINT OF WEEKES WASH AT JUNCTION ROAD.
  7           ID                     2: EXISTING CONDITIONS. PMP SAME AS FOR VINEYARD AND
  8           ID                        RITTENHOUSE FRS'S.  JULY 27, 1989 RUN.
  9           ID                     3: SUPERSTITION FREEWAY IN PLACE.
 10           ID                     4: ADJUSTED WATERSHED AREAS.
 11           ID                     5: BREAKOUT CURVE FOR NORTH DIVERSION DAM.
 12           ID                     6: NO MODIFICATIONS TO POWERLINE F.R.S.
 13           ID       TIME INCREMENT = 15 MINUTES
 14           ID       FILE = FCDP720
 15           IT      15      0      0    300
 16           IO       5

 17           KK      15  WATERSHED 15
 18           KM     HYDROGRAPH FOR WATERSHED 15
 19           PB   17.80
 20           IN      60
 21           PI   0.02   0.03   0.03   0.03   0.04   0.04   0.04   0.05   0.05   0.05
 22           PI   0.06   0.06   0.06   0.07   0.07   0.08   0.08   0.08   0.08   0.09
 23           PI   0.10   0.10   0.10   0.11   0.11   0.12   0.12   0.13   0.14   0.15
 24           PI   0.16   0.17   0.18   0.18   0.18   0.19   0.21   0.23   0.26   0.30
 25           PI   0.35   0.46   0.58   0.71   0.85   1.57   2.11   2.22   1.24   0.52
 26           PI   0.39   0.33   0.28   0.23   0.18   0.15   0.14   0.13   0.12   0.11
 27           PI   0.11   0.10   0.10   0.09   0.08   0.07   0.06   0.05   0.04   0.03
 28           PI   0.03   0.02
 29           BA   1.76
 30           LS      0     94
 31           UD    .18

 32           KK     R15 ROUTE HYDROGRAPH FROM WS 15
 33           KM     ROUTE HYDROGRAPH FROM WATERSHED 15
 34           RM      1    .11     .3

 35           KK      14 WATERSHED 14
 36           KM     HYDROGRAPH FOR WATERSHED 14
 37           BA   1.11
 38           LS      0     93
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 39          UD    .15

 40          KK     16 WATERSHED 16
 41          KM    HYDROGRAPH FOR WATERSHED 16
 42          BA   2.16
 43          LS     0      95
 44          UD    .35

 45          KK    114 CONCENTRATION PT. 114 (INCLUDES WATERSHEDS 14, 15, & 16)
 46          KM    COMBINE ALL THREE HYDROGRAPHS AT CP 114
 47          HC     3
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


 48          KK   R114 ROUTE CP 114
 49          KM    ROUTE HYDROGRAPH FROM CP114 TO CP 113
 50          RM     1     .17      .3

 51          KK     13 WATERSHED 13
 52          KM    HYDROGRAPH FOR WATERSHED 13
 53          BA   1.29
 54          LS     0      96
 55          UD   .126

 56          KK    113 CONCENTRATION PT 113 FOR HYDROGRAPHS CP 114 AND WS 13
 57          KM    COMBINE HYDROGRAPHS CP 114 AND WS 13
 58          HC     2

 59          KK   R113 ROUTE CP 113 TO CP 112
 60          KM    ROUTE HYDROGRAPH FOR CP 113
 61          RM     1     .19      .3

 62          KK     12 WATERSHED 12
 63          KM    HYDROGRAPH FOR WATERSHED 12
 64          BA   1.32
 65          LS     0      97
 66          UD    .27

 67          KK    112 CONCENTRATION PT. 112 FOR HYDROGRAPHS FROM CP 113 AND WS 12.
 68          KM    COMBINE HYDROGRAPH FROM CP 113 AND WS 12
 69          HC     2

 70          KK   R112 ROUTE CP 112 TO CP 111
 71          KM    ROUTE HYDROGRAPH CP 112 TO CP 111
 72          RM     1     .07      .3

 73          KK     11 WATERSHED 11
 74          KM    HYDROGRAPH FOR WATERSHED 11
 75          BA    .70
 76          LS     0      95
 77          UD   .186

 78          KK     17 WATERSHED 17
 79          KM    HYDROGRAPH FOR WATERSHED 17
 80          BA    .37
 81          LS     0      93
 82          UD   .138
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 83          KK      10   WATERSHED 10
 84          KM      HYDROGRAPH FOR WATERSHED 10
 85          BA     .54
 86          LS       0      97
 87          UD     .14
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


 88          KK     111 CONCENTRATION PT. 111
 89          KM     COMBINE HYDROGRAPHS FROM CP 112, WS 11, AND WS 17
 90          HC       4

 91          KK   RD111 ROUTE CP 111 TO PT AT WHICH BREAKOUT WOULD OCCUR.
 92          KM     ROUTE HYDROGRAPH CP111 TO THE POINT AT WHICH THE BREAKOUT OCCURS.
 93          RM       5     .64      .3

 94          KK      2A  WATERSHED 2A
 95          KM      HYDROGRAPH FOR WATERSHED 2A
 96          BA    1.09
 97          LS       0      90
 98          UD     .22

 99          KK    CP2A  CONCENTRATION POINT 2A
100          KM    COMBINE ROUTED HYDROGRAPH FROM CP 111 AND WATERSHED 2A.
101          HC       2

102          KK    FLOW    POINT OF DIVERSION FOR WEEKES WASH
103          KO       3
104          OT  DIVERT
105          DI       0    6500    7000    9000   10000   15000
106          DQ       0       0     260    1300    1880    4600

107          KK    RR2A ROUTE REMAINING HYDROGRAPH TO SUPERSTITION FREWAY
108          KM     ROUTE THE REMAINING HYDROGRAPH TO DETENTION NORTH OF SUPERSTITION FREEWAY
109          RM       2     .42      .3

110          KK     2BE WATERSHED 2B EAST
111          KM     HYDROGRAPH FOR WATERSHED 2B EAST
112          BA    1.22
113          LS       0      93
114          UD     .48

115          KK    102B  CONCENTRATION POINT NORTH OF FREEWAY
116          KM     CONCENTRATION POINT NORTH OF SUPERSTITION FREEWAY AT DETENTION AREA
117          HC       2

118          KK  DET2BE   ROUTE THROUGH FREEWAY  (WEEKES WASH DETENTION BASIN)
119          KM      ROUTE FLOW THROUGH WEEKES WASH DETENTION BASIN AND THEN FREEWAY
120          KM      PRINCIPLE OUTLET IS 2-12 X 12 (FOOT) BOX CULVERTS
121          KM      INVERT IS AT 1636: EMERGENCY SPILLWAY CREST IS AT 1650.
122          RS       1    ELEV    1636
123          SV       0     6.0    13.0    29.0    47.0    69.0    93.0   122.0   153.0   184.0
124          SV     217     239
125          SE    1636    1637    1638    1640    1642    1644    1646    1648    1650    1652
126          SE    1654    1655
127          SQ       0      22     194     584    1050    1604    2236    2900    3534    4108
128          SQ    4622    4860
129          ST    1650     320     2.2     1.5
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


 130        KK   FRWAY
 131        KM    DIVERT ALL FLOWS FROM EMERGENCY SPILLWAY
 132        DT   SPILL
 133        DI      0    3665    5000   10000   15000
 134        DQ      0       0    1335    6335   11335

 135        KK    CHAN  ROUTE FLOWS THROUGH THE CHANNEL
 136        KM     ROUTE FLOW THROUGH THE IMPROVED CHANNEL
 137        RM      1      .1      .3

 138        KK    WASH   ROUTE FLOWS THROUGH THE WASH
 139        KM      ROUTE FLOWS THROUGH THE NATURAL WASH SYSTEM
 140        RM      2     .50      .3

 141        KK  RSPILL
 142        KM    RETRIEVE FLOW DIVERTED FROM THE EMERGENCY SPILLWAY
 143        DR   SPILL

 144        KK   IDAHO
 145        KM    ROUTE THE RETRIEVED FLOW DOWN IDAHO RD.
 146        RM      1      .1      .3

 147        KK     WW
 148        KM    COMBINE ALL FLOWS FROM FREEWAY
 149        HC      2

 150        KK    RWW
 151        KM    ROUTE FLOWS TO POWERLINE F.R.S.
 152        RM      4     .98      .3

 153        KK    2BWW  WATERSHED 2B WEST, WEST
 154        KM      HYDROGRAPH FOR WATERSHED 2B WEST, WEST
 155        BA    .45
 156        LS      0      92
 157        UD     .4

 158        KK    2BWE  WATERSHED 2B WEST, EAST
 159        KM     RUNOFF FROM EAST OF IDAHO ROAD 2B WEST, EAST
 160        BA    .70
 161        LS      0      92
 162        UD     .3

 163        KK    16BW  ROUTE THROUGH THE DETENTION NORTH OF THE FREEWAY  (N. DIVERSION DAM)
 164        KM      ROUTE FLOWS THROUGH THE DETENTION NORTH OF THE SUPERSTITION FREEWAY
 165        RS      1    ELEV  1623.5
 166        SV      0      .6     8.3    17.5    28.2    36.0    48.6
 167        SE  1623.5  1624.0  1626.0  1628.0  1630.0  1632.0  1634.0
 168        SQ      0       0      31      93     135     169     208
 169        ST  1630.0     110     2.2     1.5
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


 170        KK    C004  COMBINE FLOWS JUST NORTH OF FREEWAY
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171        KM    COMBINE THE FLOWS JUST NORTH OF THE FREEWAY
172        HC       2

173        KK    NDIV
174        KM    DIVERSION OF FLOW OVER THE NORTH DIVERSION DAM.
175        KO       3
176        DT    EXIT
177        DI       0    1218    5000   10000
178        DQ       0       0    3782    8782

179        KK  NDROUT  ROUTE THROUGH THE FREEWAY
180        KM    ROUTE COMBINED FLOW THROUGH 2 - 10  X 8  BOX CULVERTS
181        RS       1    ELEV  1622.6
182        SV       0    0.02    0.16    1.12    4.17   25.42
183        SE  1622.6  1623.0  1624.0  1626.0  1628.0  1630.0
184        SQ       0       0     101     372     738    1111
185        ST  1630.0    2875     2.2     1.5

186        KK    R28W  ROUTE TO CP102
187        KM     ROUTE THE FLOWS FROM DETENTION POND TO CP102 (POWERLINE F.R.S.)
188        RM       2     .40      .3

189        KK     28S  WATERSHED 28 SOUTH OF SUPERTITION FREEWAY
190        KM     HYDROGRAPH FOR WATERSHED 28 SOUTH
191        BA    1.91
192        LS       0      91
193        UD     .32

194        KK     102 CONCENTRATION PT. 102, WEEKES WASH WATERSHED AT POWERLINE FRS.
195        KM     COMBINE HYDROGRAPHS FROM CP D111 AND WS 2 (WE ARE NOW AT POWERLINE DAM)
196        HC       3

197        KK       5 WATERSHED 5 ( BEGINNING OF SIPHON DRAW WATERSHED)
198        KM     HYDROGRAPH FOR WS 5 (BEGINNING OF THE WATERSHED FOR SIPHON DRAW TO THE DAM)
199        BA    5.65
200        LS       0      95
201        UD     .71

202        KK      R5 ROUTE HYDROGRAPH FROM WS 5 TO CP 104
203        KM      ROUTE HYDROGRAPH FOR WS 5 TO CP 104
204        RM       1     .07      .3

205        KK       4 WATERSHED 4
206        KM      HYDROGRAPH FOR WATERSHED 4
207        BA   11.85
208        LS       0      95
209        UD    1.30
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LINE       ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


210        KK     104  CONCENTRATION POINT 104
211        KM     COMBINE HYDROGRAPHS AT CP 104
212        HC       2

213        KK    R104
214        KM    ROUTE CP 104 TO 106
215        RM       2     .50      .3
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216        KK      7  WATERSHED 7
217        KM    HYDROGRAPH FOR WATERSHED 7
218        BA     .61
219        LS      0      93
220        UD      .3

221        KK      6 WATERSHED 6
222        KM      HYDROGRAPH FOR WATERSHED 6
223        BA    7.86
224        LS      0      93
225        UD    1.08

226        KK     106 CONCENTRATION PT. 106, HYDROGRAPHS FROM R 5, WS 4, & WS 6
227        KM      COMBINE HYDROGRAPHS FROM R5, WS 4, AND WS 6
228        HC      3

229        KK    R106 ROUTE THE HYDROGRAPH FROM CP 106 TO WHERE NEXT WASH ENTERS.
230        KM      ROUTE HYDROGRAPH FROM CP 104 TO WHERE OTHER WASH ENTERS
231        RM      1     .27      .3

232        KK      3N WATERSHED 3N
233        KM      HYDROGRAPH FOR WATERSHED 3N
234        BA    2.89
235        LS      0      95
236        UD     .41

237        KK    CULV   ROUTE FLOWS THROUGH CULVERTS
238        KM     ROUTE FLOWS THROUGH THE CULVERTS
239        RS     1.0    ELEV    1665
240        SV      0     .15     .60     1.5     3.1     5.6     9.1    13.7   19.45   26.35
241        SE    1665  1665.5    1666  1666.5    1667  1667.5    1668  1668.5    1669  1669.5
242        SQ      0     119     375     688    1063    1462    1938    2375    2875    3375

243        KK   RCULV  ROUTE FLOWS TO W103
244        KM     ROUTE THE FLOWS TO CONCENTRATION POINT W103
245        RM      2      .5      .3

246        KK      3S  WATERSHED 3 SOUTH
247        KM      HYDROGRAPH FOR WATERSHED 3 SOUTH
248        BA    2.39
249        LS      0      90
250        UD    .436
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LINE       ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


251        KK     103
252        HC      2

253        KK      3A   WATERSHED 3A
254        KM     HYDROGRAPH FOR WATERSHED 3A
255        BA    1.20
256        LS      0      91
257        UD      .4

258        KK   CP103
259        KM     CONCENTRATION POINT FOR WEST FORK OF SIPHON DRAW
260        HC      2
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261          KK    W103 CONCTRATION PT. W103 WHERE UNNAMED WASH ENTERS.
262          KM      COMBINE HYDROGRAPHS FROM CP 104 AND WS 3 - SIPHON DRAW WATERSHED
263          HC       2

264          KK   RW103 ROUTE RESULTING HYDROGRAPH TO POWELINE DAM STRUCTURE
265          KM      ROUTE THE HYDROGRAPH TO POWERLINE DAM
266          RM       1     .16      .3

267          KK     PLD CONCENTRATION PT. AT POWERLINE DAM
268          KM     COMBINE HYDROGRAPHS FROM WEEKES WASH SUB-BASIN AND SIPHON DRAW SUB-BASIN
269          HC       2
270          KO       0       2

271          KK     RES RESERVOIR ROUTING THROUGH THE STRUCTURE
272          KM     RESERVOIR RATING CURVE
273          RS       1    ELEV  1568.2
274          SV       0     175     380     700    1100    1600    2175    2875    3675    4200
275          SV    4600    5525    6725    7925
276          SQ       0      75      92     106     119     130     141     150     159     165
277          SQ    1228    7360   16800   27280
278          SE  1568.1  1568.2  1570.0  1572.1  1574.1  1576.1  1578.1  1580.1  1582.1  1583.3
279          SE  1584.1  1586.1  1588.1  1590.1
280          SS  1583.3       0       0       0
281          ST  1589.1   13358     2.2     1.5
282          ZZ
```

```
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
                                                 ****


                    WEEKES WASH - POWERLINE F.R.S  ANALYSIS
                    CONVERSION OF MODEL FROM TR-20
                              72-HR FULL PMF :SCS EXCESS & HYDROGRAPH
                              DEVELOPMENT, MUSKINGUM ROUTING
                      CONDITIONS:   1: 100-YR, 24-HR STORM IS CONTAINED WITHIN THE BREAKOUT
                                       POINT OF WEEKES WASH AT JUNCTION ROAD.
                                    2: EXISTING CONDITIONS, PMP SAME AS FOR VINEYARD AND
                                       RITTENHOUSE FRS'S.  JULY 27, 1989 RUN.
                                    3: SUPERSTITION FREEWAY IN PLACE.
                                    4: ADJUSTED WATERSHED AREAS.
                                    5: BREAKOUT CURVE FOR NORTH DIVERSION DAM.
                                    6: NO MODIFICATIONS TO POWERLINE F.R.S.
                      TIME INCREMENT = 15 MINUTES
                      FILE = FCDPT20

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

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

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                    COMPUTATION INTERVAL     .25 HOURS
                        TOTAL TIME BASE   74.75 HOURS

          ENGLISH UNITS

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

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           **************
           *            *
 102 KK    *     FLOW   *        POINT OF DIVERSION FOR WEEKES WASH
           *            *
           **************

 103 KO         OUTPUT CONTROL VARIABLES
                     IPRNT          3  PRINT CONTROL
                     IPLOT          0  PLOT CONTROL
                     QSCAL         0.  HYDROGRAPH PLOT SCALE

     DT         DIVERSION
                     ISTAD     DIVERT  DIVERSION HYDROGRAPH IDENTIFICATION

     DI           INFLOW        .00   6500.00   7000.00   9000.00  10000.00  15000.00

     DQ      DIVERTED FLOW      .00      .00    260.00   1300.00   1880.00   4600.00

                                                                  ***

      ***           ***           ***           ***           ***

                       DIVERSION HYDROGRAPH   DIVERT

  PEAK FLOW     TIME                        MAXIMUM AVERAGE FLOW
                                     6-HR       24-HR       72-HR     74.75-HR
+   (CFS)       (HR)
                          (CFS)
+    4152.      48.00              1787.        447.        149.        143.
                        (INCHES)   1.607       1.607       1.607       1.607
                         (AC-FT)    886.        886.        886.        886.
```

```
                    CUMULATIVE AREA =   10.34 SQ MI


     ***           ***           ***           ***           ***

                     HYDROGRAPH AT STATION     FLOW

  PEAK FLOW    TIME                      MAXIMUM AVERAGE FLOW
                                  6-HR       24-HR       72-HR     74.75-HR
+  (CFS)      (HR)
                         (CFS)
+  10024.    48.00                7708.       3392.       1437.       1385.
                       (INCHES)   6.931      12.200      15.511      15.511
                        (AC-FT)   3822.       6728.       8554.       8554.

                    CUMULATIVE AREA =   10.34 SQ MI


 WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

 WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

 WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG


*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***

          **************
          *            *
 173 KK   *     NDIV   *
          *            *
          **************

 175 KO         OUTPUT CONTROL VARIABLES
                     IPRNT          3  PRINT CONTROL
                     IPLOT          0  PLOT CONTROL
                     QSCAL         0.  HYDROGRAPH PLOT SCALE

    DT          DIVERSION
                     ISTAO       EXIT  DIVERSION HYDROGRAPH IDENTIFICATION

    DI            INFLOW        .00   1218.00   5000.00  10000.00

    DQ      DIVERTED FLOW       .00      .00   3782.00   8782.00

                                                          ***

     ***           ***           ***           ***           ***

                     DIVERSION HYDROGRAPH     EXIT

  PEAK FLOW    TIME                      MAXIMUM AVERAGE FLOW
                                  6-HR       24-HR       72-HR     74.75-HR
+  (CFS)      (HR)
                         (CFS)
+    413.    48.00                108.         27.          9.          9.
                       (INCHES)   .870        .870        .870        .870
```

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                    (AC-FT)      53.        53.        53.        53.

                    CUMULATIVE AREA =    1.15 SQ MI


     ***           ***           ***           ***           ***

                     HYDROGRAPH AT STATION     MDIV

 PEAK FLOW     TIME                        MAXIMUM AVERAGE FLOW
                                   6-HR      24-HR      72-HR     74.75-HR
+  (CFS)       (HR)
                       (CFS)
+   1218.     46.50               948.       395.       164.        158.
                     (INCHES)    7.667     12.770     15.879      15.879
                      (AC-FT)     470.       783.       974.        974.

                    CUMULATIVE AREA =    1.15 SQ MI


WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN       0. TO     1938.
              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 *** TIME INTERVAL IS GREATER THAN .29*LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG


*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***


          ***************
          *             *
 267 KK   *       PLD   *     CONCENTRATION PT. AT POWERLINE DAM
          *             *
          ***************

 270 KO         OUTPUT CONTROL VARIABLES
                     IPRNT          5  PRINT CONTROL
                     IPLOT          2  PLOT CONTROL
                     QSCAL         0.  HYDROGRAPH PLOT SCALE
1                                                STATION      PLD

                      (O) OUTFLOW
        0.     5000.    10000.    15000.    20000.    25000.    30000.    35000.    40000.    45000.    50000.    55000.        0.
DAHRMN PER
 10000   10---------.---------.---------.---------.---------.---------.---------.---------.---------.---------.---------.---------.
 10015   20        .         .         .         .         .         .         .         .         .         .         .         .
 10030   30        .         .         .         .         .         .         .         .         .         .         .         .
 10045   40        .         .         .         .         .         .         .         .         .         .         .         .
```

10100 50
10115 60
10130 70
10145 80
10200 90
10215 100
10230 110
10245 120
10300 130
10315 140
10330 150
10345 160
10400 170
10415 180
10430 190
10445 200
10500 210
10515 220
10530 230
10545 240
10600 250
10615 260
10630 270
10645 280
10700 290
10715 300
10730 310
10745 320
10800 330
10815 340
10830 350
10845 36.0
10900 37.0
10915 38.0
10930 39.0
10945 40.0
11000 41.0
11015 42.0
11030 43.0
11045 44.0
11100 45.0
11115 46.0
11130 47.0
11145 48.0
11200 49. 0
11215 50. 0
11230 51. 0
11245 52. 0
11300 53. 0
11315 54. 0
11330 55. 0
11345 56. 0
11400 57. 0
11415 58. 0
11430 59. 0
11445 60. 0
11500 61. 0
11515 62. 0
11530 63. 0
11545 64. 0

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11600  65.  0    .    .    .    .    .    .    .    .    .    .    .    .
11615  66.  0    .    .    .    .    .    .    .    .    .    .    .    .
11630  67.  0    .    .    .    .    .    .    .    .    .    .    .    .
11645  68.  0    .    .    .    .    .    .    .    .    .    .    .    .
11700  69.  0    .    .    .    .    .    .    .    .    .    .    .    .
11715  70.  0    .    .    .    .    .    .    .    .    .    .    .    .
11730  71. .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
11745  72.  0    .    .    .    .    .    .    .    .    .    .    .    .
11800  73.  0    .    .    .    .    .    .    .    .    .    .    .    .
11815  74.   0   .    .    .    .    .    .    .    .    .    .    .    .
11830  75.   0   .    .    .    .    .    .    .    .    .    .    .    .
11845  76.   0   .    .    .    .    .    .    .    .    .    .    .    .
11900  77.   0   .    .    .    .    .    .    .    .    .    .    .    .
11915  78.   0   .    .    .    .    .    .    .    .    .    .    .    .
11930  79.   0   .    .    .    .    .    .    .    .    .    .    .    .
11945  80.   0   .    .    .    .    .    .    .    .    .    .    .    .
12000  81. . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
12015  82.   0   .    .    .    .    .    .    .    .    .    .    .    .
12030  83.   0   .    .    .    .    .    .    .    .    .    .    .    .
12045  84.   0   .    .    .    .    .    .    .    .    .    .    .    .
12100  85.   0   .    .    .    .    .    .    .    .    .    .    .    .
12115  86.   0   .    .    .    .    .    .    .    .    .    .    .    .
12130  87.   0   .    .    .    .    .    .    .    .    .    .    .    .
12145  88.    0  .    .    .    .    .    .    .    .    .    .    .    .
12200  89.    0  .    .    .    .    .    .    .    .    .    .    .    .
12215  90.    0  .    .    .    .    .    .    .    .    .    .    .    .
12230  91. . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
12245  92.    0  .    .    .    .    .    .    .    .    .    .    .    .
12300  93.    0  .    .    .    .    .    .    .    .    .    .    .    .
12315  94.    0  .    .    .    .    .    .    .    .    .    .    .    .
12330  95.    0  .    .    .    .    .    .    .    .    .    .    .    .
12345  96.    0  .    .    .    .    .    .    .    .    .    .    .    .
20000  97.    0  .    .    .    .    .    .    .    .    .    .    .    .
20015  98.    0  .    .    .    .    .    .    .    .    .    .    .    .
20030  99.    0  .    .    .    .    .    .    .    .    .    .    .    .
20045 100.     0 .    .    .    .    .    .    .    .    .    .    .    .
20100 101. . . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . .
20115 102.     0 .    .    .    .    .    .    .    .    .    .    .    .
20130 103.     0 .    .    .    .    .    .    .    .    .    .    .    .
20145 104.     0 .    .    .    .    .    .    .    .    .    .    .    .
20200 105.     0 .    .    .    .    .    .    .    .    .    .    .    .
20215 106.     0 .    .    .    .    .    .    .    .    .    .    .    .
20230 107.     0 .    .    .    .    .    .    .    .    .    .    .    .
20245 108.     0 .    .    .    .    .    .    .    .    .    .    .    .
20300 109.     0 .    .    .    .    .    .    .    .    .    .    .    .
20315 110.     0 .    .    .    .    .    .    .    .    .    .    .    .
20330 111. . . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . .
20345 112.     0 .    .    .    .    .    .    .    .    .    .    .    .
20400 113.      0.    .    .    .    .    .    .    .    .    .    .    .
20415 114.      0.    .    .    .    .    .    .    .    .    .    .    .
20430 115.      0.    .    .    .    .    .    .    .    .    .    .    .
20445 116.      0.    .    .    .    .    .    .    .    .    .    .    .
20500 117.      0.    .    .    .    .    .    .    .    .    .    .    .
20515 118.      0.    .    .    .    .    .    .    .    .    .    .    .
20530 119.      0.    .    .    .    .    .    .    .    .    .    .    .
20545 120.      0.    .    .    .    .    .    .    .    .    .    .    .
20600 121. . . . 0. . . . . . . . . . . . . . . . . . . . . . . . . . . .
20615 122.       0.   .    .    .    .    .    .    .    .    .    .    .
20630 123.       0.   .    .    .    .    .    .    .    .    .    .    .
20645 124.       0.   .    .    .    .    .    .    .    .    .    .    .
```

```
20700 125.     0 .       .       .       .       .       .       .       .       .       .       .       .
20715 126.     0 .       .       .       .       .       .       .       .       .       .       .       .
20730 127.     0 .       .       .       .       .       .       .       .       .       .       .       .
20745 128.      0.       .       .       .       .       .       .       .       .       .       .       .
20800 129.      0.       .       .       .       .       .       .       .       .       .       .       .
20815 130.      0.       .       .       .       .       .       .       .       .       .       .       .
20830 131. . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
20845 132.      0.       .       .       .       .       .       .       .       .       .       .       .
20900 133.      0.       .       .       .       .       .       .       .       .       .       .       .
20915 134.      0.       .       .       .       .       .       .       .       .       .       .       .
20930 135.       0       .       .       .       .       .       .       .       .       .       .       .
20945 136.       0       .       .       .       .       .       .       .       .       .       .       .
21000 137.       0       .       .       .       .       .       .       .       .       .       .       .
21015 138.       0       .       .       .       .       .       .       .       .       .       .       .
21030 139.       0       .       .       .       .       .       .       .       .       .       .       .
21045 140.       0       .       .       .       .       .       .       .       .       .       .       .
21100 141. . . . . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
21115 142.       0       .       .       .       .       .       .       .       .       .       .       .
21130 143.       0       .       .       .       .       .       .       .       .       .       .       .
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21330 151. . . . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
21345 152.       . 0     .       .       .       .       .       .       .       .       .       .       .
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21430 155.       . 0     .       .       .       .       .       .       .       .       .       .       .
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21515 158.       .  0    .       .       .       .       .       .       .       .       .       .       .
21530 159.       .   0   .       .       .       .       .       .       .       .       .       .       .
21545 160.       .   0   .       .       .       .       .       .       .       .       .       .       .
21600 161. . . . . . . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
21615 162.       .    0  .       .       .       .       .       .       .       .       .       .       .
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21815 170.       .         0     .       .       .       .       .       .       .       .       .       .
21830 171. . . . . . . . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
21845 172.       .         . 0   .       .       .       .       .       .       .       .       .       .
21900 173.       .         .  0  .       .       .       .       .       .       .       .       .       .
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21945 176.       .         .     0.      .       .       .       .       .       .       .       .       .
22000 177.       .         .       0     .       .       .       .       .       .       .       .       .
22015 178.       .         .       .0    .       .       .       .       .       .       .       .       .
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22100 181. . . . . . . . . . . . . . . . . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
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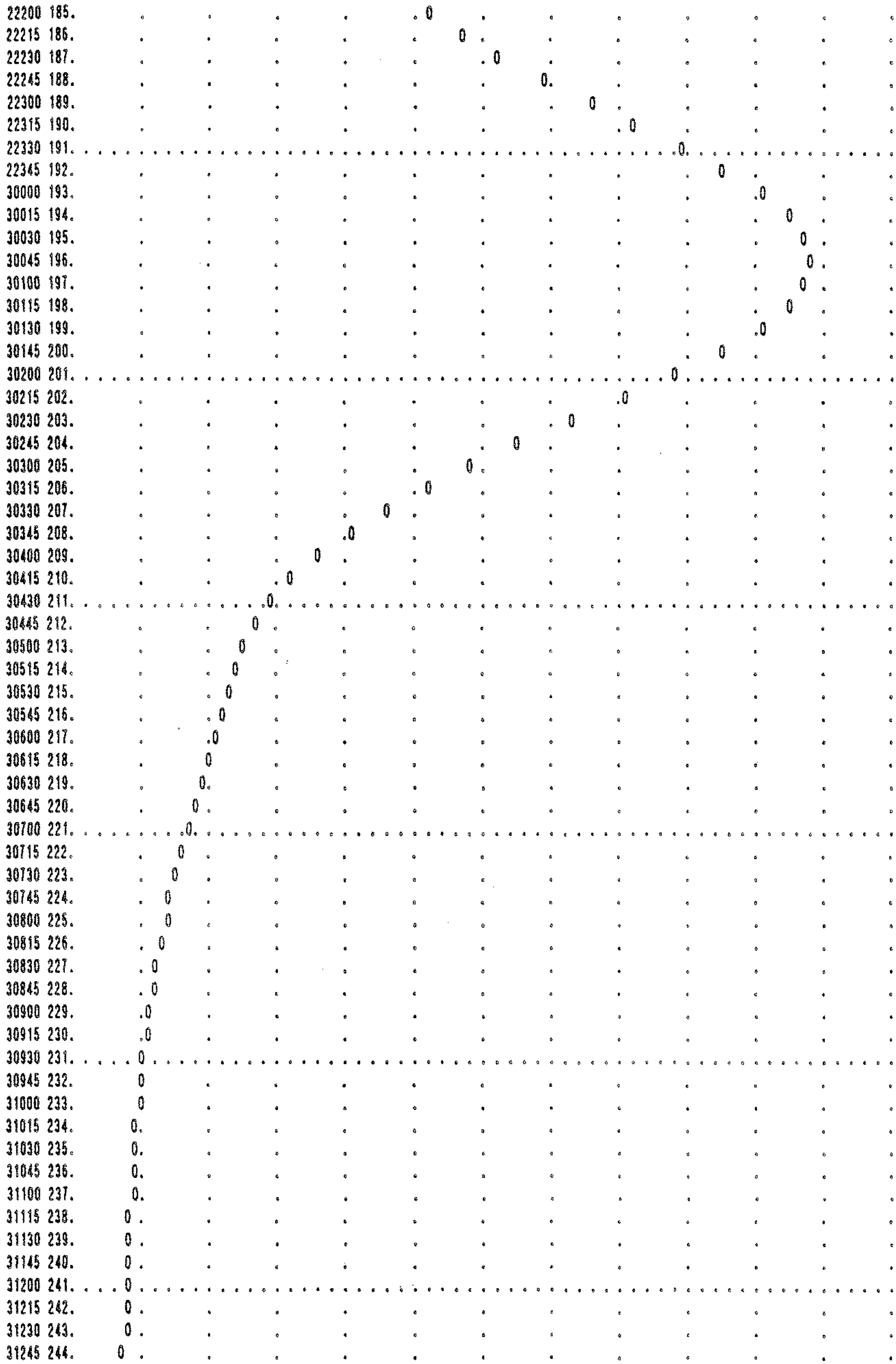
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22300 189.
22315 190.
22330 191.
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30030 195.
30045 196.
30100 197.
30115 198.
30130 199.
30145 200.
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30215 202.
30230 203.
30245 204.
30300 205.
30315 206.
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30430 211.
30445 212.
30500 213.
30515 214.
30530 215.
30545 216.
30600 217.
30615 218.
30630 219.
30645 220.
30700 221.
30715 222.
30730 223.
30745 224.
30800 225.
30815 226.
30830 227.
30845 228.
30900 229.
30915 230.
30930 231.
30945 232.
31000 233.
31015 234.
31030 235.
31045 236.
31100 237.
31115 238.
31130 239.
31145 240.
31200 241.
31215 242.
31230 243.
31245 244.

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31300 245.      0 .        .        .        .        .        .        .        .        .        .        .        .
31315 246.      0 .        .        .        .        .        .        .        .        .        .        .        .
31330 247.      0 .        .        .        .        .        .        .        .        .        .        .        .
31345 248.      0 .        .        .        .        .        .        .        .        .        .        .        .
31400 249.      0 .        .        .        .        .        .        .        .        .        .        .        .
31415 250.      0 .        .        .        .        .        .        .        .        .        .        .        .
31430 251. . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
31445 252.      0 .        .        .        .        .        .        .        .        .        .        .        .
31500 253.     0  .        .        .        .        .        .        .        .        .        .        .        .
31515 254.     0  .        .        .        .        .        .        .        .        .        .        .        .
31530 255.     0  .        .        .        .        .        .        .        .        .        .        .        .
31545 256.     0  .        .        .        .        .        .        .        .        .        .        .        .
31600 257.     0  .        .        .        .        .        .        .        .        .        .        .        .
31615 258.     0  .        .        .        .        .        .        .        .        .        .        .        .
31630 259.     0  .        .        .        .        .        .        .        .        .        .        .        .
31645 260.     0  .        .        .        .        .        .        .        .        .        .        .        .
31700 261. . . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
31715 262.     0  .        .        .        .        .        .        .        .        .        .        .        .
31730 263.     0  .        .        .        .        .        .        .        .        .        .        .        .
31745 264.    0   .        .        .        .        .        .        .        .        .        .        .        .
31800 265.    0   .        .        .        .        .        .        .        .        .        .        .        .
31815 266.    0   .        .        .        .        .        .        .        .        .        .        .        .
31830 267.    0   .        .        .        .        .        .        .        .        .        .        .        .
31845 268.    0   .        .        .        .        .        .        .        .        .        .        .        .
31900 269.    0   .        .        .        .        .        .        .        .        .        .        .        .
31915 270.    0   .        .        .        .        .        .        .        .        .        .        .        .
31930 271. . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
31945 272.   0    .        .        .        .        .        .        .        .        .        .        .        .
32000 273.   0    .        .        .        .        .        .        .        .        .        .        .        .
32015 274.   0    .        .        .        .        .        .        .        .        .        .        .        .
32030 275.   0    .        .        .        .        .        .        .        .        .        .        .        .
32045 276.   0    .        .        .        .        .        .        .        .        .        .        .        .
32100 277.   0    .        .        .        .        .        .        .        .        .        .        .        .
32115 278.  0     .        .        .        .        .        .        .        .        .        .        .        .
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32145 280.  0     .        .        .        .        .        .        .        .        .        .        .        .
32200 281. .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
32215 282.  0     .        .        .        .        .        .        .        .        .        .        .        .
32230 283.  0     .        .        .        .        .        .        .        .        .        .        .        .
32245 284.  0     .        .        .        .        .        .        .        .        .        .        .        .
32300 285. 0      .        .        .        .        .        .        .        .        .        .        .        .
32315 286. 0      .        .        .        .        .        .        .        .        .        .        .        .
32330 287. 0      .        .        .        .        .        .        .        .        .        .        .        .
32345 288. 0      .        .        .        .        .        .        .        .        .        .        .        .
40000 289. 0      .        .        .        .        .        .        .        .        .        .        .        .
40015 290. 0      .        .        .        .        .        .        .        .        .        .        .        .
40030 291. 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
40045 292. 0      .        .        .        .        .        .        .        .        .        .        .        .
40100 293.0       .        .        .        .        .        .        .        .        .        .        .        .
40115 294.0       .        .        .        .        .        .        .        .        .        .        .        .
40130 295.0       .        .        .        .        .        .        .        .        .        .        .        .
40145 296.0       .        .        .        .        .        .        .        .        .        .        .        .
40200 297.0       .        .        .        .        .        .        .        .        .        .        .        .
40215 298.0       .        .        .        .        .        .        .        .        .        .        .        .
40230 299.0       .        .        .        .        .        .        .        .        .        .        .        .
40245 300.0-------.--------.--------.--------.--------.--------.--------.--------.--------.--------.--------.--------.
1
1
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RUNOFF SUMMARY

FLOW IN CUBIC FEET PER SECOND

TIME IN HOURS, AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT	15	2515.	48.00	1628.	653.	269.	1.76		
+	ROUTED TO	R15	2514.	48.00	1629.	653.	269.	1.76		
+	HYDROGRAPH AT	14	1585.	48.00	1025.	411.	168.	1.11		
+	HYDROGRAPH AT	16	3078.	48.00	1994.	804.	333.	2.16		
+	3 COMBINED AT	114	7176.	48.00	4644.	1868.	770.	5.03		
+	ROUTED TO	R114	7160.	48.00	4644.	1868.	770.	5.03		
+	HYDROGRAPH AT	13	1846.	48.00	1198.	481.	200.	1.29		
+	2 COMBINED AT	113	9006.	48.00	5834.	2348.	970.	6.32		
+	ROUTED TO	R113	8964.	48.00	5830.	2348.	970.	6.32		
+	HYDROGRAPH AT	12	1887.	48.00	1223.	493.	206.	1.32		
+	2 COMBINED AT	112	10851.	48.00	7046.	2841.	1177.	7.64		
+	ROUTED TO	R112	10821.	48.00	7049.	2841.	1177.	7.64		
+	HYDROGRAPH AT	11	1001.	48.00	648.	260.	108.	.70		
+	HYDROGRAPH AT	17	528.	48.00	342.	137.	56.	.37		
+	HYDROGRAPH AT	10	773.	48.00	502.	202.	84.	.54		
+	4 COMBINED AT	111	13123.	48.00	8526.	3440.	1425.	9.25		
+	ROUTED TO	RD111	12919.	48.50	8519.	3440.	1425.	9.25		
+	HYDROGRAPH AT	2A	1550.	48.00	1000.	399.	162.	1.09		

	2 COMBINED AT								
+		CP2A	14176.	48.00	9495.	3839.	1586.	10.34	
	DIVERSION TO								
+		DIVERT	4152.	48.00	1787.	447.	149.	10.34	
	HYDROGRAPH AT								
+		FLOW	10024.	48.00	7708.	3392.	1437.	10.34	
	ROUTED TO								
+		RR2A	9986.	48.50	7694.	3392.	1437.	10.34	
	HYDROGRAPH AT								
+		2BE	1723.	48.00	1120.	451.	185.	1.22	
	2 COMBINED AT								
+		102B	11540.	48.25	8783.	3843.	1623.	11.56	
	ROUTED TO								
+		DET2BE	11479.	48.50	8784.	3841.	1622.	11.56	
+									1654.51 48.50
	DIVERSION TO								
+		SPILL	7814.	44.00	5119.	1339.	446.	11.56	
	HYDROGRAPH AT								
+		FRWAY	3665.	44.00	3665.	2503.	1175.	11.56	
	ROUTED TO								
+		CHAN	3666.	44.00	3665.	2503.	1175.	11.56	
	ROUTED TO								
+		WASH	3665.	46.25	3665.	2502.	1175.	11.56	
	HYDROGRAPH AT								
+		RSPILL	7814.	48.50	5119.	1339.	446.	.00	
	ROUTED TO								
+		IDAHO	7836.	48.50	5114.	1339.	446.	.00	
	2 COMBINED AT								
+		WW	11501.	48.50	8779.	3841.	1621.	11.56	
	ROUTED TO								
+		RWW	11348.	49.50	8744.	3841.	1620.	11.56	
	HYDROGRAPH AT								
+		2BWW	638.	48.00	413.	166.	68.	.45	
	HYDROGRAPH AT								
+		2BWE	996.	48.00	644.	258.	105.	.70	
	ROUTED TO								
+		16BW	994.	48.00	643.	256.	105.	.70	
+									1632.26 48.00
	2 COMBINED AT								
+		COO4	1631.	48.00	1056.	422.	173.	1.15	
	DIVERSION TO								

+		EXIT	413.	46.50	108.	27.	9.	1.15		
	HYDROGRAPH AT								
+		NDIV	1218.	46.50	948.	395.	164.	1.15		
	ROUTED TO								
+		NDROUT	1218.	48.00	945.	395.	164.	1.15		
+									1630.06	48.00
	ROUTED TO								
+		R2BW	1218.	48.50	943.	395.	164.	1.15		
	HYDROGRAPH AT								
+		2BS	2713.	48.00	1752.	702.	285.	1.91		
	3 COMBINED AT								
+		102	13789.	49.00	11158.	4933.	2068.	14.62		
	HYDROGRAPH AT								
+		5	7805.	48.00	5167.	2101.	870.	5.65		
	ROUTED TO								
+		R5	7798.	48.25	5165.	2101.	870.	5.65		
	HYDROGRAPH AT								
+		4	15170.	48.50	10593.	4403.	1825.	11.85		
	2 COMBINED AT								
+		104	22768.	48.25	15691.	6503.	2695.	17.50		
	ROUTED TO								
+		R104	22536.	48.75	15667.	6502.	2695.	17.50		
	HYDROGRAPH AT								
+		7	869.	48.00	562.	226.	93.	.61		
	HYDROGRAPH AT								
+		6	10334.	48.25	7070.	2906.	1192.	7.86		
	3 COMBINED AT								
+		106	33018.	48.50	23217.	9633.	3980.	25.97		
	ROUTED TO								
+		R106	32864.	49.00	23193.	9633.	3980.	25.97		
	HYDROGRAPH AT								
+		3N	4106.	48.00	2664.	1075.	445.	2.89		
	ROUTED TO								
+		CULV	4081.	48.00	2663.	1075.	445.	2.89		
+									1670.21	48.00
	ROUTED TO								
+		RCULV	4029.	48.50	2659.	1075.	445.	2.89		
	HYDROGRAPH AT								
+		3S	3371.	48.00	2182.	875.	354.	2.39		
	2 COMBINED AT								
+		103	7300.	48.00	4829.	1950.	799.	5.28		

```
        HYDROGRAPH AT
+                       3A     1699.  48.00      1099.      441.      179.      1.20

        2 COMBINED AT
+                     CP103    8999.  48.00      5923.     2391.      979.      6.48

        2 COMBINED AT
+                      W103   40265.  48.50     28868.    12021.     4958.     32.45

        ROUTED TO
+                     RW103   40243.  48.75     28862.    12021.     4958.     32.45

        2 COMBINED AT
+                       PLD   53807.  48.75     39999.    16947.     7026.     47.07

        ROUTED TO
+                       RES   53728.  49.00     38948.    16812.     6295.     47.07
+                                                                              1590.04      49.00
1                          SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION   DET2BE


    PLAN  1 ...............                INITIAL VALUE    SPILLWAY CREST    TOP OF DAM
                            ELEVATION        1636.00          1650.00          1650.00
                            STORAGE             0.              153.             153.
                            OUTFLOW             0.             3534.            3534.


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

                1.00    1654.51      4.51       228.     11479.      8.25       48.50        .00
1                          SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION    168W


    PLAN  1 ...............                INITIAL VALUE    SPILLWAY CREST    TOP OF DAM
                            ELEVATION        1623.50          1630.00          1630.00
                            STORAGE             0.               28.              28.
                            OUTFLOW             0.              135.             135.


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

                1.00    1632.26      2.26        38.       994.     10.75       48.00        .00
1                          SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION   NDROUT


    PLAN  1 ...............                INITIAL VALUE    SPILLWAY CREST    TOP OF DAM
                            ELEVATION        1622.60          1630.00          1630.00
                            STORAGE             0.               25.              25.
                            OUTFLOW             0.             1111.            1111.


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

1.00	1630.06	.06	26.	1218.	2.00	48.00	.00

1 SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION RES

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1568.20	1583.30	1589.10
STORAGE	175.	4200.	7325.
OUTFLOW	75.	165.	22040.

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	1590.04	.94	7889.	53728.	5.25	49.00	.00

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

APPENDIX C

Precipitation Analyses

APPENDIX C

Appendix C contains the calculation sheets for determining the precipitation amounts for the 25-, 50-, and 100-year storms and for the probable maximum precipitation (PMP). Precipitation data for two PMP storms are developed in the calculation sheets. These are the 6-hour local storm and the 72-hour general storm.

25-, 50-, and 100-yr Storms
(NOAA Atlas)

JMM JAMES M. MONTGOMERY, CONSULTING ENGINEERS, INC.

BY L T Miller DATE 3/9/89 CLIENT MCFCD SHEET 1 OF 6

CHKD. BY ECL DESCRIPTION ESTIMATION OF NOAA PRECIPITATION JOB NO. 1213.0020

CALCULATE WEIGHTED PRECIPITATION FROM NOAA ISOPLUVIAL MAPS:

Freq./Dur	Precip. (in)		Relative Area		Wt. Precip.
25-yr/24-hr	2.925	x	.29	=	.848
	3.2	x	.48	=	1.536
	3.6	x	.14	=	.504
	4.0	x	.10	=	.400
					3.288"
50-yr/24-hr	3.3	x	.23	=	.759
	3.6	x	.50	=	1.800
	4.0	x	.14	=	.560
	4.4	x	.09	=	.396
	4.8	x	.05	=	.240
					3.755"
100-yr/24-hr	3.7	x	.20	=	.740
	4.0	x	.40	=	1.600
	4.4	x	.30	=	1.320
	4.8	x	.10	=	.480
					4.140"

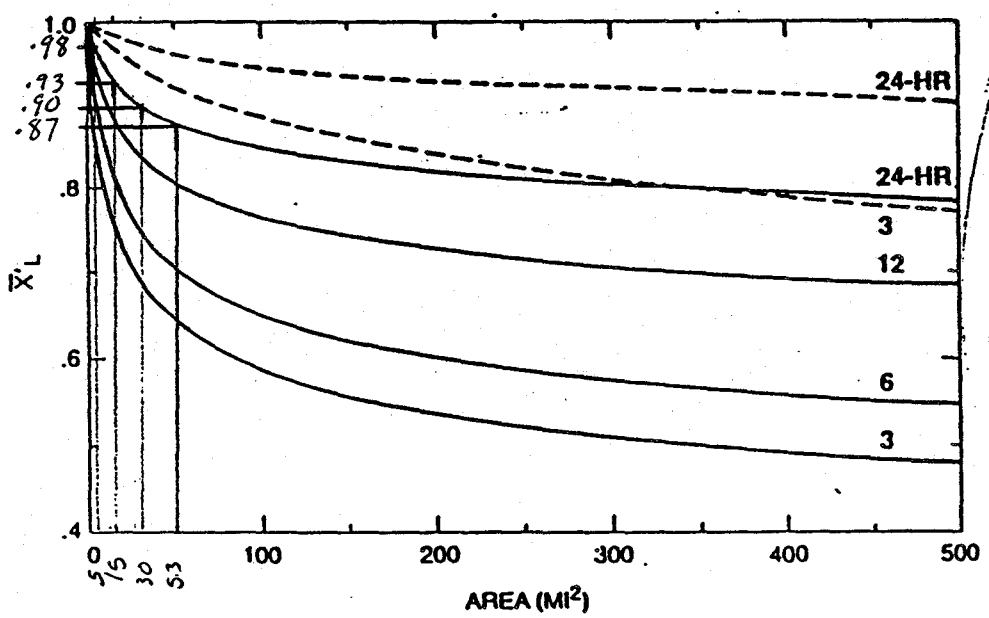
JMM JAMES M. MONTGOMERY, CONSULTING ENGINEERS, INC.

BY L Miller DATE 3/23/89 CLIENT MCFCD SHEET 2 OF 6

CHKD. BY ECJ DESCRIPTION DAMBREAK DARF CALCULATIONS JOB NO. 1213.0020

DETERMINE DARF FOR THE FOLLOWING AREAS (sq. mi.):

0.26
5.0
15.0
30.0
53.0



Recommended for use in Central A.Z.

FIGURE 15, HYDRO-40

AREA	DARF	100-YR PRECIP			ADJ. 100-YR PRECIP
.25	1.00	x	4.140	=	4.14
5.0	.98	x	4.140	=	4.06
15.0	.93	x	4.140	=	3.85
30.0	.90	x	4.140	=	3.73
53.0	.87	x	4.140	=	3.60

JMM JAMES M. MONTGOMERY, CONSULTING ENGINEERS, INC.

BY L.T. Miller DATE 3/23/89 CLIENT MCFCD SHEET 3 OF 6

CHKD. BY ECJ DESCRIPTION DAMBREAK DARF CALCULATIONS JOB NO. 1213.0020

AREA	DARF	50-yr PRECIP		ADJ. 50-YR PRECIP
.25	1.00	x 3.755	=	3.76
5.0	.98	x 3.755	=	3.68
15.0	.93	x 3.755	=	3.49
30.0	.90	x 3.755	=	3.38
53.0	.87	x 3.755	=	3.27

AREA	DARF	25-yr PRECIP		ADJ. 25-yr PRECIP
.25	1.00	x 3.288	=	3.29
5.0	.98	x 3.288	=	3.22
15.0	.93	x 3.288	=	3.06
30.0	.90	x 3.288	=	2.96
53.0	.87	x 3.288	=	2.86

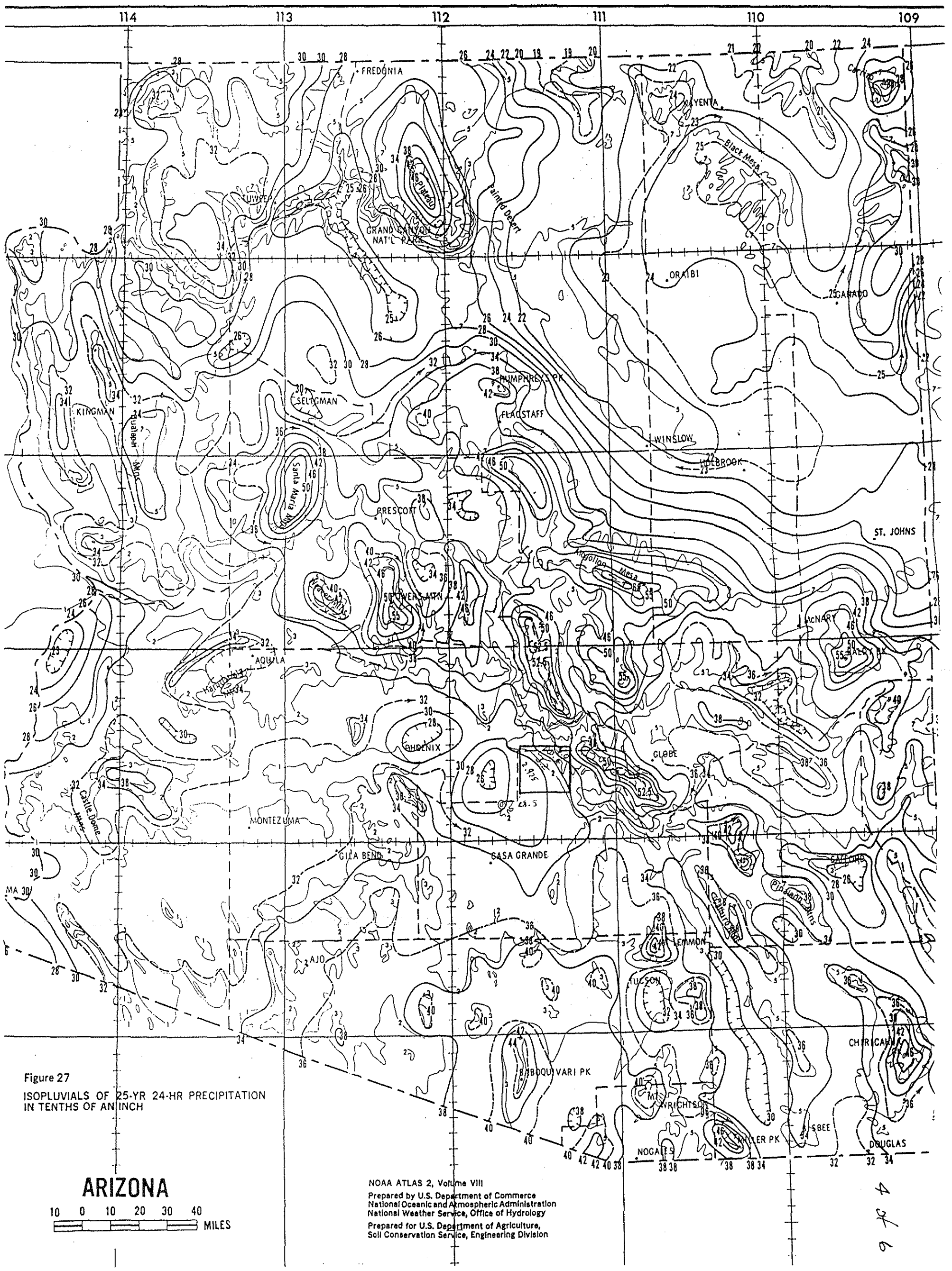


Figure 27

ISOPLUVIALS OF 25-YR 24-HR PRECIPITATION IN TENTHS OF AN INCH

NOAA ATLAS 2, Volume VIII

Prepared by U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service, Office of Hydrology

Prepared for U.S. Department of Agriculture,
Soil Conservation Service, Engineering Division

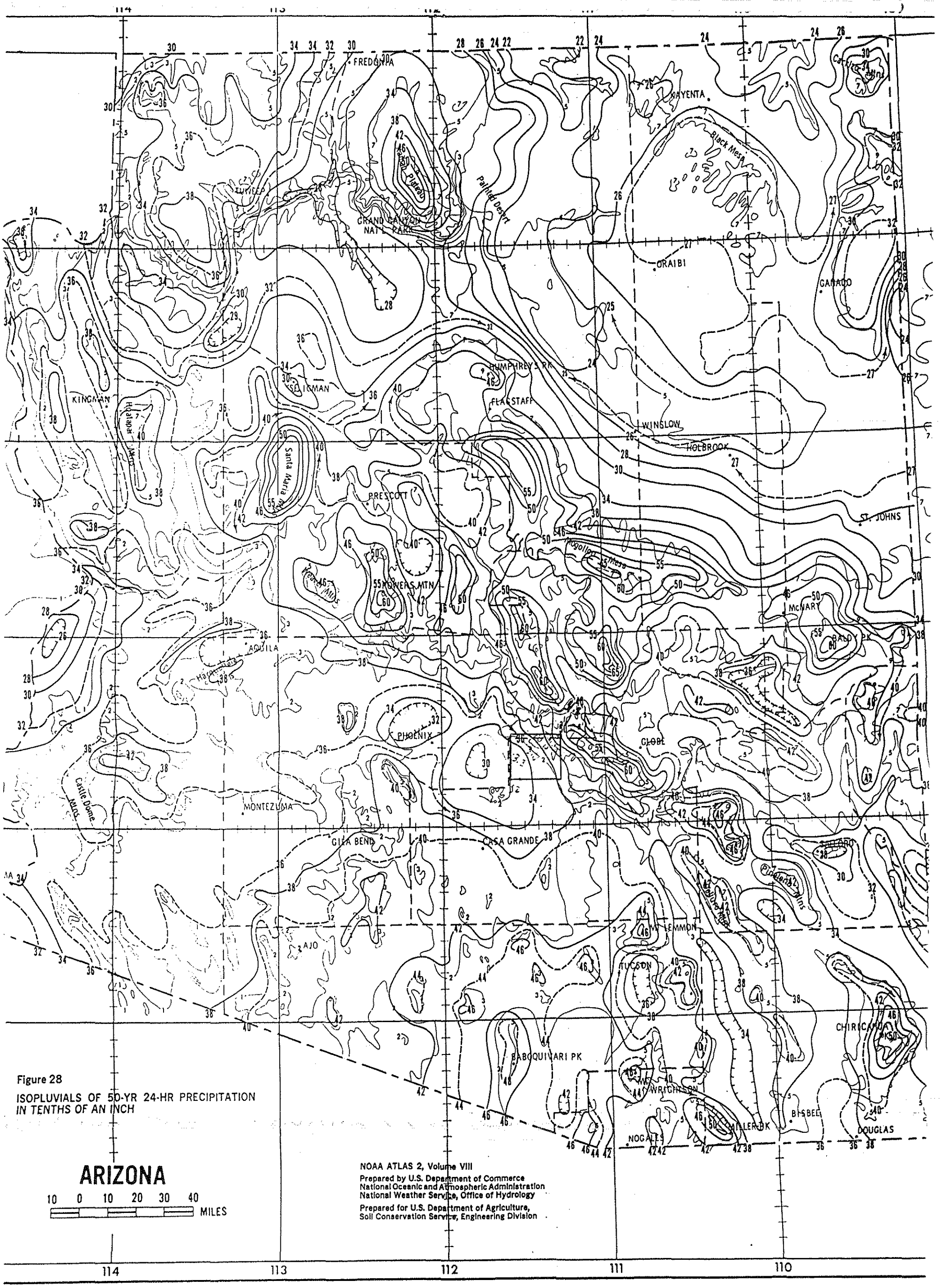


Figure 28

ISOPLUVIALS OF 50-YR 24-HR PRECIPITATION IN TENTHS OF AN INCH

5 of 6

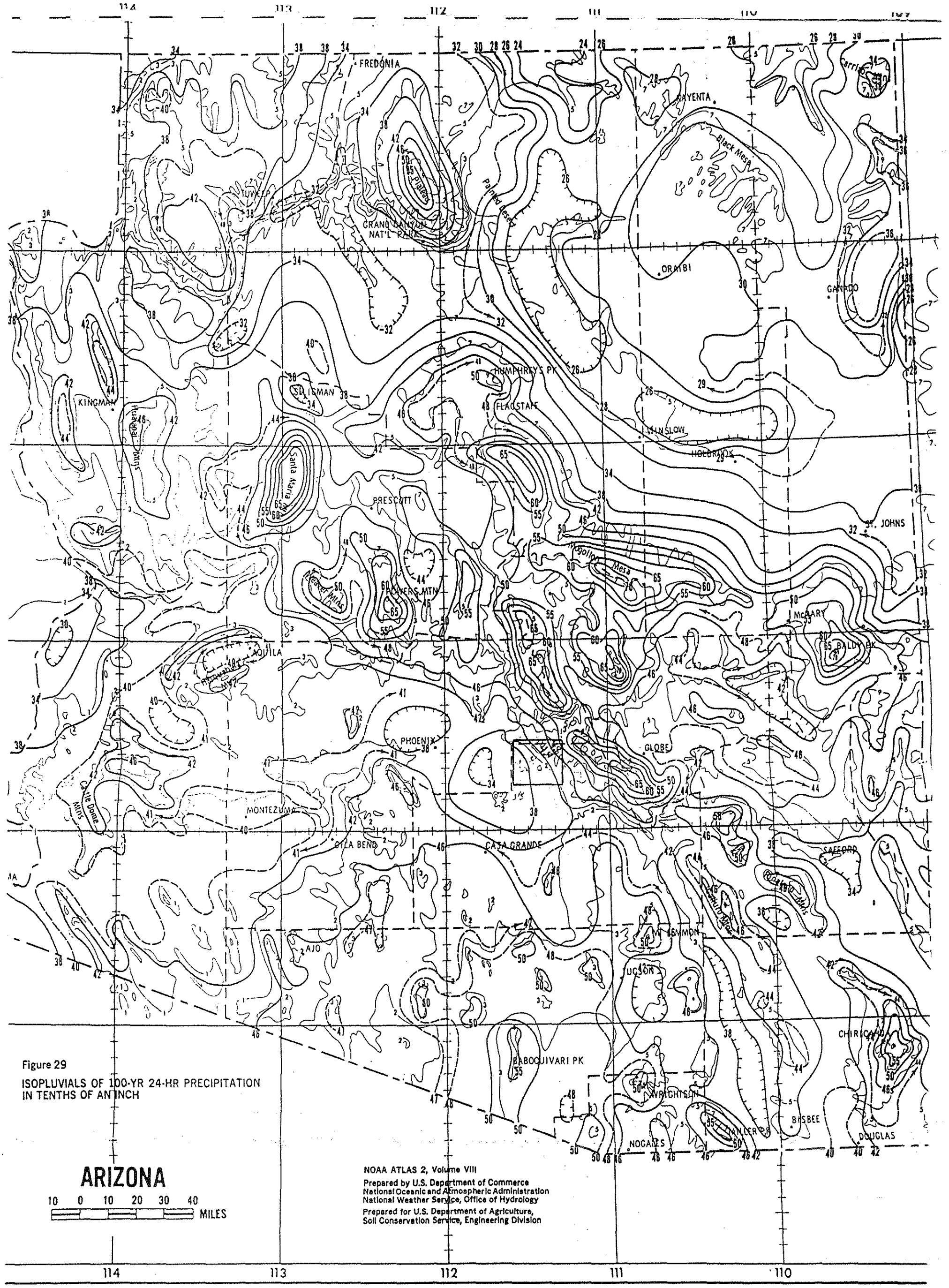


Figure 29

ISOPLUVIALS OF 100-YR 24-HR PRECIPITATION IN TENTHS OF AN INCH

NOAA ATLAS 2, Volume VIII

Prepared by U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service, Office of Hydrology

Prepared for U.S. Department of Agriculture,
Soil Conservation Service, Engineering Division

6 of 6

Probable Maximum Precipitation
(HMR 49)

Table 6.1.--General-storm PMP computations for the Colorado River and Great basin

Drainage POWERLINE, VINEYARD AND RITTENHOUSE Area 146.91 mi^2 (~~km^2~~)

Latitude 33° 22', Longitude 111° 27' of basin center

Month AUGUST

Step	Duration (hrs) 6	12	18	24	48	72	
A. Convergence PMP							
1. Drainage average value from one of figures 2.5 to 2.16 14.2 in. (~~mm~~)							
2. Reduction for barrier elevation [fig. 2.18] 85 %							
3. Barrier-elevation reduced PMP [step 1 X step 2] 12.1 in. (~~mm~~)							
4. Durational variation [figs. 2.25 to 2.27 and table 2.7].	76	90	96	100	111	115	%
5. Convergence PMP for indicated durations [steps 3 X 4]	9.2	10.9	11.6	12.1	13.4	13.9	in. (~~mm~~)
6. Incremental 10 mi^2 (26 km^2) PMP [successive subtraction in step 5]	9.2	1.7	0.7	0.5	1.3	0.5	in. (~~mm~~)
7. Areal reduction [select from figs. 2.28 and 2.29]	79	92.4	95.8	98.5	100	100	%
8. Areally reduced PMP [step 6 X step 7]	7.3	1.6	0.7	0.5	1.3	0.5	in. (~~mm~~)
9. Drainage average PMP [accumulated values of step 8]	7.3	8.9	9.6	10.1	11.4	11.9	in. (~~mm~~)
B. Orographic PMP							
1. Drainage average orographic index from figure 3.11a to d. (Revised) 4.1 in. (mm)							
2. Areal reduction [figure 3.20] 92 %							
3. Adjustment for month [one of figs. 3.12 to 3.17] 100 %							
4. Areally and seasonally adjusted PMP [steps 1 X 2 X 3] 3.77 in. (mm)							
5. Durational variation [table 3.4) ~~3.6~~]	36	63	84	100	139	157	%
6. Orographic PMP for given durations [steps 4 X 5]	1.4	2.4	3.2	3.8	5.2	5.9	in. (~~mm~~)
C. Total PMP							
1. Add steps A9 and B6	8.7	11.3	12.8	13.92	16.63	17.8	in. (~~mm~~)

2. PMP for other durations from smooth curve fitted to plot of computed data.

3. Comparison with local-storm PMP (see sec. 6.3).

Table 6.1.--General-storm PMP computations for the Colorado River and Great basin

Drainage POWERLINE, VINEYARD AND RITTENHOUSE Area 146.91 mi^2 (~~km^2~~)

Latitude 33°22′, Longitude 111°27′ of basin center

Month JULY

Step	Duration (hrs) 6	12	18	24	48	72	
A. Convergence PMP							
1. Drainage average value from one of figures 2.5 to 2.16 12.7 in. (~~mm~~)							
2. Reduction for barrier elevation [fig. 2.18] 85 %							
3. Barrier-elevation reduced PMP [step 1 X step 2] 10.8 in (~~mm~~)							
4. Durational variation [figs. 2.25 to 2.27 and table 2.7].	76	90	96	100	111	115	%
5. Convergence PMP for indicated durations [steps 3 X 4]	8.2	9.7	10.4	10.8	12.0	12.4	in. (~~mm~~)
6. Incremental 10 mi^2 (26 km^2) PMP [successive subtraction in step 5]	8.2	1.5	0.7	0.4	1.2	0.4	in. (~~mm~~)
7. Areal reduction [select from figs. 2.28 and 2.29]	79.8	92.5	95.2	99	100	100	%
8. Areally reduced PMP [step 6 X step 7]	6.5	1.4	0.7	0.4	1.2	0.4	in. (~~mm~~)
9. Drainage average PMP [accumulated values of step 8]	6.5	7.9	8.6	9.0	10.2	10.6	in. (~~mm~~)
B. Orographic PMP							
1. Drainage average orographic index from figure 3.11a to d. (Revised) 4.1 in. (mm)							
2. Areal reduction [figure 3.20] 92 %							
3. Adjustment for month [one of figs. 3.12 to 3.17] 82.6 %							
4. Areally and seasonally adjusted PMP [steps 1 X 2 X 3] 3.12 in. (~~mm~~)							
5. Durational variation [table 3.4) ~~3.6~~]	36	63	84	100	139	157	%
6. Orographic PMP for given durations [steps 4 X 5]	1.1	2.0	2.6	3.1	4.3	4.9	in. (~~mm~~)
C. Total PMP							
1. Add steps A9 and B6	7.6	9.9	11.2	12.1	14.5	15.5	in. (~~mm~~)

2. PMP for other durations from smooth curve fitted to plot of computed data.

3. Comparison with local-storm PMP (see sec. 6.3).

Table 6.1.--General-storm PMP computations for the Colorado River and Great basin

Drainage POWERLINE VINEYARD AND RITTENHOUSE Area 146.91 mi^2 (~~km^2~~)

Latitude 33°22′, Longitude 111°27′ of basin center

Month SEPTEMBER

Step		Duration (hrs) 6	12	18	24	48	72
A. Convergence PMP							
1. Drainage average value from one of figures 2.5 to 2.16	14.1 in. (~~mm~~)						
2. Reduction for barrier elevation [fig. 2.18]	85 %						
3. Barrier-elevation reduced PMP [step 1 X step 2]	11.99 in. (~~mm~~)						
4. Durational variation [figs. 2.25 to 2.27 and table 2.7].		76	90	96	100	111	115 %
5. Convergence PMP for indicated durations [steps 3 X 4]		9.1	10.8	11.5	12.0	13.3	13.8 in. (~~mm~~)
6. Incremental 10 mi^2 (26 km^2) PMP [successive subtraction in step 5]		9.1	1.7	0.7	0.5	1.3	0.5 in. (~~mm~~)
7. Areal reduction [select from figs. 2.28 and 2.29]		79	92.4	95.8	98.5	100	100 %
8. Areally reduced PMP [step 6 X step 7]		7.2	1.6	0.7	0.5	1.3	0.4 in. (~~mm~~)
9. Drainage average PMP [accumulated values of step 8]		7.2	8.8	9.5	10.0	11.3	11.7 in. (~~mm~~)
B. Orographic PMP							
1. Drainage average orographic index from figure 3.11a to d.	(Revised) 4.1 in. (~~mm~~)						
2. Areal reduction [figure 3.20]	92 %						
3. Adjustment for month [one of figs. 3.12 to 3.17]	100 %						
4. Areally and seasonally adjusted PMP [steps 1 X 2 X 3]	3.77 in. (mm)						
5. Durational variation [table 3.9) ~~3.6~~]		36	63	84	100	139	157 %
6. Orographic PMP for given durations [steps 4 X 5]		1.4	2.4	3.2	3.8	5.2	5.9 in. (~~mm~~)
C. Total PMP							
1. Add steps A9 and B6		8.6	11.2	12.7	13.8	16.5	17.6 in. (~~mm~~)

2. PMP for other durations from smooth curve fitted to plot of computed data.

3. Comparison with local-storm PMP (see sec. 6.3).

Table 6.3A.--Local-storm PMP computation, Colorado River, Great Basin and California drainages. For drainage average depth PMP. Go to table 6.3B if areal variation is required.

Drainage POWERLINE, VINEYARD AND RITENHOUSE Area 146.91 mi^2 (~~km^2~~)
Latitude 33°22' Longitude 111°27' Minimum Elevation 1560 ft (~~m~~)

Steps correspond to those in sec. 6.3A.

1. Average 1-hr 1-mi^2 (2.6-km^2) PMP for drainage [fig. 4.5]. 11.5 in. (~~mm~~)

2. a. Reduction for elevation. [No adjustment for elevations up to 5,000 feet (1,524 m): 5% decrease per 1,000 feet (305 m) above 5,000 feet (1,524 m)]. 100 %

   b. Multiply step 1 by step 2a. 11.5 in. (~~mm~~)

3. Average 6/1-hr ratio for drainage [fig. 4.7]. 1.30

	Duration (hr)								
	1/4	1/2	3/4	1	2	3	4	5	6
4. Durational variation for 6/1-hr ratio of step 3 [table 4.4].	74	89	95	100	114	121	125	128	130 %
5. 1-mi^2 (2.6-km^2) PMP for indicated durations [step 2b X step 4].	8.5	10.2	10.9	11.5	13.1	13.9	14.4	14.7	15.0 in. (~~mm~~)
6. Areal reduction [fig. 4.9].	28.7	35.0	39.0	42.2	47.1	51.0	53.2	54.7	56.8 %
7. Areal reduced PMP [steps 5 X 6].	2.4	3.6	4.3	4.9	6.2	7.1	7.7	8.0	8.5 in. (~~mm~~)
8. Incremental PMP [successive subtraction in step 7].				4.9	1.3	0.9	0.6	0.3	0.5 in. (~~mm~~)
	2.4	1.2	0.7	0.6 } 15-min. increments					

9. Time sequence of incremental PMP according to:

   Hourly increments [table 4.7]. 0.3 0.6 1.3 4.9 0.9 0.5 in. (~~mm~~) EM 1110-2-1411

   Four largest 15-min. increments [table 4.8]. 2.4 1.2 0.7 0.6 in. (~~mm~~)

Table 6.3B.--Local-storm PMP computation, Colorado River and Great Basin, and California drainages. (Giving areal distribution of PMP).

Steps correspond to those in sec. 6.3B.

1. Place idealized isohyetal pattern [fig. 4.10] over drainage adjusted to 1:500,000 scale to obtain most critical placement.

2. Note the isohyets within drainage.

3. Average 1-hr 1-mi^2 (2.6-km^2) PMP for drainage [fig. 4.5]. 11.5 in. (~~mm~~)

4. a. Reduction for elevation. [No adjustment for elevations up to 5,000 feet (1,524 m), 5% decrease per 1,000 feet (305 m) above 5,000 feet (1,524 m)]. 100 %

   b. Multiply step 3 by step 4a. 11.5 in. (~~mm~~)

5. Average 6/1-hr ratio for drainage [fig. 4.7]. 1.29

6. Obtain isohetal labels for 15-min incremental and the highest PMP from table 4.3 corresponding 6/1-hr ratio of step 5.

PMP Increment	Isohyet A	B	C	D	E	F	G	H	I	J
Highest 1-hr	100	82	58	44	32	23	16	13	12	11
Highest 15-min.	74	56	32	21	14	8	7	6	5	4
2nd "	15	15	15	12	9	6	4	3	3	3
3rd "	6	6	6	6	5	5	3	2	2	2
4th "	5	5	5	5	4	4	2	2	2	2

in %

7. Obtain isohyetal labels in % of 1-hr PMP for 2nd to 6th highest hourly incremental PMP values from table 4.6 using 6/1-hr ratio of step 5.

2nd Highest 1-hr PMP	14	14	14	12	11	9	7	5	5	5
3rd "	6	6	6	6	6	6	5	5	5	5
4th "	5	5	5	5	5	5	5	4	4	4
5th "	3	3	3	3	3	3	3	3	3	3
6th "	2	2	2	2	2	2	2	2	2	2

in %

8. Multiply steps 5 and 7 by step 4b to get incremental isohyetal labels of PMP.

Highest 15-min.	8.5	6.4	3.7	2.4	1.6	0.9	0.8	0.7	0.6	0.46
2nd "	1.73	1.73	1.73	1.4	1.04	0.7	0.46	0.4	0.4	0.4
3rd "	0.7	0.7	0.7	0.7	0.6	0.6	0.4	0.2	0.2	0.2
4th "	0.6	0.6	0.6	0.6	0.46	0.46	0.2	0.2	0.2	0.2
Highest 1-hr	11.5	9.4	6.7	5.1	3.7	2.7	1.8	1.5	1.4	1.3
2nd "	1.6	1.6	1.6	1.4	1.3	1.04	0.8	0.6	0.6	0.6
3rd "	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.6
4th "	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.46	0.46	0.46
5th "	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
6th "	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2

in in. (~~mm~~)

9. Arrange values of step 8 in time sequence [tables 4.7 and 4.8].

(See attached sheet.)

9. Continued
Four Largest 15-min Increments (inch)
*Table 4.8

A	B	C	D	E	F	G	H	I	J
8.5	6.4	3.7	2.4	1.6	0.9	0.8	0.7	0.6	0.46
1.73	1.73	1.73	1.4	1.04	0.7	0.46	0.4	0.4	0.4
0.7	0.7	0.7	0.7	0.6	0.6	0.4	0.2	0.2	0.2
0.6	0.6	0.6	0.6	0.46	0.46	0.2	0.2	0.2	0.2

Hourly Increments (inch)
*Table 4.7
Sequence: EM1110-2-1411

A	B	C	D	E	F	G	H	I	J
0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.46	0.46	0.46
1.6	1.6	1.6	1.4	1.3	1.04	0.8	0.6	0.6	0.6
11.5	9.4	6.7	5.1	3.7	2.7	1.8	1.5	1.4	1.3
0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.6
0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4

* See following pages for the average precipitation values over the watershed, their hourly distribution and their associated calculations.

JMM JAMES M. MONTGOMERY, CONSULTING ENGINEERS, INC.

BY E. JUNOD DATE 4/5/89 CLIENT MARICOPA F.C.D. SHEET 1 OF 5

CHKD. BY _____ DESCRIPTION PRECIP. CALCS FOR 15 MIN & HOURLY VALUES JOB NO. 1213.0020

LOCAL STORM - PMP

AVERAGE PRECIPITATION VALUES OVER THE WATERSHED ....

1ST HOURLY INCREMENT	0.2 IN.
2ND " "	0.6 IN.
3RD " "	1.2 IN.
4TH " "	4.5 IN. → EXAMPLE CALC. SEE PAGE 4
5TH " "	0.7 IN.
6TH " "	0.4 IN.
	Σ = 7.6 IN. (6 HOUR STORM)

15 MIN. INCREMENTS	
1ST " "	2.3 IN. → EXAMPLE CALC. SEE PAGE 5
2ND " "	1.1 IN.
3RD " "	0.6 IN.
4TH " "	0.5 IN.

DISTRIBUTION

	PRECIPITATION (IN.)	TOTAL HOURLY PRECIPITATION (IN.)
1ST HR.	0.05	0.2
	0.05	
	0.05	
	0.05	
2ND HR.	0.15	0.6
	0.15	
	0.15	
	0.15	
3RD HR.	0.30	1.2
	0.30	
	0.30	
	0.30	
4TH HR	2.30	4.5
	1.10	
	0.60	
	0.50	

DISTRIBUTION (CONTINUED)

	PRECIPITATION (IN.)	TOTAL HOURLY PRECIP. (IN.)
5TH HR.	0.18	0.7
	0.18	
	0.18	
	0.18	
6TH HR.	0.10	0.4
	0.10	
	0.10	
	0.10	

CALCULATIONS:

1.) PLANIMETER THE AREA OF THE DRAINAGE BASIN ON THE 1:500,000 MAP.

THE AREA PLANIMETERED WAS 137 MILES^2.

THE AREA OF THE 1:24,000 TOPOMAP WAS 146.91 MILES^2.

- FIGURE 4.10 "IDEALIZED LOCAL STORM ISOHYETAL PATTERN"
  - OVER-LAY FIGURE 4.10 ON THE 1:500,000 MAP

THE ISOHYET LINES A → J FORM ELIPSES WHICH ENCOMPASS A FIXED AMOUNT OF AREA.

12.)

ISOHYET	AREA ENCLOSED (MI.^{2})
A	1
B	5
C	25
D	55
E	95
⋮	⋮

- PLANIMETER EACH ELIPSE A → J, ON THE 1:500,000 SCALE MAP, TO DETERMINE THE AREA ENCLOSED PER ISOHYETAL LINE.

THE FOLLOWING AREA ADJUSTMENT WAS PERFORMED:

ISOHYETAL	AREA PLANIMETERED (MILES)^2	ADJUSTED
A	1	1
B	4	4
C	20	20
D	30	30
E	17	18.7
F	22	23.7
G	17	18.7
H	9	10.7
I	11	12.7
J	6	7.7
	Σ = 137	147.2

** (A, B, C, D)

THIS THEORETICALLY SHOULD EQUAL THE BASIN AREA OF 146.91 BUT 147.2 IS ACCEPTABLE.

** BECAUSE ISOHEYTS A, B, C & D WERE COMPLETELY ENCLOSED WITHIN THE DRAINAGE BASIN, THERE WAS NO NEED TO ADJUST THEIR AREAS.

2.) CALCULATION OF THE LOCAL STORM PMP VALUES

* TABLE 6.3B, PART #9: TABLE (HOURLY INCREMENTS & 15 MIN. INCREMENTS)

BECAUSE ISOHYETAL A HAS A MORE CONCENTRATED PRECIPITATION THAN ISOHYETAL J; THE ABOVE HOURLY AND 15 MIN. INCREMENTS WILL BE AVERAGED FOR ISOHYETS B → J AND A'S WILL NOT.

FOR EXAMPLE →

JMM JAMES M. MONTGOMERY, CONSULTING ENGINEERS, INC.

BY E. JUNSD DATE 4/6/89 CLIENT MARICOPA FCD SHEET 4 OF 5

CHKD. BY _____ DESCRIPTION _____ JOB NO. 1213.0020

9. Continued
Four Largest 15-min Increments (inch)
*Table 4.8

A	B	C	D	E	F	G	H	I	J
8.5	6.4	3.7	2.4	1.6	0.9	0.8	0.7	0.6	0.46
1.73	1.73	1.73	1.4	1.04	0.7	0.46	0.4	0.4	0.4
0.7	0.7	0.7	0.7	0.6	0.6	0.4	0.2	0.2	0.2
0.6	0.6	0.6	0.6	0.46	0.46	0.2	0.2	0.2	0.2

Hourly Increments (inch)
*Table 4.7
Sequence: EM1110-2-1411

A	B	C	D	E	F	G	H	I	J
0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.46	0.46	0.46
1.6	1.6	1.6	1.4	1.3	1.04	0.8	0.6	0.6	0.6
* 11.5	9.4	6.7	5.1	3.7	2.7	1.8	1.5	1.4	1.3
0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.6
0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4

FOR EXAMPLE:

* 4TH HOURLY INCREMENT

OBJECTIVE:
OBTAIN A "WEIGHTED" PRECIPITATION VALUE (INCREMENT).

ISOHYETAL	A	B	C	D	E	F	G	H	I	J
VALUE	11.5	9.4	6.7	5.1	3.7	2.7	1.8	1.5	1.4	1.3
AVERAGE	11.5	10.5	8.1	5.9	4.4	3.2	2.3	1.7	1.5	1.4
AREA (mi.²) ADJUSTED	1	4	20	30	18.7	23.7	18.7	10.7	12.7	7.7

$$\frac{11.5(1)+10.5(4)+8.1(20)+5.9(30)+4.4(18.7)+3.2(23.7)+2.3(18.7)+1.7(10.7)+1.5(12.7)+1.4(7.7)}{147.2\,(mi.)^2} = 4.5''$$

∴ 4TH HOURLY PMP INCREMENT = 4.5 IN. (SEE SHT. 1 OF THESE CALCS)

* DO THE SAME FOR THE REST OF THE HOURLY AND 15 MIN. INTERVAL PRECIPITATION VALUES.

1ST 15 MIN INCREMENT EXAMPLE:

JMM JAMES M. MONTGOMERY, CONSULTING ENGINEERS, INC.

BY E. JUNOD DATE 4/19/89 CLIENT MARICOPA F.C.D. SHEET 5 OF 5

CHKD. BY _____ DESCRIPTION _____ JOB NO. 1213.0020

9. Continued
Four Largest 15-min Increments (inch) *
*Table 4.8

A	B	C	D	E	F	G	H	I	J
8.5	6.4	3.7	2.4	1.6	0.9	0.8	0.7	0.6	0.46
1.73	1.73	1.73	1.4	1.04	0.7	0.46	0.4	0.4	0.4
0.7	0.7	0.7	0.7	0.6	0.6	0.4	0.2	0.2	0.2
0.6	0.6	0.6	0.6	0.46	0.46	0.2	0.2	0.2	0.2

Hourly Increments (inch)
*Table 4.7
Sequence: EM1110-2-1411

A	B	C	D	E	F	G	H	I	J
0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.46	0.46	0.46
1.6	1.6	1.6	1.4	1.3	1.04	0.8	0.6	0.6	0.6
11.5	9.4	6.7	5.1	3.7	2.7	1.8	1.5	1.4	1.3
0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.6
0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4

FOR EXAMPLE:

* 1ST 15 MIN. INCREMENT

OBJECTIVE:

OBTAIN A "WEIGHTED" PRECIPITATION VALUE (INCREMENT).

	A	B	C	D	E	F	G	H	I	J
ISOHEYTAL VALUE	8.5	6.4	3.7	2.4	1.6	0.9	0.8	0.7	0.6	0.46
AVERAGE	8.5	7.45	5.05	3.05	2	1.25	0.85	0.75	0.65	0.53
AREA (mi.²) ADJUSTED	1	4	20	30	18.7	23.7	18.7	10.7	12.7	7.7

$$\frac{8.5(1) + 7.45(4) + 5.05(20) + 3.05(30) + 2(18.7) + 1.25(23.7) + 0.85(18.7) + 0.75(10.7) + 0.65(12.7) + 0.53(7.7)}{147.2\ (mi)^2} = 2.27$$

∴ 1ST 15 MIN. INCREMENT = 2.27 ≈ 2.3 IN. (SEE SHT. 1 OF THESE CALCS.)

Jmm - Phoenix

U.S. DEPARTMENT OF COMMERCE
National Technical Information Service
PB-276 477

Probable Maximum Precipitation Estimates, Colorado River and Great Basin Drainages

National Weather Service, Silver Spring, Md

Prepared for

Corps of Engineers, Washington, D C

Sep 77

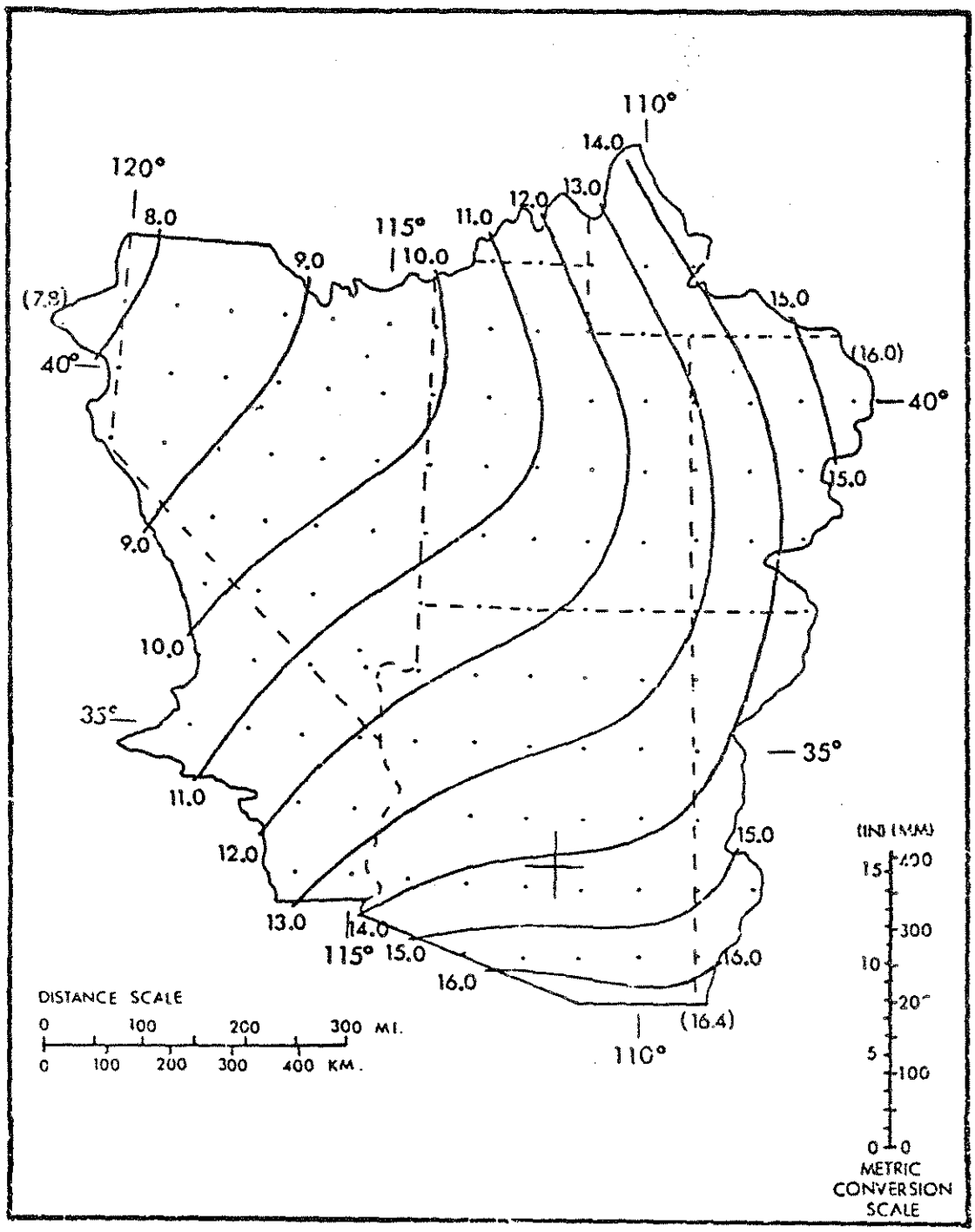


Figure 2.12.--1000-mb (100-kPa) 24-hr convergence PMP (inches) for 10 mi² (26 km²) for August. Values in parentheses are limiting values and are to facilitate extrapolation beyond the indicated gradient.

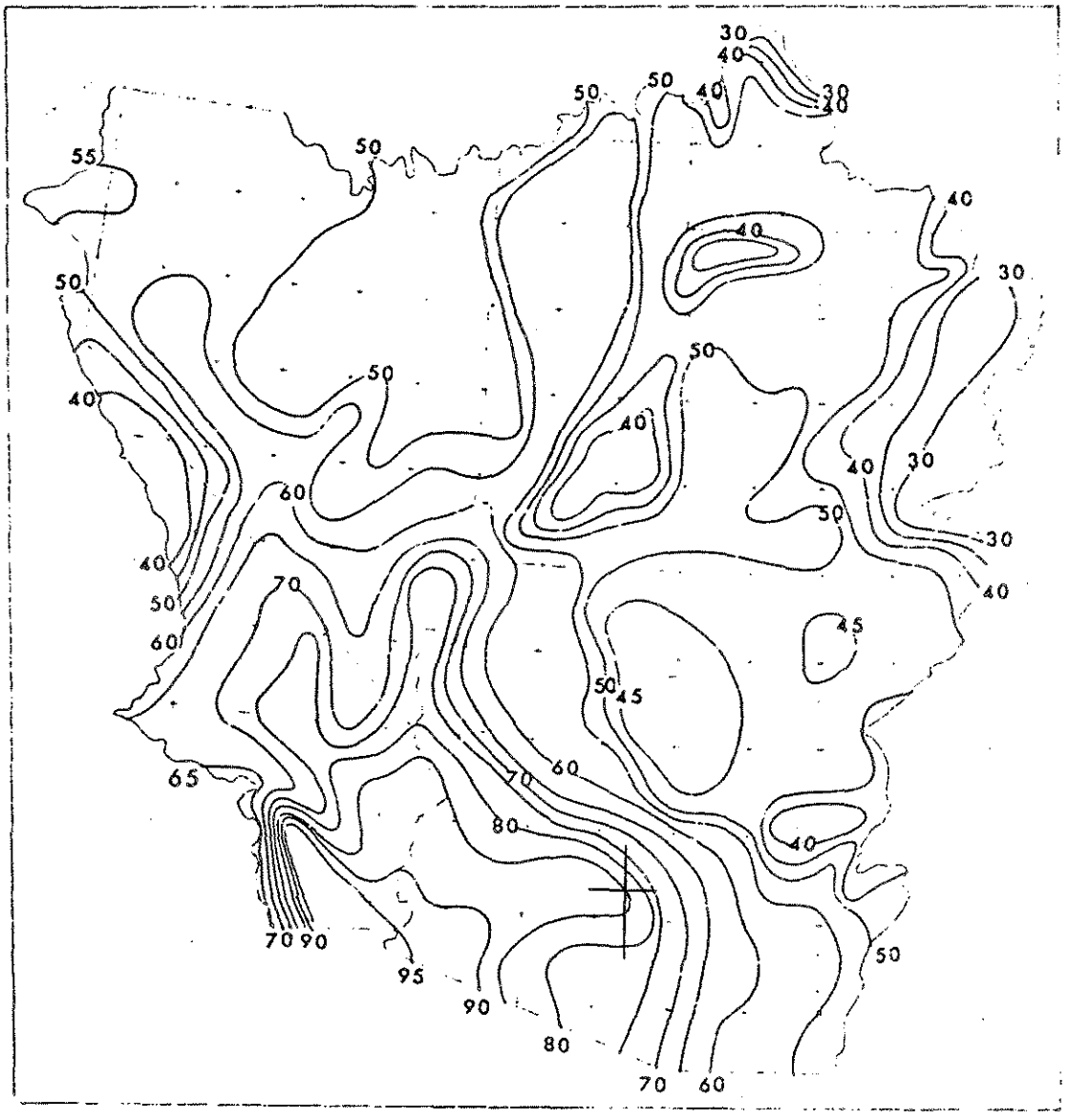


Figure 2.18.--Percent of 1000-mb (100-kPa) convergence PMP resulting from effective elevation and barrier considerations. Isolines drawn for every five percent.

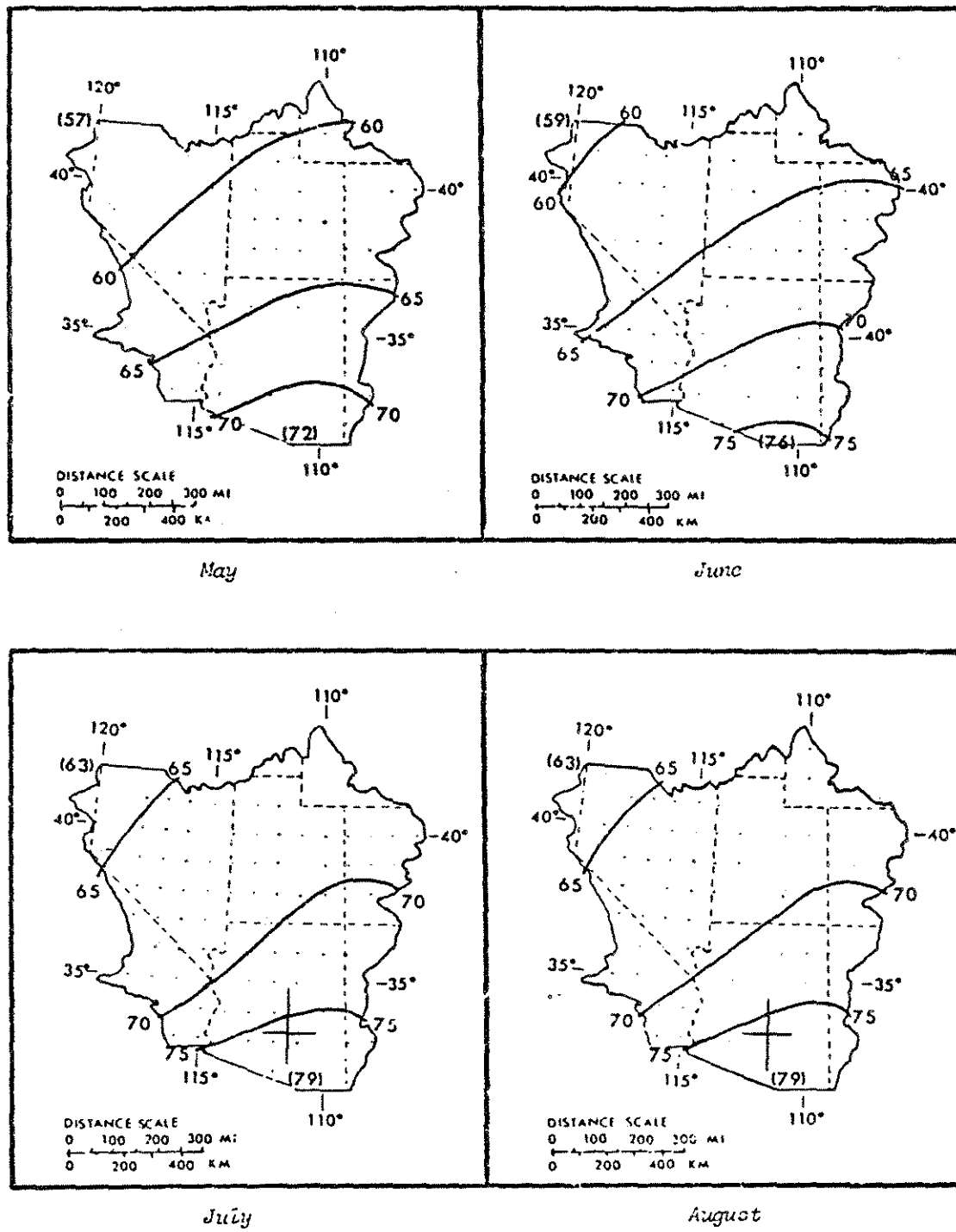


Figure 2.26.--Regional variation of 6/24-hr ratios by month (percent). Values in parentheses are limiting values and are to facilitate extrapolation beyond the indicated gradient.

For the range of 6/24-hr ratios included in figures 2.25 to 2.27, depth-duration values in percent of 24-hr amounts are found in table 2.7. The regional ratio maps, and the depth-duration curves presented in figure 2.20 were used in adjusting the major storm data to 24-hr amounts listed in table 2.1.

Table 2.7.—Durational variation of convergence PMP (in percent of 24-hr amount).

Duration (Hrs)						Duration (Hrs)					
6	12	18	24	48	72	6	12	18	24	48	72
50	76	90	100	129	150	66	84	93	100	116	124
51	77	90	100	128	148	67	85	94	100	116	123
52	77	90	100	127	146	68	85	94	100	115	122
53	77	91	100	127	144	69	86	94	100	115	121
54	78	91	100	126	142						
55	78	91	100	125	140	70	87	94	100	114	120
56	79	91	100	124	138	71	87	95	100	114	119
57	79	92	100	123	137	72	88	95	100	113	118
58	80	92	100	122	135	73	88	95	100	113	118
59	80	92	100	121	134	74	89	95	100	112	117
						75	89	96	100	112	116
60	81	92	100	120	132	→ *76	90	96	100	111	115
61	81	92	100	120	131	77	90	96	100	110	114
62	82	93	100	119	129	78	91	96	100	110	114
63	82	93	100	118	128	79	92	97	100	109	113
64	83	93	100	117	126						
65	84	93	100	117	125	80	92	97	100	109	113

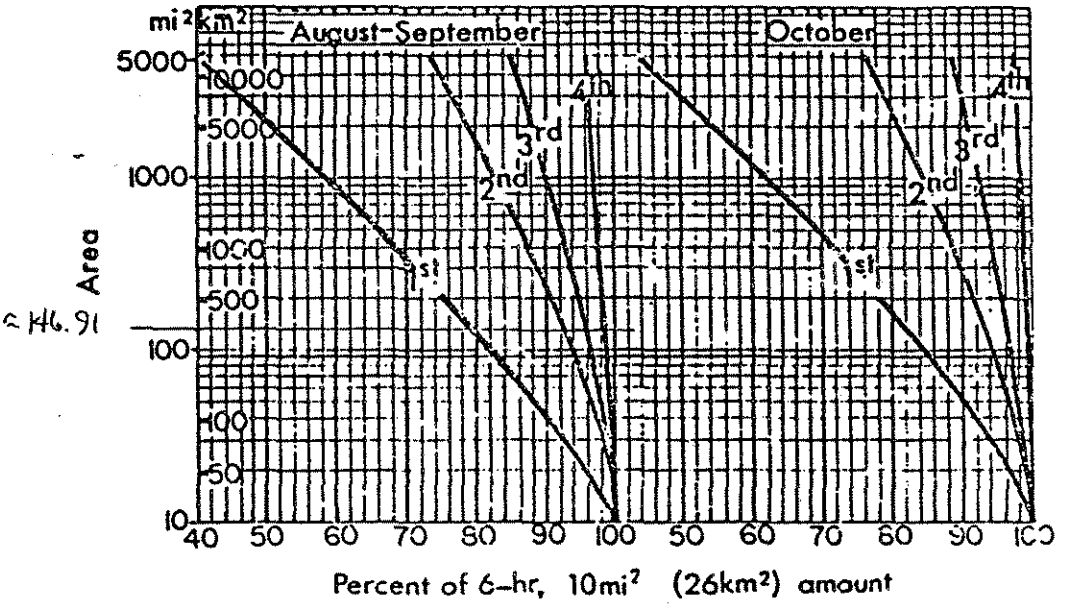
Note: For use, enter first column (6 hr) with 6/24-hr ratio from figures 2.25 to 2.27.

2.5 Areal Reduction for Basin Size

For operational use, basin average values of convergence PMP are needed rather than 10-mi^2 (26-km^2) values. Preferably, the method for reducing 10-mi^2 (26-km^2) values to basin average rainfalls should be derived from depth-area relations of storms in the region. However, all general storms in the region include large proportions of orographic precipitation.

Our solution was to use generalized depth-area relations developed for PMP estimates within bordering zones in the Central and Eastern United States (Riedel et al. 1956). The smoothed areal variations adopted for the Southwestern States are shown in figures 2.28 and 2.29 for each month or a combination of months where differences are insignificant.

Figures 2.28 and 2.29 give depth-area relations that reduce 10-mi^2 (26-km^2) convergence PMP for basin sizes up to 5,000 mi^2 (12,950 km^2) for each month. Areal variations are given for the 4 greatest (1st to 4th) 6-hr PMP increments. After the 4th increment no reduction for basin size is required. Application of these figures will become clear through consideration of an example of PMP computation in chapter 6.



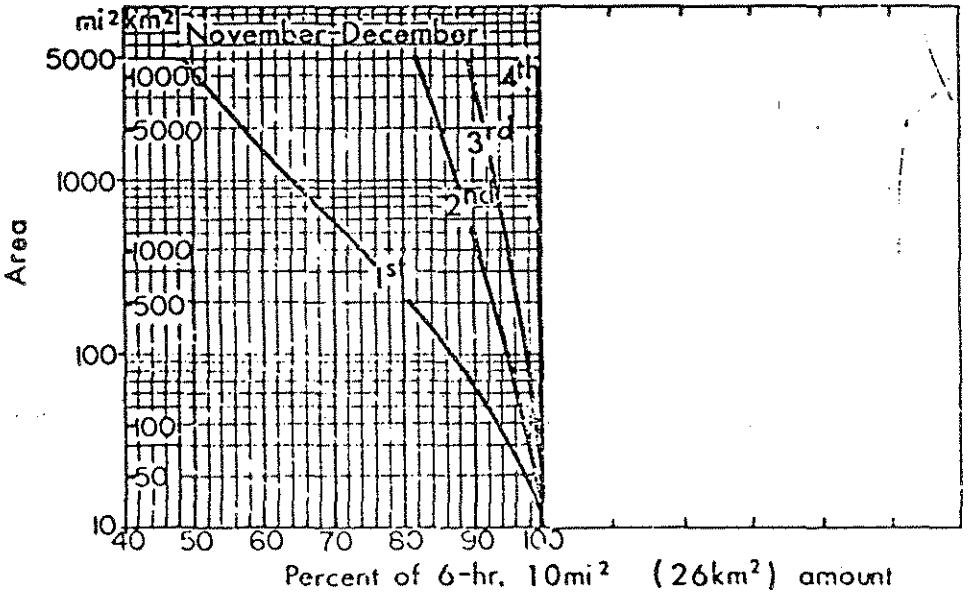


Figure 2.29.--Depth-area variation for convergence PMP for first to fourth 6-hr increments.

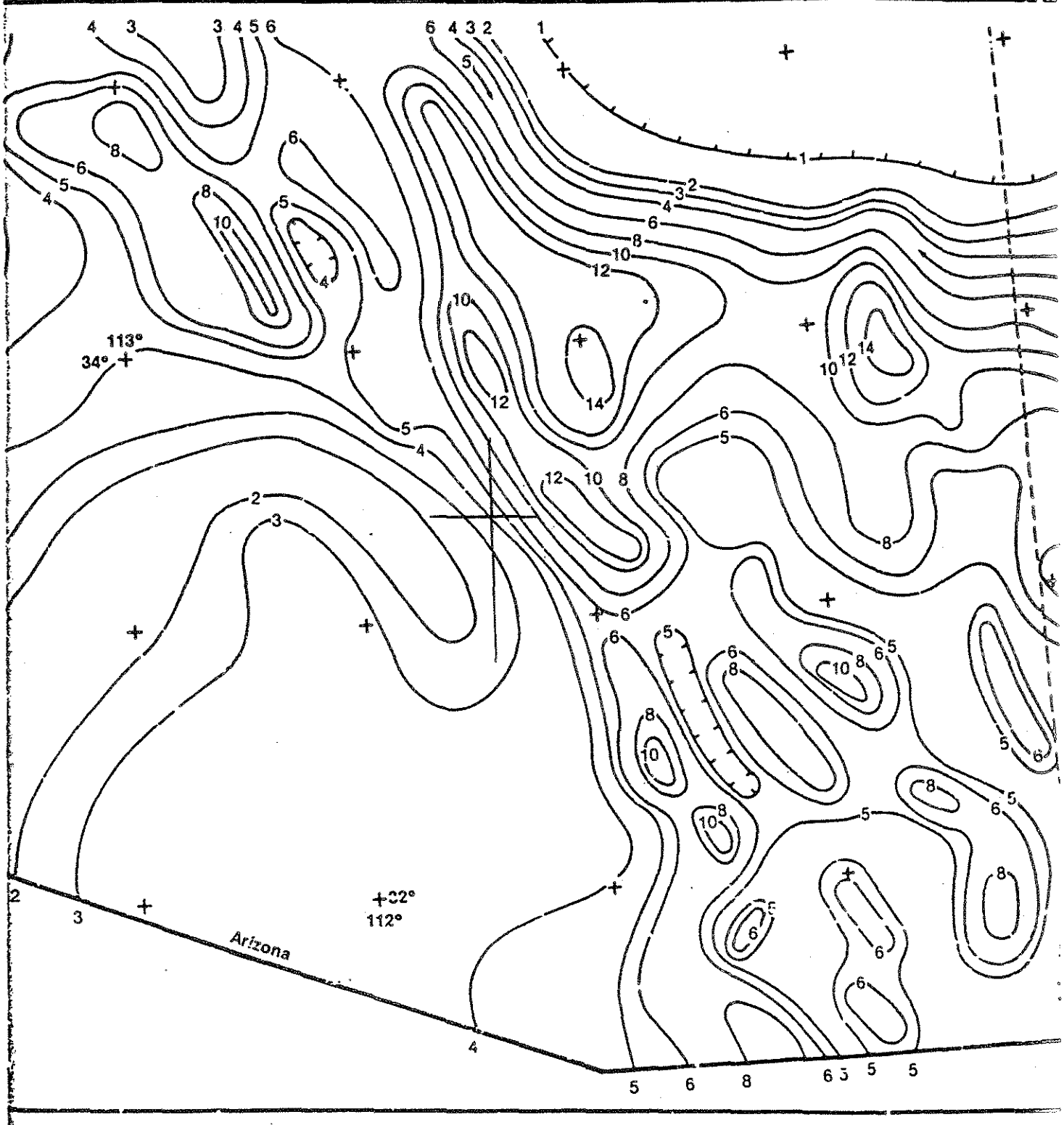


FIGURE 3.11d (Revised) — 10-mi² (26

96

18 F

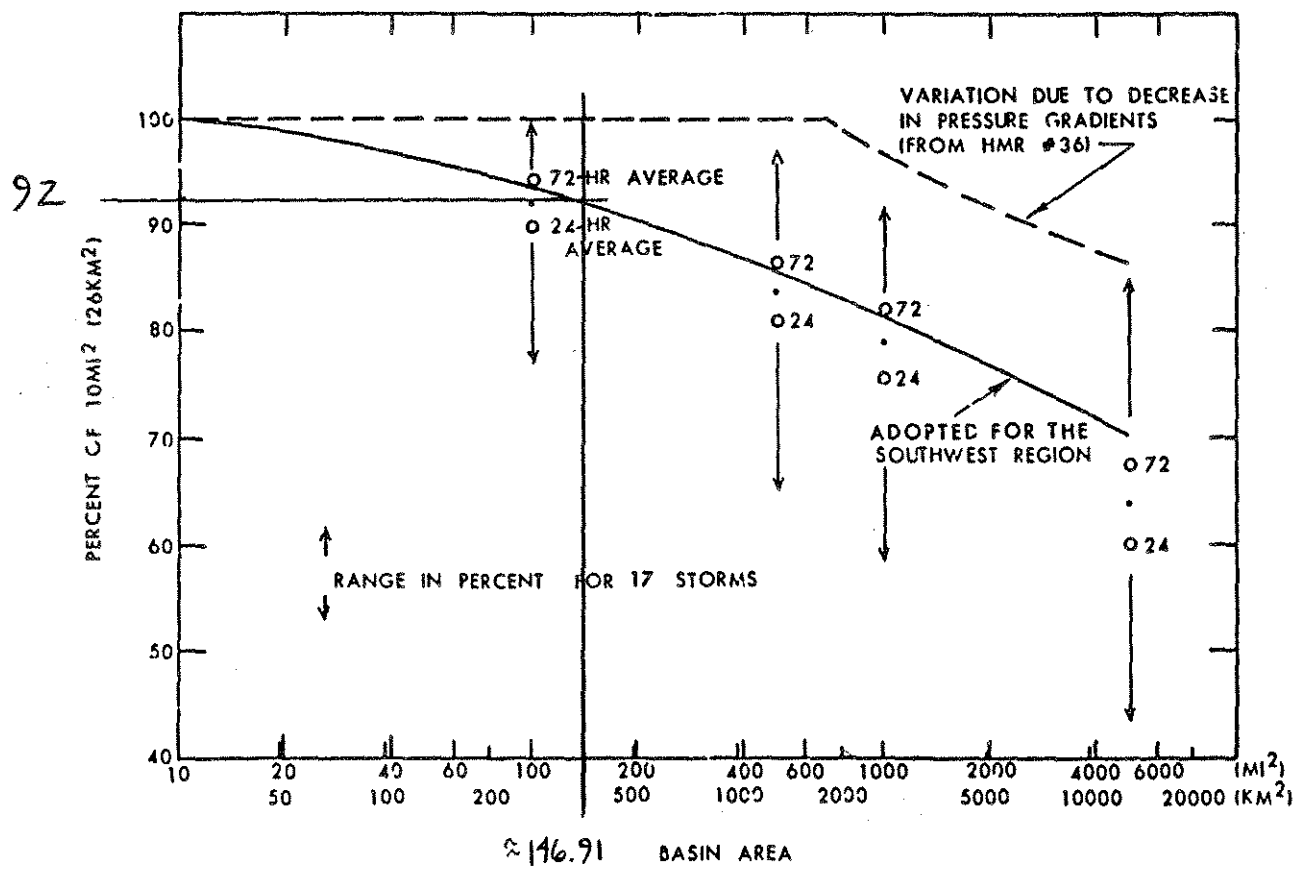
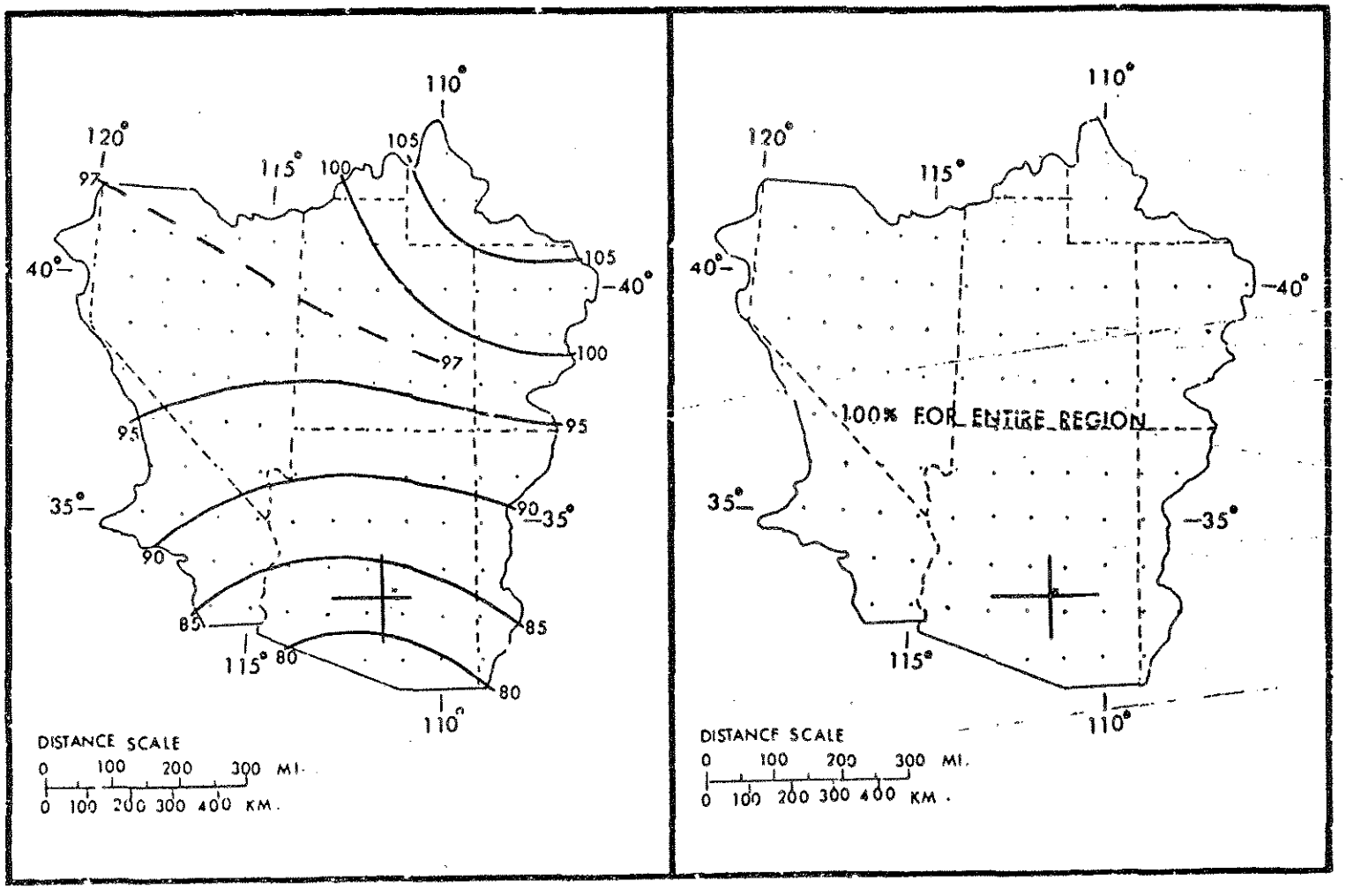


Figure 3.20.--Variation of orographic PMF with basin size.



July *August*

Figure 3.15.--Seasonal variation in 10-mi^2 (26-km^2) 24-hr orographic PMP for the study region (in percent of values in figure 3.11).

Table 3.9.--Durational variation of orographic PMP

Latitude °N	Percent of 24-hr value					
	6 hr	12	18	24	48	72
42	28	55	79	100	161	190
41	29	56	79	100	160	189
40	30	57	80	100	159	187
39	30	57	80	100	157	185
38	31	58	81	100	155	182
37	32	59	81	100	152	177
36	33	60	82	100	149	172
35	34	61	82	100	146	167
34	35	62	83	100	143	162
33	36	63	84	100	139	157
32	37	64	84	100	135	152
31	39	66	85	100	132	146

4. LOCAL-STORM PMP FOR THE SOUTHWESTERN REGION AND CALIFORNIA

4.1 Introduction

This chapter provides generalized estimates of local or thunderstorm probable maximum precipitation. By "generalized" is meant that mapped values are given from which estimates of PMP may be determined for any selected drainage.

4.1.1 Region of Interest

Local-storm PMP was not included in the "Interim Report, Probable Maximum Precipitation in California" (HMR No. 36). During the formulation of the present study, we decided that the local-storm part of the study should include California west of the Sierra Nevada. It was also noted that PMP for summer thunderstorms was not considered west of the Cascade Divide in the Northwestern Region (HMR No. 43). As stated in the latter report, "No summer thunderstorms have been reported there (west of the Divide) of an intensity of those to the east, for which the moisture source is often the Gulf of Mexico or Gulf of California. The Cascade Divide offers an additional barrier to such moisture inflows to coastal areas where, in addition, the Pacific Ocean to the west has a stabilizing influence on the air to hinder the occurrence of intense summer local storms." Therefore, it was necessary to establish some continuation of the Cascade Divide into California so that the local-storm PMP definition would have continuity between the two regions.

The stabilizing influence of the Pacific air is at times interrupted by the warm moist tropical air from the south pushing into California, although it is difficult to determine where the limit of southerly flow occurs. General storms having the tropical characteristic of excessive thunderstorm rains are observed as far north as the northern end of the Sacramento Valley. Thus, a northern boundary has been selected for this study, excluding that portion of

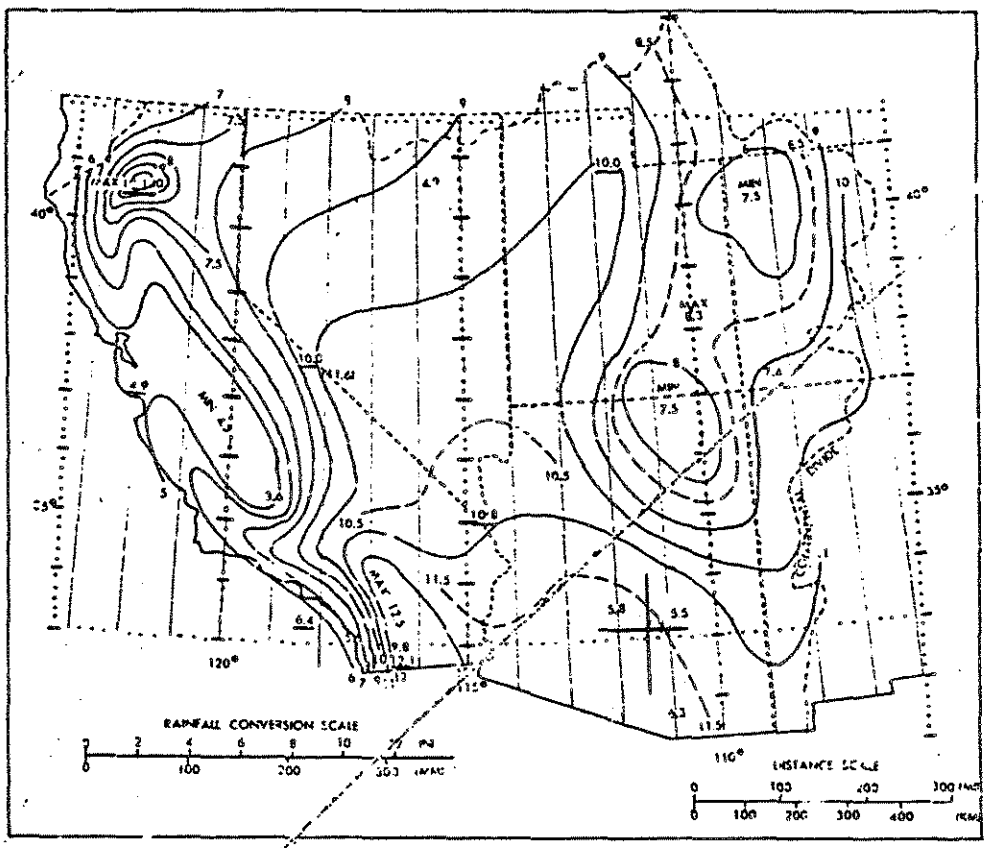


Figure 4.5--Local-storm PMP for 1 mi^2 (2.6 km^2) 1 hr. Directly applicable for locations between sea level and 5000 ft (1524 m). Elevation adjustment must be applied for locations above 5000 ft.

events. In contrast to figure 4.4, figure 4.5 maintains a maximum between these two locations. There is no known meteorological basis for a different solution. The analysis suggests that in the northern portion of the region maximum PMP occurs between the Sierra Nevada on the west and the Wasatch range on the east.

A discrete maximum (> 10 inches, 254 mm) occurs at the north end of the Sacramento Valley in northern California because the northward-flowing moist air is increasingly channeled and forced upslope. Support for this PMP center comes from the Newton, Kennett, and Red Bluff storms (fig. 4.1). Although the analysis in this region appears to be an extension of the broad maximum through the center of the Southwestern Region, it does not indicate the direction of moist inflow. The pattern has evolved primarily as a result of attempts to tie plotted maxima into a reasonable picture while considering inflow directions, terrain effects, and moisture potential.

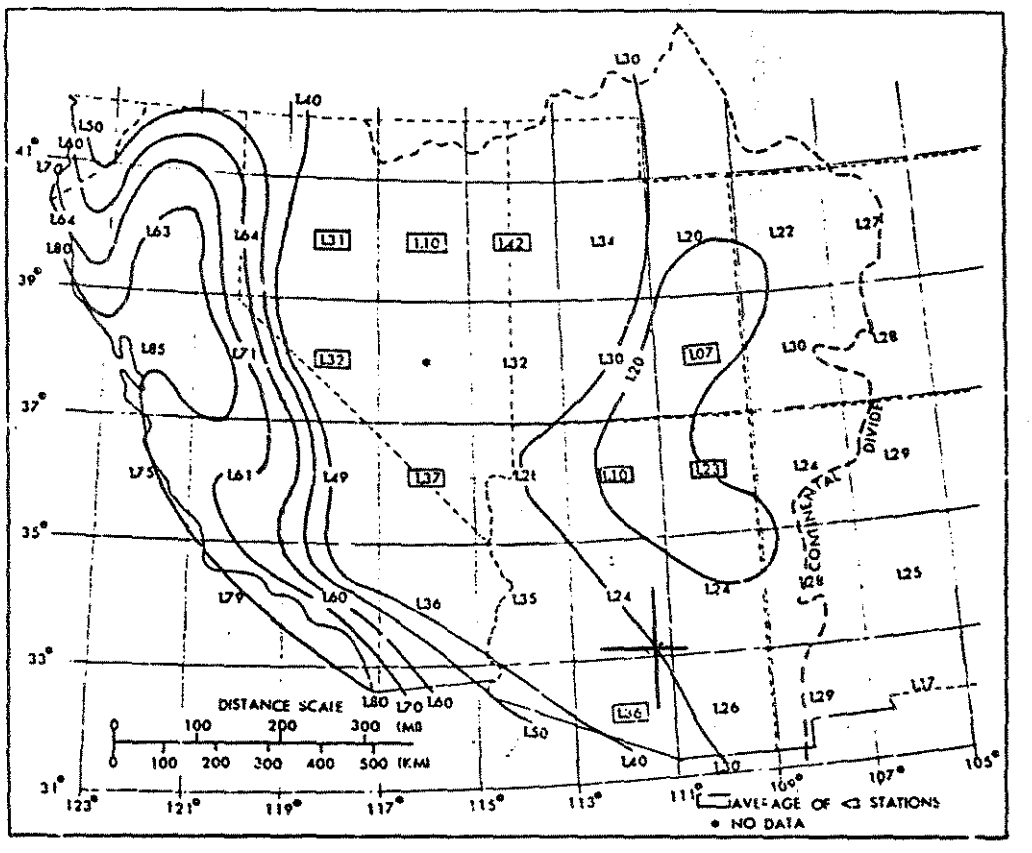


Figure 4.7.--Analysis of 6/1-hr ratios of averaged maximum station data (plotted at midpoints of a 2° latitude-longitude grid).

establish the basic depth-duration curve, then structure a variable set of depth-duration curves to cover the range of 6/1-hr ratios that are needed.

Three sets of data were considered for obtaining a base relation (see table 4.3 for depth-duration data):

a. An average of depth-duration relations from each of 17 greatest 3-hr rains from summer storms (1940-49) in Utah (U. S. Weather Bureau 1951b) and in unpublished tabulations for Nevada and Arizona (1940-63). The 3-hr amounts ranged from 1 to 3 inches (25 to 76 mm) in these events.

b. An average depth-duration relation from 14 of the most extreme short-duration storms listed in Storm Rainfall (U. S. Army, Corps of Engineers 1945-). These storms come from Eastern and Central States and have 3-hr amounts of 5 to 22 inches (127 to 559 mm).

ratios than storms with high 3/1-hr ratios. The geographical distribution of 15-min to 1-hr ratios also were inversely correlated with magnitudes of the 6/1-hr ratios of figure 4.7. For example, Los Angeles and San Diego (high 6/1-hr ratios) have low 15-min to 1-hr ratios (approximately 0.60) whereas the 15-min to 1-hr ratios in Arizona and Utah (low 6/1-hr ratios) were generally higher (approximately 0.75).

Depth-duration relations for durations less than 1 hour were then smoothed to provide a family of curves consistent with the relations determined for 1 to 6 hours, as shown in figure 4.3. Adjustment was necessary to some of the curves to provide smoother relations through the common point at 1 hour.

We believe we were justified in reducing the number of the curves shown in figure 4.3 for durations less than 1 hour, letting one curve apply to a range of 6/1-hr ratios. The corresponding curves have been indicated by letter designators, A-D, on figure 4.3. As an example, for any 6-hr amount between 115% and 135% of 1-hr, 1-mi^2 (2.6-km^2) PMP, the associated values for durations less than 1 hour are obtained from the curve designated as "B".

Table 4.4 lists durational variations in percent of 1-hr PMP for selected 6/1-hr rain ratios. These values were interpolated from figure 4.3.

To determine 6-hr PMP for a basin, use figure 4.3 (or table 4.4) and the geographical distribution of 6/1-hr ratios given in figure 4.7.

Table 4.4.—Durational variation of 1-mi^2 (2.6-km^2) local-storm PMP in percent of 1-hr PMP (see figure 4.3)

6/1-hr ratio	Duration (hr) 1/4	1/2	3/4	1	2	3	4	5	6
1.1	86	93	97	100	107	109	110	110	110
1.2	74	89	95	100	110	115	118	119	120
1.3	74	89	95	100	114	121	125	128	130
1.4	63	83	93	100	118	126	132	137	140
1.5	63	83	93	100	121	132	140	145	150
1.6	43	70	87	100	124	138	147	154	160
1.8	43	70	87	100	130	149	161	171	180
2.0	43	70	87	100	137	161	175	188	200

4.5 Depth-Area Relation

We have thus far developed local-storm PMP for an area of 1 mi^2 (2.6 km^2). To apply PMP to a basin, we need to determine how 1-mi^2 (2.6-km^2) PMP should decrease with increasing area. We have adopted depth-area relations based on rainfalls in the Southwest and from consideration of a model thunderstorm.

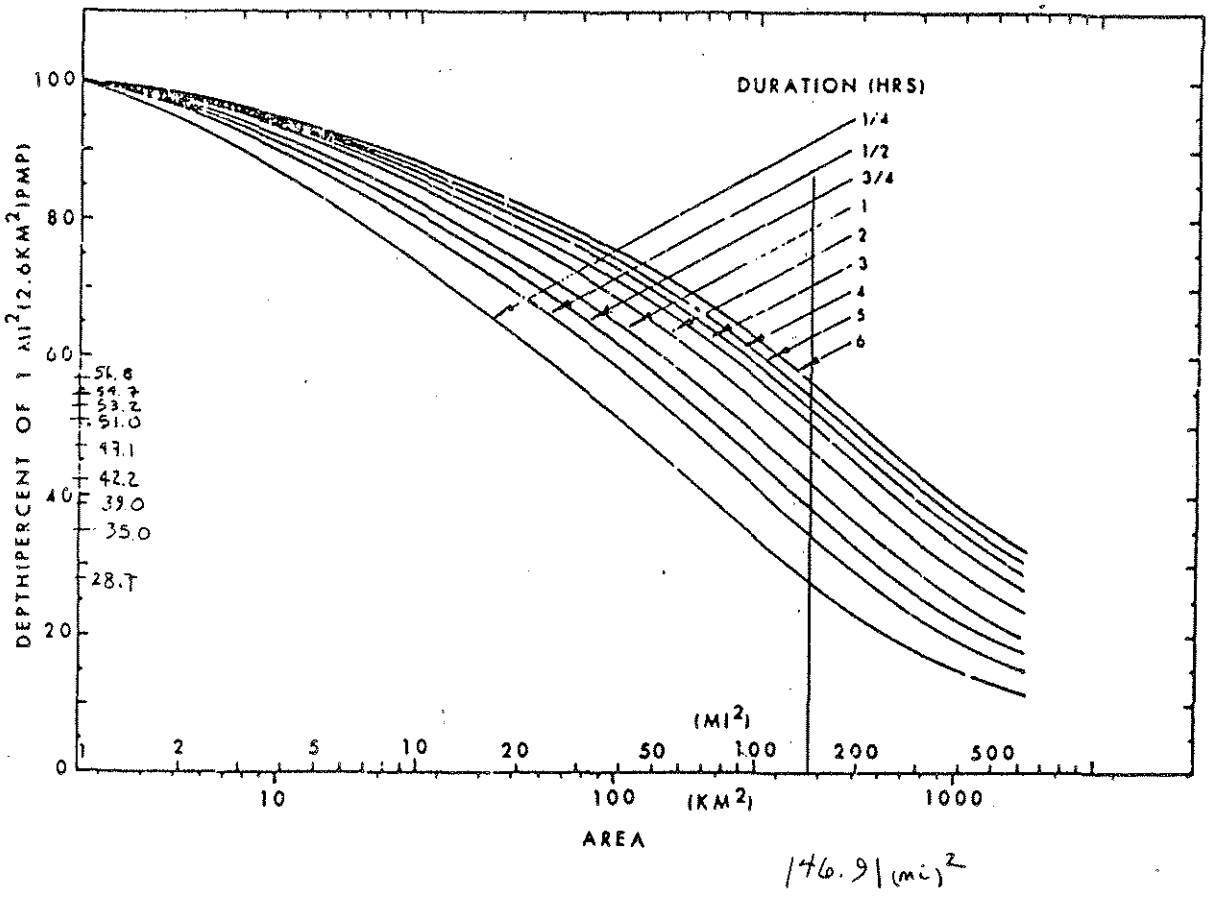


Figure 4.9.--Adopted depth-area relations for local-storm PMP.

Table 4.5.--Isohyetal labels for the 4 highest 15-min PMP increments and for 1-hr PMP

6/hr ratio (%)	PMP Increment	Isohyet A	B	C	D	E	F	G	H	I	J
		Enclosed area mi^2 (km^2)									
		1 (2.6)	5 (13)	25 (65)	55 (142)	95 (246)	150 (388)	220 (570)	300 (777)	385 (997)	500 (1,295)
		Percent of 1-hr, 1-mi^2 (2.6-km^2) PMP									
<115 (A)	Highest 15-min.	86	68	44	30	18	10	7	6	5	4
	2nd. 15-min.	7	7	7	7	7	6	4	3	3	3
	3rd. 15-min.	4	4	4	4	4	4	3	2	2	2
	4th. 15-min.	3	3	3	3	3	3	2	2	2	2
116-135 (B)	Highest 15-min.	74	56	32	21	14	8	7	6	5	4
	2nd. 15-min.	15	15	15	12	9	6	4	3	3	3
	3rd. 15-min.	6	6	6	6	5	5	3	2	2	2
	4th. 15-min.	5	5	5	5	4	4	2	2	2	2
136-155 (C)	Highest 15-min.	63	45	27	18	11	7	6	5	4	4
	2nd. 15-min.	20	20	15	12	9	6	4	3	3	3
	3rd. 15-min.	10	10	9	8	7	5	3	3	3	3
	4th. 15-min.	7	7	7	6	5	5	3	2	2	2
>156 (D)	Highest 15-min.	43	31	19	14	9	7	5	4	4	4
	2nd. 15-min.	27	23	16	12	8	6	4	3	3	3
	3rd. 15-min.	17	16	13	10	8	5	4	3	3	2
	4th. 15-min.	13	12	10	8	7	5	3	3	2	2
	1-hr. PMP	100	82	58	44	32	23	16	13	12	11

Table 4.6.--Isohyetal labels for second to sixth hourly incremental PMP in percent of 1-hr 1-mi^2 (2.6-km^2) PMP

6/1-hr ratio	Isohyet A	B	C	D	E	F	G	H	I	J
					Second highest 1-hr PMP increment					
1.1	7	7	7	7	7	7	6	4	4	4
1.2	11	11	11	11	10	8	7	5	5	5
→ 1.3	14	14	14	12	11	9	7	5	5	5
1.4	17	17	16	14	12	10	8	6	6	6
1.5	21	20	18	16	13	11	8	6	6	6
1.6	24	23	20	18	15	12	9	7	7	6
1.7	27	26	23	20	16	13	10	7	7	7
1.8	30	29	25	21	17	14	10	8	8	7
1.9	34	32	27	23	18	14	11	8	8	8
					Third highest 1-hr PMP increment					
1.1	2	2	2	2	2	2	2	2	2	2
1.2	4	4	4	4	4	4	4	4	4	4
→ 1.3	6	6	6	6	6	6	5	5	5	5
1.4	9	9	9	9	8	7	6	5	5	5
1.5	11	11	11	11	10	8	7	5	5	5
1.6	14	14	14	13	11	10	8	6	6	6
1.7	17	17	17	14	13	11	8	7	6	6
1.8	19	19	18	16	14	12	9	7	6	6
1.9	21	21	20	18	15	13	10	8	7	7
					Fourth highest 1-hr PMP increment					
1.1	1	1	1	1	1	1	1	1	1	1
1.2	3	3	3	3	3	3	3	3	3	3
→ 1.3	5	5	5	5	5	5	5	4	4	4
1.4	6	6	6	6	6	5	5	4	4	4
1.5	7	7	7	7	7	6	5	4	4	4
1.6	8	8	8	8	7	6	5	5	5	5
1.7	10	10	10	9	8	7	6	5	5	5
1.8	12	11	11	10	9	8	7	6	5	5
1.9	14	13	12	11	10	9	7	6	6	6
					Fifth highest 1-hr PMP increment					
1.1	1	1	1	1	1	1	1	1	1	1
1.2	2	2	2	2	2	2	2	2	2	2
→ 1.3	3	3	3	3	3	3	3	3	3	3
1.4	5	5	5	5	5	5	4	4	4	4
1.5	6	6	6	6	6	5	5	4	4	4
1.6	7	7	7	7	7	6	5	5	5	5
1.7	9	9	9	9	8	7	5	5	5	5
1.8	10	10	10	10	9	7	6	6	5	5
1.9	12	12	12	11	9	8	6	6	6	6
					Sixth highest 1-hr PMP increment					
1.1	1	1	1	1	1	1	1	1	1	1
1.2	1	1	1	1	1	1	1	1	1	1
→ 1.3	2	2	2	2	2	2	2	2	2	2
1.4	4	4	4	4	4	4	4	4	4	3
1.5	5	5	5	5	5	5	4	4	4	4
1.6	6	6	6	6	6	5	5	5	5	5
1.7	7	7	7	7	7	6	5	5	5	5
1.8	8	8	8	8	8	6	5	5	5	5
1.9	9	9	9	9	9	8	6	6	5	5

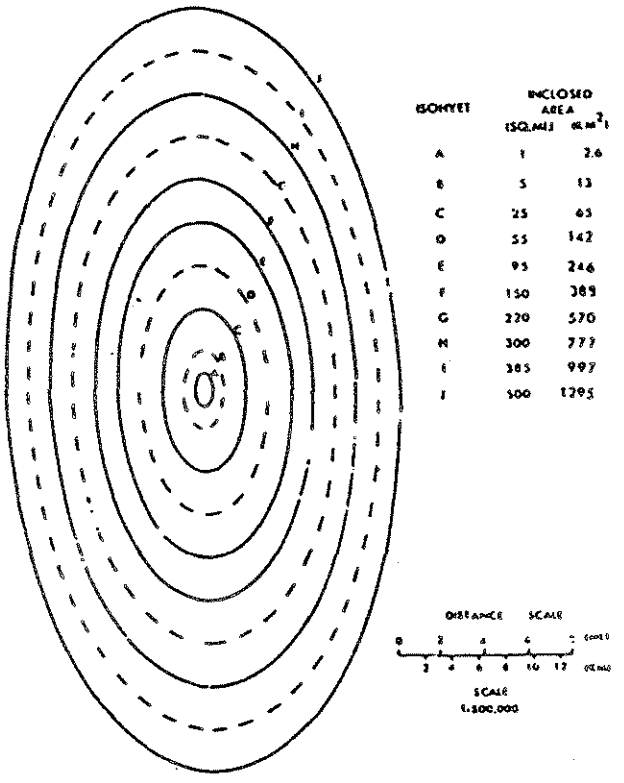


Figure 4.10.--Idealized local-storm isohyetal pattern.

storm period. The sequence of hourly incremental PMP for the Southwest 6-hr thunderstorm in accord with this study is presented in column 2 of table 4.7. A small variation from this sequence is given in Engineering Manual 1110-2-1411 (U. S. Army, Corps of Engineers 1965). The latter, listed in column 3 of table 4.7, places greater incremental amounts somewhat more toward the end of the 6-hr storm period. In application, the choice of either of these distributions is left to the user since one may prove to be more critical in a specific case than the other.

Table 4.7.--Time sequence for hourly incremental PMP in 6-hr storm

Increment	HMR No. 5[1]	EM1110-2-1411[2]
	Sequence Position	
Largest hourly amount	Third	Fourth
2nd largest	Fourth	Third
3rd largest	Second	Fifth
4th largest	Fifth	Second
5th largest	First	Last
least	Last	First

[1] U. S. Weather Bureau 1947.
[2] U. S. Corps of Engineers 1952.

Also of importance is the sequence of the four 15-min incremental PMP values. We recommend a time distribution, table 4.8, giving the greatest intensity in the first 15-min interval (U.S. Weather Bureau 1947). This is based on data from a broad geographical region. Additional support for this time distribution is found in the reports of specific storms by Keppell (1963) and Osborn and Renard (1969).

Table 4.8.--Time sequence for 15-min incremental PMP within 1 hr.

Increment	Sequence Position
Largest 15-min amount	First
2nd largest	Second
3rd largest	Third
least	Last

4.8 Seasonal Distribution

The time of the year when local-storm PMP is most likely is of interest. Guidance was obtained from analysis of the distribution of maximum 1-hr thunderstorm events through the warm season at the recording stations in Utah, Arizona, and in southern California (south of 37°N and east of the Sierra Nevada ridgeline). The period of record used was for 1940-72 with an average record length for the stations considered of 27 years. The month with the one greatest thunderstorm rainfall for the period of record at each station was noted. The totals of these events for each month, by States, are shown in table 4.9.

Table 4.9.--Seasonal distribution of thunderstorm rainfalls.

(The maximum event at each of 108 stations, period of record 1940-72.)

	Month						
	M	J	J	A	S	O	No. of Cases
Utah	1	5	9	14	5		34
Arizona		4	16	19	4		43
S. Calif.*		14	10	7			31
No. of cases/mo.	1	23	35	40	9	0	

*South of 37°N and east of Sierra Nevada ridgeline.

Scale

1:500,000

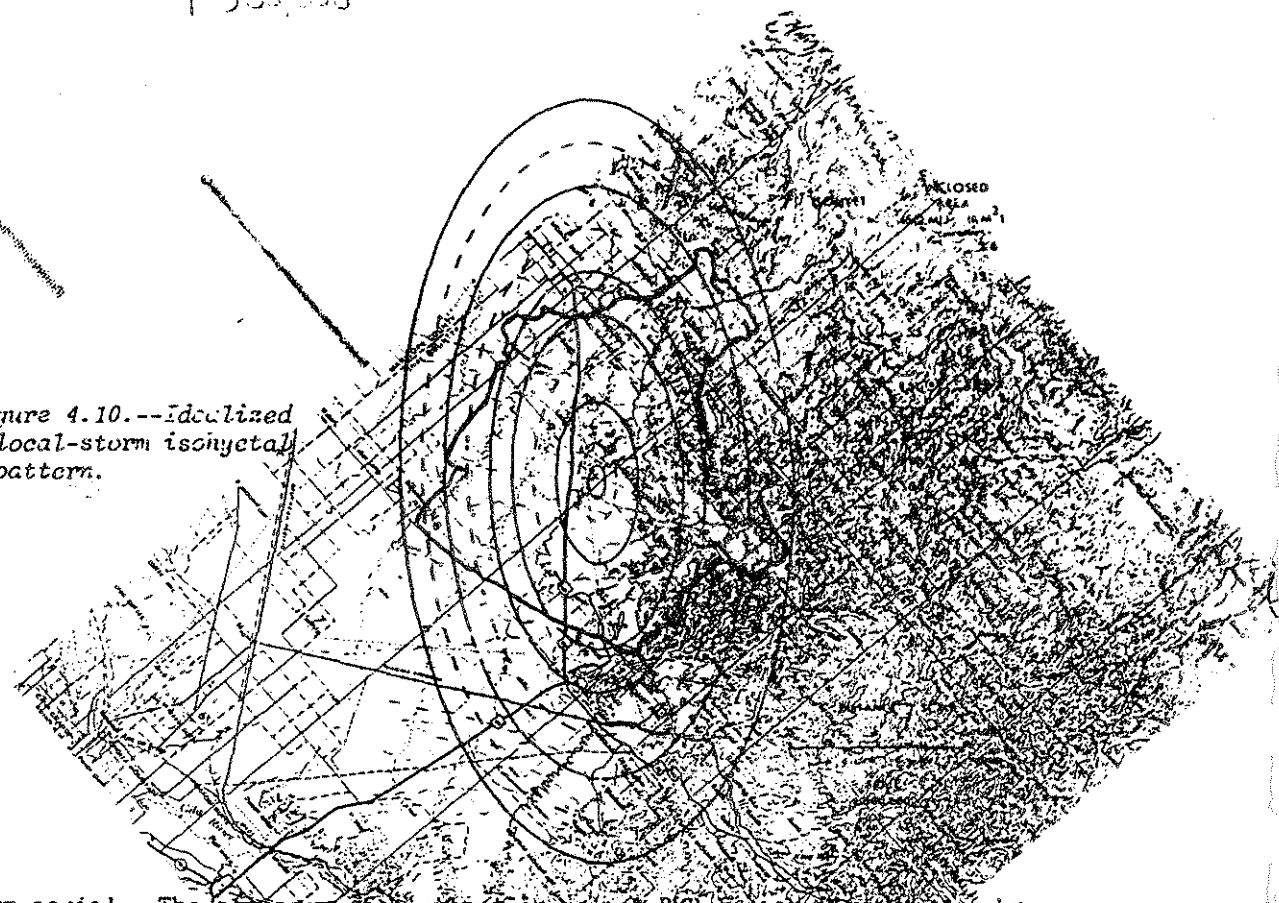


Figure 4.10.--Idealized local-storm isohyetal pattern.

storm period. The sequence of hourly incremental PMP for the southeast 6-hr thunderstorm in accord with this study is presented in column 2 of table 4.7. A small variation from this sequence is given in Engineering Manual 1110-2-1411 (U. S. Army, Corps of Engineers 1952). The factors listed in column 3 of table 4.7, places greater incremental amounts somewhat more toward the end of the 6-hr storm period. In application, the choice of either of these distributions is left to the user; one may prove to be more critical in a specific case than the other.

Table 4.7.--Time sequence for hourly incremental PMP in 6-hr storm

Increment	HMR No. 5[1]	EM 1110-2-1411[2]
	Sequence Position	
Largest hourly amount	Third	Fourth
2nd largest	Fourth	Third
3rd largest	Second	Fifth
4th largest	Fifth	Second
5th largest	First	Last
least	Last	First

[1]U. S. Weather Bureau 1947.
[2]U. S. Corps of Engineers 1952.

APPENDIX D

Curve Numbers, Times of Concentration and Lag Times
Vineyard and Rittenhouse

APPENDIX D

Appendix D contains a computer listing from a Super Calc file used to calculate the times of concentration and lag times for all subbasins in the Vineyard and Rittenhouse drainage areas. Also shown on the printout are curve numbers selected for each subbasin.

DNBKLG5.CAL

BASIN ID	CN	BASIN AREA (sq mi)	L (ft)	E2 (ft)	E1 (ft)	S (ft/ft)	N	B (ft)	D (ft)	Z	R	V (fps)	Q (cfs)	CRITICAL DEPTH (ft)	CRITICAL Qc (cfs)	CRITICAL Vc (fps)	ACTUAL V (fps)	ACTUAL Tc (hr)	SCS LAG (hr)	TOTAL SCS LAG (hr)
VINEYARD FRS DRAINAGE AREA																				
V1	85	3.03										13.00					13.00	.94	.02	.53
			1.700	5.057	3.880	.6924														
			5.700	3.880	2.180	.2982	.04	0	2	3	.95	19.59	235	3.28	235	7.27	7.27	.22	.13	
			10.200	2.180	1.930	.0245	.083	20	3	5	2.08	4.56	479	2.16	477	7.18	4.56	.62	.37	
V2	84	3.34										12.00					12.00	.03	.02	.47
			1.400	4.520	3.600	.6571														
			5.660	3.600	2.240	.2403	.04	0	2	3	.95	17.58	211	3.14	210	7.11	7.11	.22	.13	
			8.600	2.240	2.015	.0262	.086	20	3	5	2.08	4.55	477	2.16	477	7.18	4.55	.53	.32	
V3	81	.40										3.60					3.60	.25	.15	.30
			3.180	2.145	1.975	.0535														
			3.920	1.975	1.930	.0115	.062	25	3	5	2.16	4.29	515	2.05	517	7.15	4.29	.25	.15	
V4	81	1.85										4.20					4.20	.24	.14	.52
			3.600	2.420	2.162	.0717														
			12.300	2.162	1.850	.0254	.081	30	4	10	2.54	5.43	1.522	3.08	1.519	8.11	5.43	.63	.38	
V5	82	1.66										8.00					8.00	.05	.03	.45
			1.500	2.370	1.910	.3067														
			4.800	1.910	1.800	.0229	.0805	20	3	3	2.23	4.77	415	2.12	414	7.42	4.77	.28	.17	
			7.000	1.800	1.740	.0086	.055	30	4	10	2.54	4.65	1.303	2.84	1.301	7.84	4.65	.42	.25	
V6	70	3.59	23.740	1.740	1.560	.0076	.053	40	3	10	2.09	4.00	839	2.01	841	6.96	4.00	1.65	.99	.99
V7	86	1.69										8.25					8.25	.03	.02	.74
			800	2.356	2.150	.2575														
			6.880	2.150	1.940	.0305	.093	10	3	3	1.97	4.38	250	2.15	249	7.05	4.38	.44	.26	
			10.400	1.940	1.820	.0115	.064	10	3	5	1.85	3.76	282	2.07	280	6.65	3.76	.77	.46	
V8	81	.73										9.50					9.50	.02	.01	.33
			800	2.248	1.970	.3475														
			7.480	1.970	1.820	.0201	.081	10	3	5	1.85	3.91	293	2.12	293	6.71	3.91	.53	.32	
V9	83	.95										1.80					1.80	.49	.30	.41
			3.200	1.860	1.820	.0125														
			4.200	1.820	1.775	.0107	.056	20	5	5	3.17	5.93	1.334	3.78	1.331	9.05	5.93	.20	.12	
V10	82	5.48	26.320	1.775	1.565	.0080	.059	30	2	10	1.42	2.85	285	1.22	284	5.52	2.85	2.57	1.54	1.54
V11	85	.44	10.000	1.904	1.775	.0129						1.80					1.80	1.54	.93	.93
V12	82	3.32	15.200	1.775	1.655	.0079	.056	10	3	10	1.71	3.37	404	2.08	405	6.32	3.37	1.25	.75	1.38
			12.600	1.655	1.565	.0071	.055	15	3	10	1.79	3.37	455	2.01	453	6.42	3.37	1.04	.62	
V13	85	2.35										6.70					6.70	.05	.03	.99
			1.200	2.339	2.150	.1575														
			5.100	2.150	2.000	.0294	.091	10	3	3	1.97	4.40	251	2.16	252	7.07	4.40	.32	.19	
			20.000	2.000	1.788	.0106	.06	20	3	3	2.23	4.36	379	2.01	379	7.25	4.36	1.28	.77	
V14	82	4.09	13.600	1.788	1.674	.0084	.06	20	2	5	1.49	2.95	177	1.21	177	5.62	2.95	1.28	.77	1.73
			15.600	1.674	1.560	.0073	.058	25	2	10	1.38	2.72	244	1.21	243	5.42	2.72	1.60	.96	
V15	85	1.64	12.040	1.972	1.800	.0143	.071	10	3	5	1.85	3.77	282	2.08	283	6.66	3.77	.89	.53	.62
			2.000	1.800	1.785	.0075	.054	20	3	5	2.06	3.88	407	1.97	406	6.91	3.88	.14	.09	
V16	85	.76	6.200	1.785	1.737	.0077	.056	25	3	10	1.93	3.62	598	2.00	601	6.68	3.62	.48	.29	.29

OMBKLG5.CAL

BASIN ID	CN	BASIN AREA (sq mi)	L (ft)	E2 (ft)	E1 (ft)	S (ft/ft)	N	B (ft)	D (ft)	Z	R	V (fps)	Q (cfs)	CRITICAL DEPTH (ft)	CRITICAL Qc (cfs)	CRITICAL Vc (fps)	ACTUAL V (fps)	ACTUAL Tc (hr)	SCS LAG (hr)	TOTAL SCS LAG (hr)
V17	87	4.06	1.000	4.080	3.620	.4600						11.00					11.00	.03	.02	.69
			9.200	3.620	2.400	.1326	.04	5	2	3	1.25	15.67	345	3.10	345	7.78	7.78	.33	.20	
			13.200	2.400	2.135	.0201	.078	20	3	3	2.23	4.61	401	2.08	401	7.36	4.61	.80	.48	
V18	85	5.06	6.340	2.753	2.070	.1077						5.30					5.30	.33	.20	.93
			18.400	2.070	1.865	.0111	.061	20	3	5	2.08	4.18	439	2.06	439	7.04	4.18	1.22	.73	
V19	84	2.77	1.150	2.116	1.965	.1313						6.00					6.00	.05	.03	.59
			5.000	1.965	1.900	.0130	.07	10	3	3	1.97	3.80	217	1.99	217	6.83	3.80	.31	.22	
			11.800	1.900	1.805	.0081	.0505	25	5	5	3.29	5.84	1.460	3.68	1.457	9.12	5.84	.56	.34	
V20	81	.48	9.700	1.805	1.737	.0070	.0525	30	3	10	1.99	3.75	676	2.00	678	6.78	3.75	.72	.43	.43
V21	80	4.43	14.800	1.805	1.667	.0093	.064	10	2	10	1.20	2.53	152	1.29	152	5.15	2.53	1.63	.98	1.83
			14.300	1.667	1.562	.0073	.0575	30	2	10	1.42	2.80	280	1.21	280	5.50	2.80	1.42	.85	
RITTENHOUSE FRS DRAINAGE AREA																				
R1	80	1.56	16.800	1.990	1.805	.0110	.063	10	3	3	1.97	3.89	222	2.02	223	6.87	3.89	1.20	.72	.72
R2	78	8.43	14.000	1.805	1.700	.0075	.06	15	2	5	1.41	2.70	135	1.23	144	5.54	2.70	1.44	.86	1.90
			17.500	1.700	1.585	.0066	.055	20	2	5	1.49	2.85	171	1.23	182	5.66	2.81	1.73	1.04	
R3	81	1.10	16.800	2.030	1.830	.0119	.063	10	3	3	1.97	4.04	230	2.05	229	6.91	4.04	1.15	.69	.69
R4	78	2.67	21.500	1.830	1.675	.0072	.054	20	3	10	1.87	3.54	532	2.02	534	6.58	3.54	1.69	1.01	1.01
R5	81	2.71	4.000	4.040	3.160	.2200						7.50					7.50	.15	.09	.39
			13.900	3.160	2.315	.0608	.04	10	2	3	1.41	11.53	369	2.66	368	7.70	7.70	.50	.30	
R6	78	4.19	3.800	3.400	2.600	.2105	.04	5	2	3	1.25	19.74	434	3.46	434	8.16	8.16	.13	.08	.70
			15.200	2.600	2.185	.0273	.091	10	3	5	1.85	4.06	305	2.16	304	6.77	4.06	1.04	.62	
R7	86	2.67	11.800	2.185	2.050	.0114	.061	15	4	5	2.51	4.81	674	2.89	672	7.90	4.81	.68	.41	.41
R8	79	2.00	23.200	2.050	1.826	.0097	.058	15	4	5	2.51	4.65	651	2.84	650	7.84	4.65	1.39	.83	.83
R9	74	.26	6.900	1.826	1.777	.0071	.052	20	4	10	2.39	4.31	1.033	2.83	1.036	7.58	4.31	.45	.27	.27
R10	84	3.35	2.800	3.109	2.157	.3400						9.50					9.50	.08	.05	.92
			20.000	2.157	1.880	.0139	.069	10	3	5	1.85	3.82	286	2.09	285	6.67	3.82	1.46	.87	
R11	84	3.90	2.000	3.032	2.400	.3160						9.00					9.00	.06	.04	.78
			4.800	2.400	2.120	.0583	.04	10	2	3	1.41	11.30	362	2.64	363	7.68	7.68	.17	.10	
			14.600	2.120	1.880	.0164	.015	10	3	5	1.85	3.82	287	2.10	288	6.69	3.82	1.06	.64	
R12	81	4.46	2.900	2.240	2.005	.0810	.04					4.60					4.60	.18	.11	.76
			11.800	2.005	1.875	.0110	.06	15	4	5	2.51	4.80	672	2.89	672	7.90	4.80	.68	.41	
			7.690	1.875	1.812	.0083	.052	15	4.5	5	2.77	5.13	866	3.30	868	8.35	5.13	.41	.25	

DMBKLG5.CAL

BASIN ID	CN	BASIN AREA (sq mi)	L (ft)	E2 (ft)	E1 (ft)	S (ft/ft)	N	B (ft)	D (ft)	Z	R	V (fps)	Q (cfs)	CRITICAL DEPTH (ft)	CRITICAL Qc (cfs)	CRITICAL Vc (fps)	ACTUAL V (fps)	ACTUAL Tc (hr)	SCS LAG (hr)	TOTAL SCS LAG (hr)
												1.60					1.60	1.25	.75	.85
R13	81	1.27	7.200	1.882	1.808	.0103														
			3.000	1.808	1.777	.0103	.058	20	4.5	10	2.65	4.99	1.458	3.35	1.460	8.14	4.99	.17	.10	
R14	77	2.82	7.400	1.825	1.753	.0097	.0575	25	4	10	2.47	4.65	1.210	2.89	1.212	7.78	4.65	.44	.26	.76
			13.400	1.753	1.675	.0058	.047	30	4	10	2.54	4.49	1.256	2.79	1.258	7.79	4.49	.83	.50	
												1.65					1.65	.24	.14	1.47
R15	79	6.30	1.400	1.778	1.760	.0129														
			7.800	1.760	1.710	.0064	.051	40	3	15	1.96	3.65	931	1.99	931	6.70	3.65	.59	.36	
			14.900	1.710	1.618	.0062	.0505	45	3	15	2.00	3.67	990	1.97	990	6.74	3.67	1.13	.68	
			6.300	1.618	1.586	.0051	.047	50	3	15	2.03	3.62	1.031	1.94	1.037	6.76	3.62	.48	.29	

APPENDIX E

Adjusted Curve Numbers
Powerline

APPENDIX E

Appendix E contains the calculation sheets for adjusting the subbasin curve numbers in the Powerline FRS HEC-1 model developed by the District from future to existing conditions.

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BY F. Duren DATE 7/27/89 CLIENT FCD of Maricopa County SHEET 1 OF 10

CHKD. BY ECJ DESCRIPTION Adjusted Curve Numbers Powerline Drainage JOB NO. 1213.0020

Subbasin	CN (1) (AMC III)
10	97
17	93
16	95
15	94
14	93
13	96
12	97
11	95
2A	90
2BE	93
2BWW	92
2BWE	92
2BS	91
5	95
4	95
7	93
6	93
3N	95
3S	90
3A	91

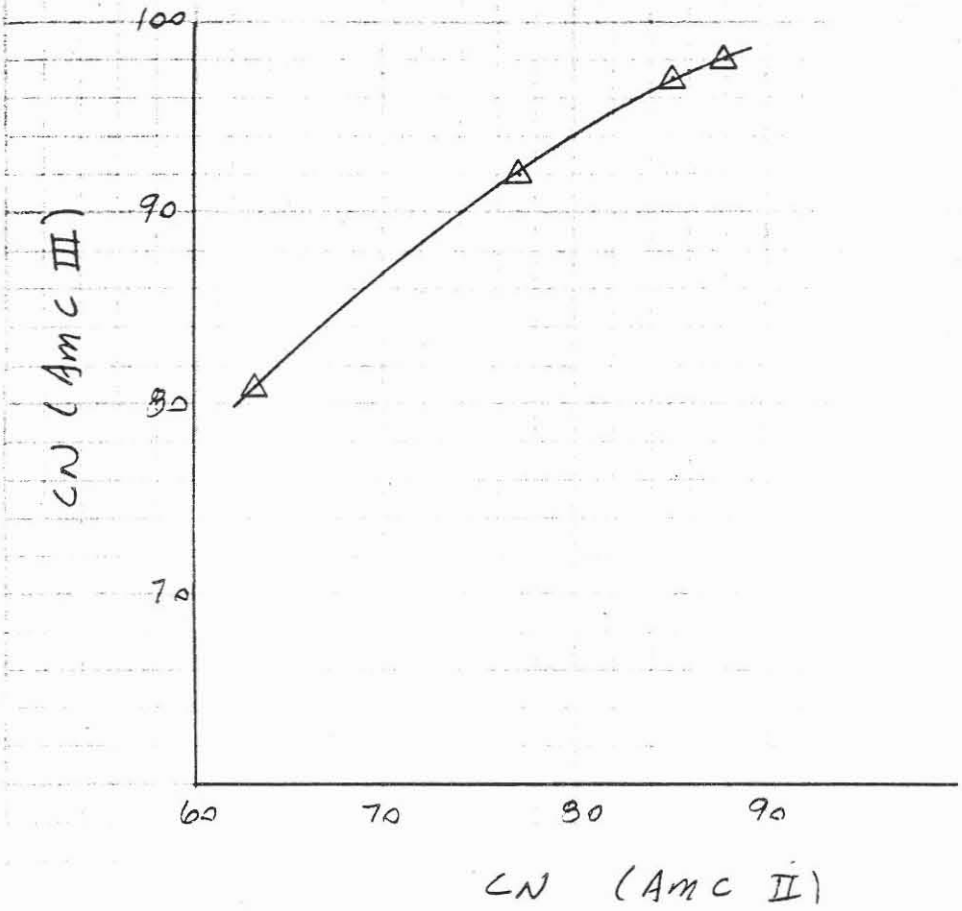
(1) CN's for subbasins 10, 2A, 2BE, 2BWW, 2BWE, 2BS, 3N, 3S, + 3A were calculated based on soil map. CN's for all other subbasins are adjusted from SCS AMC II, existing conditions, to AMC III, existing conditions. (see graph on pg. 2)

JMM JAMES M. MONTGOMERY, CONSULTING ENGINEERS, INC.

BY F. Duren DATE 7/27/89 CLIENT _____ SHEET 2 OF 10

CHKD. BY ECJ DESCRIPTION _____ JOB NO. 1213.0020

Adjustment of SCS's CN's from AMC II to AMC III



Subbasins	AMC II		AMC III
1, 14, 6	79	=	93
15	80	=	94
5, 4	81	=	95
16, 11	82	=	95
13	83	=	96
12	85	=	97

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BY ECJ DATE 7/26/89 CLIENT MFCD SHEET 3 OF 10

CHKD. BY FKD DESCRIPTION CURVE NUMBERS FOR PMP ANALYSIS OF THE POWER LINE DRAINAGE BASIN JOB NO. 1213.0020

POWERLINE DRAINAGE BASIN

SUBBASIN	AREA (mi.²)	SOIL GROUP	% OF AREA	AMC III CURVE NUMBER	WEIGHTED CURVE NUMBER
2A	1.09	A	28	81	
		B	51.3	92	
		C	20	97	
		D	0.7	98	
					90
2BE	1.22	A	1.2	81	
		B	75.8	92	
		C	20	97	
		D	3	98	
					93
2BS	1.91	A	14	81	
		B	86	92	
					91
2BWW	0.45	B	100	92	
					92
2BWE	0.70	A	0.5	81	
		B	99.5	92	
					92
3N	2.89	B	49	92	
		C	30	97	
		D	21	98	
					95
3S	2.39	A	18	81	
		B	75.5	92	
		C	6.5	97	
					90
3A	1.20	A	21	81	
		B	63.6	92	
		C	13.5	97	
		D	1.9	98	
					91

JMM JAMES M. MONTGOMERY, CONSULTING ENGINEERS, INC.

BY ECJ DATE 7/26/89 CLIENT MFCD SHEET 4 OF 10

CHKD. BY _____ DESCRIPTION CURVE NUMBERS FOR PMP ANALYSIS OF THE POWERLINE DRAINAGE BASIN JOB NO. 1213.0020

POWERLINE DRAINAGE BASIN

SUBBASIN	AREA (mi²)	SOIL GROUP	% OF AREA	AMC III CURVE NUMBER	WEIGHTED CURVE NUMBER
7	0.61	A	4.5	81	
		B	72.5	92	
		C	14	97	
		D	9	98	
					93
10	0.54	A	4	81	
		B	1	92	
		C	57	97	
		D	38	98	97

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Report on

A HYDROLOGIC ANALYSIS OF THE POWERLINE F.R.S.

Prepared by

Flood Control District of Maricopa County
Hydrology Division
Watershed Management Branch

Valerie Rice, Hydrologist
Doug Plasencia, Hydrologist

Volume I

January 1989

A HYDROLOGIC ANALYSIS
OF THE
POWERLINE F.R.S.

Volume I

2.5 Rainfall Excess

In this study the SCS Curve Number method was used to estimate rainfall excess. The Curve Numbers (CN) for the calibration model were taken directly from the SCS Weekes Wash Study. The SCS Technical Release 55 - Urban Hydrology for Small Watersheds (Reference 13) was used to determine the CN for future land use on areas that are currently agricultural or undeveloped desert. The land use plans for the Tonto National Forest do not include development therefore there was no change in CN for the forest. The average lot size was estimated to be between 1/4 acre to 1/2 acre with 25% to 38% impervious area, and to have a hydrologic soil groups of mostly B and C. The CN's were based on antecedent soil moisture condition II.

2.6 Unit Hydrograph Development

The unit hydrograph technique is used in the subbasin runoff component of the HEC-1 models to transform rainfall excess to subbasin outflow. An SCS dimensionless unit hydrograph was used in this study. This method uses CN, rainfall, and lag time, defined as the lag (hours) between the center of mass of rainfall excess and the peak of the hydrograph. By definition lag time is equal to .6 times the time of concentration (Tc). The time of concentration for the individual subbasins was taken from the SCS Weekes Wash Study. For those subbasins that were further divided, the time of concentration was calculated by estimating the average velocity of the runoff over the hydraulic length of the basin. The estimated velocities were checked for reasonableness and used within the model.

2.7 Channel Routing

Both the Kinematic Wave method and the Muskingum method were used to simulate the channel flow through each subbasin. The washes in the study area are natural with little or no improvements and therefore significant storage and attenuation of the flood hydrographs was expected. The Muskingum method was chosen for the channel routing because it provides for attenuation of the flood wave and produces outflows that were similar to those of the SCS Weekes Wash Study.

The Muskingum 'X' coefficient (weighting factor) was set equal to 0.3. This coefficient can range in value from 0.0 to 0.5. Using an X of 0.5 results in translation of the routed hydrograph with minimal attenuation while an X of 0.0 would be used for a reservoir.

IV. MODELING ASSUMPTIONS

4.1 Magnitude of Flood for Dam Safety Analysis

Using the Arizona Department of Water Resources, Dam Safety Guidelines, the Powerline F.R.S. currently has a "Hazard Potential Classification" of "Significant", e.g. limited urban development existing downstream from the structure. The "Size Classification" of Powerline F.R.S. is considered a medium dam. With these conditions the inflow design flood magnitude is 1/2 the PMF.

The area downstream of the Powerline F.R.S. is predicted to be a rapidly growing area within the next ten years. Therefore, the "Hazard Potential Classification" would increase to "High". The design flood magnitude would, therefore increase to PMF for these conditions. Because there are many factors to consider in the selection of the magnitude of the flood the "Guidelines for the Determination of Spillway Capacity Requirements" only provides ranges of flood magnitude. The Department of Water Resources would review all the factors and require a specific flood magnitude. Because the HEC-1 model allows for the easy determination of both the 1/2 PMF and the full PMF simultaneously, both flood magnitudes were analyzed.

4.2 Land Use Conditions:

The HEC-1 base model assumed existing land use conditions. However, as a result of an FCD In-House Progress Review (I.P.R.) is was decided that future land use conditions should be used to model the watershed. Private lands were assumed to be developed to 1/4 acre lots and 1/2 acre lots, which represents current residential and commercial development trends in the Apache Junction area. The Tonto National Forest land was assumed to remain undeveloped. Retention of onsite runoff was not assumed due to the physical difficulty of incorporating retention in mountainous watersheds, and the lack of a retention regulation in Pinal County. Table 4.1 show the comparison of Curve Numbers used in the 1985 SCS Weekes Wash Study, the FCD Study, and the A-N West Study for the Superstition Freeway.

4.3 Weekes Wash Breakout:

As discussed in Section III, the Weekes Wash breakout was assumed to be contained in the future land use conditions within the Weekes Wash watershed because of the likelihood of eventually channelizing the flow under Junction Drive. Flows over that magnitude would split as described in Section III.

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TABLE 4.1

Curve Number Comparison
for the Powerline F.R.S. Analysis

	Watershed	FCD [1] (future)	SCS [2] (existing)	A-N West [3] (future) Freeway)
0.54 mi²	10	79	--	--
	17	79	79	87
	16	82	82	88.5
	15	80	80	87
	14	79	79	86.5
	13	83	83	90
	12	86	86	92
	11	89	82	91
1.09 mi²	2A	82	--	82
1.22 mi²	2BE	82	--	84
0.45 mi²	2BWW	82	--	83
0.70 mi²	2BWE	82	--	83
1.91 mi²	2BS	80	--	--
	5	85	81	--
	4	86	81	--
0.61 mi²	7	86	--	--
	6	83	79	--

[1] The FCD analysis assumed future land use conditions.

[2] The 1986 SCS Weekes Wash Study assumed present land use conditions.

[3] The AN West Study for the Superstition Freeway (Upper Weekes Wash watershed).

2.89 mi²	3N	85	
2.39 mi²	3S	85	
1.20 mi²	3A	86	

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DRAFT

Flood Control District of Maricopa County

Volume I - Report

Hydrology Study

Dambreak Analyses for Powerline, Vineyard, and Rittenhouse Flood Retarding Structures (FCD 88-37)

June 1989

Registered Professional Engineer (Civil)
CERTIFICATE NO. 12250
FRED DURIN, JR.
Date Signed 6/21/89
ARIZONA, U.S.A.

JMM James M. Montgomery
Consulting Engineers Inc.

Loss Rates

The SCS Curve Number method was utilized to estimate loss rates, based on TR-55 suggested curve numbers. Curve numbers for undeveloped areas were taken from the TR-55 chart for arid and semiarid rangelands, with a cover type of desert shrub with less than 30% ground cover.

Two subbasins in the Vineyard drainage area, V4 and V8, contain developed areas. Rather than increase the associated curve numbers to reflect the impervious areas, the percent of impervious area within each subbasin was estimated and incorporated into the loss rate portion of the HEC-1 model. As a result, no losses were computed for the impervious portions of these subbasins.

The antecedent moisture condition (AMC) was assumed to be II for the 25-, 50- and 100-year events and III for the PMF. Selected curve numbers by hydrologic soil group are as shown in Table 2-6.

TABLE 2-6

SELECTED SCS CURVE NUMBERS

Hydrologic Soil Group	Curve Numbers AMC II	AMC III
A	63	81
B	77	92
C	85	97
D	88	98

The "Soil Survey of Aguila-Carefree Area, Parts of Maricopa and Pinal Counties, Arizona, " (SCS, 1986) was obtained from the SCS, and soil types by hydrologic group were delineated on an overlay submitted to the District as a study product. This detailed soil survey covered a major portion of the Powerline drainage basin, but only a minor portion of the Vineyard basin and none of the Rittenhouse basin was covered.

The Arizona General Soil Map (USDA, U of A) was obtained in an effort to establish hydrologic soil groups of the areas outside of the detailed soil survey boundary. However, the soil classifications identified on the map were not of sufficient detail to obtain hydrologic soil

APENDIX F

Routing Coefficients

APPENDIX F

Appendix F contains a computer listing from a Super Calc file used to compute the Muskingum "K" coefficient and the HEC-1 "NSTPS" variables for each subbasin in the Vineyard and Rittenhouse drainage areas.

MUSKINGUM "K" AND "NSTEPS" - CHANNEL ROUTING

Dambreak Analyses - Powerline, Vineyard, and Rittenhouse FRS

MUSK-K5.CAL

BASIN ID	REACH	L (ft)	E2 (ft)	E1 (ft)	S (ft/ft)	N	B (ft)	D (ft)	Z	R	V (fps)	K (hr)	MAX NSTPS (dt=5)	MIN NSTPS (dt=5)	AVG NSTPS (dt=5)
VINEYARD FRS DRAINAGE AREA															
V3	1	5,920	2,015	1,930	0.0144		25	3	5	2.16	4.29	0.38	6	3	5
V4	1	8,400	1,930	1,850	0.0095		30	4	10	2.54	5.43	0.43	7	3	5
V5	1	11,100	1,850	1,740	0.0099		30	4	10	2.54	4.65	0.66	11	5	8
V6	1	23,740	1,740	1,560	0.0076		40	3	10	2.09	4.00	1.65	28	12	20
V9	1	4,900	1,820	1,775	0.0092		20	5	5	3.17	5.93	0.23	4	2	3
V10	1	26,320	1,775	1,565	0.0080		30	2	10	1.42	2.85	2.57	43	18	31
V12	1	15,200	1,775	1,655	0.0079		10	3	10	1.71	3.37	2.29	38	16	27
	2	12,600	1,655	1,565	0.0071		15	3	10	1.79	3.37				
V14	1	13,600	1,788	1,674	0.0084		20	2	5	1.49	2.95	2.87	48	21	34
	2	15,600	1,674	1,560	0.0073		25	2	10	1.38	2.72				
V16	1	6,200	1,785	1,737	0.0077		25	3	10	1.93	3.62	0.48	8	3	6
V18	1	7,300	2,135	2,000	0.0185		10	3	3	1.97	7.99	1.14	19	8	14
	2	13,400	2,000	1,870	0.0097		15	3	5	1.97	4.18				
V19	1	7,900	1,865	1,805	0.0076		25	5	5	3.29	5.84	0.38	6	3	5
V20	1	9,700	1,805	1,737	0.0070		30	3	10	1.99	3.75	0.72	12	5	9
V21	1	24,000	1,740	1,562	0.0074		30	2	10	1.42	5.50	1.21	20	9	15
RITTENHOUSE FRS DRAINAGE AREA															
R2	1	14,000	1,805	1,700	0.0075		15	2	5	1.41	2.70	3.17	53	23	38
	2	17,500	1,700	1,585	0.0066		20	2	5	1.49	2.81				
R4	1	21,500	1,830	1,675	0.0072		20	3	10	1.87	3.54	1.69	28	12	20

MUSKINGUM "K" AND "NSTEPS" - CHANNEL ROUTING

Dambreak Analyses - Powerline, Vineyard, and Rittenhouse FRS

MUSK-K5.CAL

BASIN ID	REACH	L (ft)	E2 (ft)	E1 (ft)	S (ft/ft)	N	B (ft)	D (ft)	Z	R	V (fps)	K (hr)	MAX NSTPS (dt=5)	MIN NSTPS (dt=5)	AVG NSTPS (dt=5)
R6	1	7,400	2,315	2,185	0.0176		10	3	5	1.85	4.06	0.51	9	4	6
R7	1	11,800	2,185	2,050	0.0114		15	4	5	2.51	4.81	0.68	11	5	8
R8	1	23,200	2,050	1,826	0.0097		15	4	5	2.51	4.65	1.39	23	10	17
R9	1	6,900	1,826	1,777	0.0071		20	4	10	2.39	4.31	0.44	7	3	5
R12	1	5,700	1,880	1,850	0.0053		15	4	5	2.51	4.80	0.55	9	4	7
	2	4,000	1,850	1,812	0.0095		15	4.5	5	2.77	5.13				
R13	1	7,400	1,812	1,777	0.0047		20	4.5	10	2.65	4.99	0.41	7	3	5
R14	1	17,800	1,777	1,675	0.0057		30	4	10	2.54	4.49	1.10	19	8	13
R15	1	16,400	1,675	1,586	0.0054		50	3	15	2.03	3.62	1.26	21	9	15

APPENDIX G

U.S. Highway 60 Drainage Structures

DRAINAGE FEATURES - U.S. HIGHWAY 60
Dambreak Analyses for Powerline, Vineyard, and Rittenhouse Dams
(Revised 6-15-89)

Drainage Area or Subbasin	Size	Description	Invert Elevation
Powerline Drainage Area:			
	4' x 3' x 33.5'	Conc. Box Culvert east bound	
	24" x 64'	CMP w/Headwalls east bound	
	24" x 72'	CMP west bound	1724.50
	4-22'x 6.5' (±)	Conc. Bridge east bound	
	4-22'x 6.5' (±)	Conc. Bridge west bound	1721.50 (±)
	42" x 62.75'	Conc. Arch Culvert east bound	
	48" x 94'	Pipe Culvert west bound	1720.00
	4' x 4' x 51'	Conc. Box Culvert east bound	
	54" x 98'	Pipe Culvert west bound	1716.00
	28" x 31" x 75'	Conc. Arch Pipe east bound	
	48" x 94'	Pipe Culvert	1714.50
	4' x 3' x 37.5'	Conc. Box Culvert east bound	
	48" x 132'	Pipe Culvert west bound	1711.50
	36" x 70'	CMP east bound	
	36" x 120'	Pipe Culvert west bound	1708.00
	10' x 5' x 35.75'	Conc. Box Culvert east bound	
	10' x 5' x 61'	Box Culvert west bound	1704.00
	10' x 6' x 43'	Conc. Box Culvert east bound	
	2-6' x 5' x 64'	Box Culvert west bound	1701.50
	21" x 53.5'	Conc. Pipe Culvert east bound	
	3-10' x 6' x 38.5'	Conc. Bridge Culvert east bound	
	2-12' x 8' x 59'	Box Culvert west bound	1696.30
	6' x 4' x 38.25'	Conc. Box Culvert east bound	
	6' x 4' x 67'	Box Culvert west bound	1698.50
	6' x 4' x 33.5'	Conc. Box Culvert east bound	
	6' x 4' x 54'	Box Culvert west bound	1705.00
	24" x 70'	CMP east bound	
	24" x 94'	Pipe Culvert west bound	1709.00

Drainage Area or Subbasin	Size	Description	Invert Elevation
	6' x 4' x 33.5'	Conc. Box east bound	
	6' x 4' x 77'	Box Culvert west bound	1697.70
	8' x 5' x 37.5'	Conc. Box Culvert east bound	
	6' x 7' x 58'	Box Culvert west bound	1692.50
	4' x 4' x 33.5'	Conc. Box Culvert east bound	
	65" x 40" x 134'	CMP Arch west bound	1695.00
	24" x 52'	CMP Culvert east bound	
	24" x 66'	CPM Culvert west bound	1695.00
	24" x 38'	CMP Culvert east bound	
	43" x 27" x 102'	CMP Arch west bound	1693.00
	24" x 40'	CMP east bound	
	24" x 120'	Pipe Culvert west bound	1691.00
	5' x 4' x 38.5'	Conc. Box Culvert east bound	
	2-48" x 94'	Pipe Culvert west bound	1687.00
	4' x 3' x 37.5'	Conc. Box Culvert east bound	
	48" x 94'	Pipe Culvert west bound	1688.00
	5-20'x 10' (±)	Conc. Slab Bridge east bound	
	5-20' x 10' (±)	R.C. Bridge west bound	1685.00 (±)
	4' x 3' x 35'	Conc. Box Culvert east bound	
	48" x 108'	Pipe Culvert west bound	1693.50
	5' x 4' x 48.5'	Box Culvert east bound	
	2-58" x 36" x 84'	CMP Arch west bound	1704.00
	24" x 36'	CMP east bound	
	24" x 84'	CMP Culvert west bound	1705.00
	36" x 42'	CMP Culvert east bound	
	36" x 94'	Pipe Culvert west bound	1700.50
	4' x 3' x 33.5'	Conc. Box Culvert east bound	
	48" x 100'	Pipe Culvert west bound	1708.50
	30" x 38'	CMP Culvert east bound	
	30" x 94'	Pipe Culvert west bound	1720.00
	3-19.5' x 5' (±)	Conc. Slab Bridge east bound	
	3-19.5' x 5' (±)	R.C. Bridge west bound	1724.00 (±)

Drainage Area or Subbasin	Size	Description	Invert Elevation
	4' x 3' x 40.83'	Conc. Box Culvert east bound	
	58" x 36" x 94'	CMP Arch west bound	1732.50
	36" x 38'	CMP Culvert east bound	
	36" x 84'	CMP Culvert west bound	1736.00
V5:			
	6-10' x 5.5' x 55.5'	Conc. Box Culvert east bound	
	6-10'x6'x52'	Box Culvert west bound	1736.00
	6-10' x 6' x 38.5'	Conc. Bridge east bound	
	6-10' x 4' x 60'	Box Culvert west bound	1743.50
	6' x 5' x 39.5'	Conc. Box Culvert east bound	
	6' x 7' x 66'	Box Culvert west bound	1749.50
V9:			
	4' x 3' x 33.5'	Box Culvert east bound	
	24" x 98'	CMP thru Box Culvert west bound	1766.50
	4' x 3' x 33.5'	Conc. Box Culvert east bound	
	2-43" x 27" x 54'	CMP Arch west bound	1771.50
	8' x 5' x 33.5'	Conc. Box Culvert east bound	
	6' x 7' x 66'	Box Culvert west bound	1767.00
	24" x 38'	CMP Culvert east bound	
	24" x 128'	Pipe Culvert west bound	1776.00
	24" x 46'	CMP Culvert east bound	
			1784.00
	30" x 38"	CMP Culvert east bound	
	30" x 98'	Pipe Culvert west bound	1783.50
	36" x 94'	Pipe Culvert west bound	1779.50
	6' x 5' x 33.5'	Conc. Box Culvert east bound	
	6' x 7' x 66'	Box Culvert west bound	1777.00
	2-20' x 10' (±)	Conc. Slab Bridge east bound	
	2-20' x 10' (±)	R.C. Bridge west bound	1773.00 (±)
	30" x 46'	CMP Culvert east bound	
	30" x 94'	Pipe Culvert west bound	1779.00
V11:			
	10' x 5' x 35'	Conc. Box Culvert east bound	
	8' x 7' x 66'	Box Culvert west bound	1773.70

Drainage Area or Subbasin	Size	Description	Invert Elevation
V13:			
	12' x 6' x 33.5'	Conc. Bridge east bound	
	2-8' x 5' x 52'	Box Culvert west bound	1785.00
	48" x 38'	CMP Culvert east bound	
	48" x 108'	Pipe Culvert west bound	1789.50
	5' x 4' x 37'	Box Culvert east bound	
	2-48" x 94'	Pipe Culvert west bound	1789.50
	5' x 5' x 40'	Box Culvert east bound	
	2-48" x 94'	Pipe Culvert west bound	1789.00
V15:			
	48" x 48'	CMP Culvert east bound	
	48" x 122'	Pipe Culvert west bound	1793.00
	6' x 5' x 39.5'	Conc. Box Culvert east bound	
	5' x 5' x 79'	Box Culvert west bound	1786.00
	24" x 48'	CMP Culvert east bound	
	24" x 86'	Pipe Culvert west bound	1791.50
	10' x 8' x 34.5'	Conc. Box Culvert east bound	
	10' x 8' x 69'	Box Culvert west bound	1783.00
	24" x 38'	CMP Culvert east bound	
	10' x 6' x 39.5'	Conc. Box Culvert east bound	
	8' x 7' x 69'	Box Culvert west bound	1786.00
	36" x 42'	CMP Culvert east bound	
	36" x 102'	Pipe Culvert west bound	1795.00
	36" x 38'	CMP Culvert east bound	
	36" x 100'	Pipe Culvert west bound	1796.50
V19:			
	5-24' x 8.5'	Conc. Slab Bridge east bound	
	5-24' x 8.5'	R.C. Bridge west bound	1795.00
	4-8' x 3' x 34.5'	Conc. Bridge Culvert east bound	
	2-36" x 164'	CMP Culvert west bound	1803.00
	4-10' x 5' x 46'	Conc. Box Culvert east bound	
	4-10' x 5' x 60'	Box Culvert west bound	1803.00
R1:			
	22' x 4.5' (±)	Conc. Slab Bridge east bound	
	3-10' x 6' x 61'	Box Culv west bound	1805.50

Drainage Area or Subbasin	Size	Description	Invert Elevation
	4' x 3' x 42.5'	Conc. Box Culvert east bound	
	58" x 36" x 92'	CMP Arch west bound	1819.00
	6' x 4' x 42.5'	Conc. Box Culvert east bound	
	2-48" x 100'	Pipe Culvert west bound	1821.00
	4' x 3' x 33.5'	Conc. Box Culvert east bound	
	2-43" x 27" x 86'	CMP Arch west bound	1827.50
	5' x 3' x 37.5'	Conc. Box Culvert east bound	
	54" x 100'	CMP Culvert west bound	1827.00
R3:			
	6' x 4' x 35.5'	Conc. Box Culvert east bound	
	2-48" x 114'	CMP Culvert west bound	1830.00
	2-8' x 5' x 45'	Conc. Box Culvert east bound	
	2-8' x 7' x 79'	Box Culvert west bound	1824.70
	6' x 5' x 38.5'	Conc. Box Culvert east bound	
	2-54" x 120'	Pipe Culvert west bound	1832.00
	5' x 4' x 40'	Conc. Box Culvert east bound	
	2-48" x 98'	CMP Culvert west bound	1834.00
R8:			
	88' x 6' (±)	Conc. Bridge east bound	
	88' x 6' (±)	Conc. Bridge west bound	1830.00 (±)
R12:			
	42" x 66.5'	CMP Culvert east bound	
	50" x 31" x 90'	CMP Arch west bound	1830.00
	2-6' x 6' x 43'	Conc. Box Culvert east bound	
	2-6' x 7' x 71'	Box Culvert west bound	1820.00
	2-36" x 52.5'	CMP Culvert east bound	
	36" x 100'	CMP Culvert west bound	1824.00
	36" x 100'	CMP Culvert west bound	
	36" x 65'	CMP Culvert east bound	
	36" x 94'	CMP Culvert west bound	1823.00
	93' x 10.5' (±)	Conc. Bridge east bound	
	93' x 10.5' (±)	Conc. Bridge west bound	1816.00 (±)
	4' x 4' x 52.5'	Conc. Box Culvert east bound	
	54" x 96'	CMP Culvert west bound	1852.00
	24" x 70'	CMP Culvert east bound	
	24" x 98'	CMP Culvert west bound	1856.00

Drainage Area or Subbasin	Size	Description	Invert Elevation
	10' x 6' x 48'	Conc. Box Culvert east bound	
	10' x 6' x 84'	Box Culvert west bound	1854.00
	24" x 60.5'	CMP Culvert east bound	
	24" x 48.5'	CMP Culvert east bound	

APPENDIX H

Culvert Conversion Factor

JMM JAMES M. MONTGOMERY, CONSULTING ENGINEERS, INC.

BY ED JUNOD DATE 3/22/89 CLIENT FLOOD CONTROL DISTRICT SHEET 1 OF 6

CHKD. BY F. Duron DESCRIPTION CALCULATION OF THE FLOW AREA RED. FACTOR JOB NO. 1213.0020.6.5

w/ changes noted
-3/24/89-

UTILIZING SUBBASINS V13 AND R3, DETERMINE THE AREA CONVERSION FACTOR FOR EACH SUBBASIN TO OBTAIN THE SUM OF INDIVIDUAL CULVERT FLOWS EQUAL TO THE COMPOSITE CULVERT FLOW.

a.) COMPUTE THE FLOW THROUGH EACH CULVERT IN THE DESIRED SUB BASIN.

b.) COMPUTE THE WEIGHTED INVERT AND CROWN ELEVATIONS FOR THE COMPOSITE CULVERT.

c.) DETERMINE THE DIMENSIONS OF THE COMPOSITE CULVERT AND BASED ON $Q_{\Sigma i} = Q_c$;

DETERMINE:

A_c

$Q_{\Sigma i}$ = SUM OF INDIVIDUAL CULVERT FLOWS

Q_c = COMPOSITE CULVERT FLOW

A_c = COMPOSITE CULVERT AREA.

d.) DETERMINE THE FLOW AREA REDUCTION FACTOR (C) FOR EACH SUB BASIN.

$$A_c = A_{\Sigma i}(C)$$

$$\frac{A_c}{A_{\Sigma i}} = C$$

e.) Assume all culverts flow full and outlet water surface elevation is at top of crown.

f.) *"REFERENCE FOR: ENT. LOSS COEFF. & HEAD NOMOGRAPHS*
"URBAN DRAINAGE DESIGN STANDARDS AND PROCEDURES FOR PENINSULAR MALAYSIA"

K.V. LEWIS, P.A. CASSELL & T.J. FRICKE
DRAINAGE AND IRRIGATION DIVISION MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT
MALAYSIA, 1975

JAMES M. MONTGOMERY, CONSULTING ENGINEERS, INC.

BY _____ DATE _____ CLIENT _____ SHEET 2 OF 6

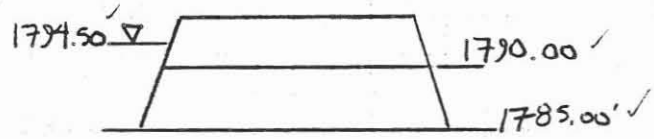
CHKD. BY _____ DESCRIPTION _____ JOB NO. _____

SOLUTION:

a.) FLOWS THROUGH CULVERTS OF SUBBASIN V13 —

CULVERT 1:

#(48)



CONC. BOX CULV.
(2) 8' × 5' × 52'
FLOWING FULL
$\eta = 0.012$
$K_e = 0.5$
USE: FIG. C-7

$\therefore H = 4.5'$
$Q = 530(2) \Longrightarrow$ **Q = 1060 CFS**

CULVERT 2:

#(49)

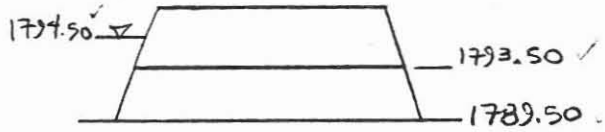
CONC. PIPE CULV.
48" × 108'
FLOWING FULL
$\eta = 0.012$
$K_e = 0.5$
USE: FIG. C-8

$\therefore H = 1.0'$

Q = 73 CFS

CULVERT 3:

#(50)

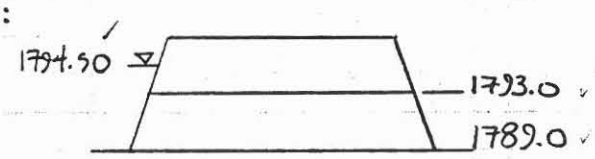


CONC. PIPE CULV.
(2) 48" × 94'
FLOWING FULL
$\eta = 0.012$
$K_e = 0.5$
USE: FIG. C-8

$\therefore H = 1.0'$
$Q = 76(2) \Longrightarrow$ **Q = 152 CFS**

CULVERT 4:

#(51)



CONC. PIPE CULV.
(2)(48" × 94')
FLOWING FULL
$\eta = 0.012$
$K_e = 0.5$
USE: FIG. C-8

$\therefore H = 1.50'$
$Q = 88(2) \Longrightarrow \boxed{Q = 176 \text{ CFS}}$

b.) SUBBASIN V13

CULVERT	AREA (FT^2)	INVERT ELEV.S (FT)	CROWN ELEV.S (FT)
1	80	1785.00	1790.00
2	12.6	1789.00 .50	1793.50
3	25.2	1789.50	1793.50
4	25.2	1789.00	1793.00

$\Sigma = 143$

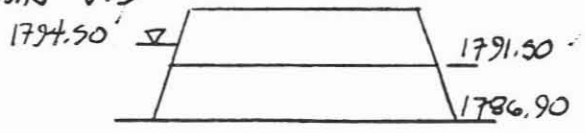
$$\text{WEIGHTED INVERT} = \frac{(80)(1785) + (12.6)(1789) + (25.2)(1789.5) + (25.2)(1789)}{143}$$

$= 1786.90$ OK

$$\text{WEIGHTED CROWN} = \frac{(80)(1790) + (12.6)(1793.50) + (25.2)(1793.50) + (25.2)(1793)}{143}$$

$= 1791.50$ OK

c.) SUBBASIN V13



CONC BOX CULV.
FLOWING FULL
$\eta = 0.012$
$K_e = 0.5$
USE: FIG. C-7

$\therefore H = 3.0'$
$Q_{si} = 1461 \Longrightarrow \boxed{A_c = 135 \text{ FT}^2}$

d.) SUBBASIN V13

$A_c = 135\ ft^2$

$A_{ei} = 143\ ft^2$

$A_c = A_{ei}(c)$

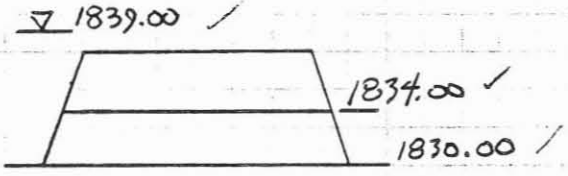
$\therefore c = \frac{135}{143}$

$\boxed{c = 94\%}$ FLOW AREA REDUCTION FACTOR FOR SUBBASIN V13.

e.) FLOWS THROUGH CULVERTS OF SUBBASIN R3 —

CULVERT 1:

*(68)

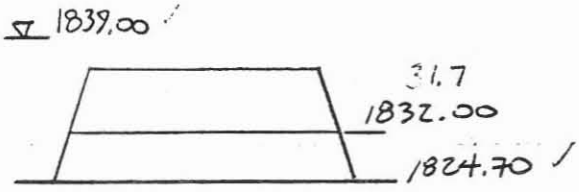


CMP
(2) 48" × 114'
FLOWING FULL
$n = 0.024$
$K_e = 0.5$
USE: FIG. C-9

$\therefore H = 5.0'$
$Q = 121(2) \Longrightarrow \boxed{Q = 242\ CFS}$
115 230

CULVERT 2:

*(69)



CONC. BOX CULV.
(2) 8' × 7' × 79'
FLOWING FULL
$n = 0.012$
$K_e = 0.5$
USE: FIG. C-7

1.3
$\therefore H = 7.0'$
$Q = 925(2) \Longrightarrow \boxed{Q = 1850\ CFS}$
950 1,900

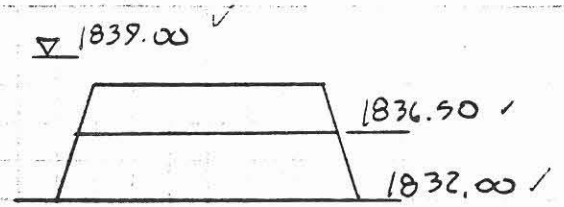
JMM JAMES M. MONTGOMERY, CONSULTING ENGINEERS, INC.

BY _____ DATE _____ CLIENT _____ SHEET 5 OF 6

CHKD. BY _____ DESCRIPTION _____ JOB NO. _____

CULVERT 3:

*(70)

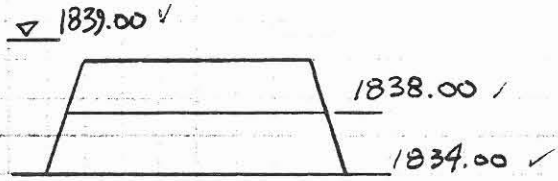


CONC. PIPE CULV.
(2) 54" x 120'
FLOWING FULL
$\eta = 0.012$
$K_e = 0.5$
USE: FIG. C-8

$\therefore H = 2.5'$
$Q = 144(2)$ $\Longrightarrow$ $\boxed{Q = 288 \text{ CFS}}$

CULVERT 4:

*(71)



CMP
(2) 48" x 98'
FLOWING FULL
$\eta = 0.024$
$K_e = 0.5$
USE: FIG. C-9

$\therefore H = 1.0$
$Q = 56(2)$ $\Longrightarrow$ $\boxed{Q = 112 \text{ CFS}}$
53 106

b.) SUB BASIN R3

CULVERT	AREA (FT^2)	INVERT ELEV.S (FT)	CROWN ELEV.S (FT)
1	25.2	1830.00	1834.00
2	112	1824.70	1832.00 31.7
3	31.81	1832.00	1836.50
4	25.2	1834.00	1838.00

$\Sigma = 194.21$

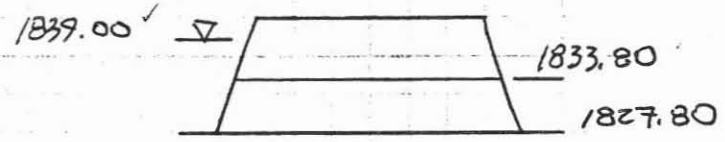
$$\text{WEIGHTED INVERT} = \frac{(25.2)(1830) + (112)(1824.70) + (31.81)(1832) + (25.2)(1834)}{194.21}$$

$$= 1827.80$$

$$\text{WEIGHTED CROWN} = \frac{(25.2)(1834) + (112)(1832) + (31.81)(1836.5) + (25.2)(1838)}{194.21}$$

$$= 1833.80$$

c'.) SUB BASIN R3



L = 77'
CONC. BOX CULV.
FLOWING FULL
$\eta = 0.012$
$K_e = 0.5$
USE: FIG. C-7

$\therefore H = 5.2'$

$Q_{ei} = 2492$
2524

$\Longrightarrow$ $\boxed{A_c = 176\ FT^2}$

2484 = 176

d'.) SUB BASIN R3

$A_c = 176\ FT^2$

$A_{ei} = 194.21\ FT^2$

$A_c = A_{ei}(c)$

$\therefore C = \frac{176}{194.21}$

$\boxed{C = 91\%}$ FLOW REDUCTION FACTOR FOR SUB BASIN R3.

CONCLUSION:

AS CAN BE SEEN, THE COMPOSITE CULVERT AREA IS LESS THAN THE SUM OF THE INDIVIDUAL CULVERT AREAS FOR A PARTICULAR SUBBASIN BY A CERTAIN PERCENTAGE. THE PERCENTAGES OBTAINED FOR SUBBASINS V13 AND R3 WERE 94% AND 91%, RESPECTIVELY; THEREFORE, BASED UPON THESE FINDINGS AN AVERAGE PERCENTAGE OF 92.5% WILL BE UTILIZED AS THE FLOW AREA REDUCTION FACTOR FOR CONVERTING THE INDIVIDUAL FLOW AREAS INTO A COMPOSITE FLOW AREA.

$\boxed{C = 92.5\%}$

Table C-1 Entrance Loss Coefficients for Culverts with Outlet Control

Type of Structure and Design of Entrance	k_e
1. Pipe, Concrete	
Projecting from fill	
Socket (groove) end	0.2
Square cut end	0.5
Headwall or headwall and wingwalls	
Socket end of pipe (groove-end)	0.2
Square-edge	0.5
Rounded (radius = 1/12D)	0.2
Mitered to conform to fill slope	0.7
End-Section conforming to fill slope	0.5
2. Pipe, or Pipe-Arch, Corrugated Metal	
Projecting from fill (no headwall)	0.9
Headwall or headwall and wingwalls	
Square-edge	0.5
Mitered to conform to fill slope	0.5
3. Box, Reinforced Concrete	
Headwall parallel to embankment (no wingwalls)	
Square-edged on 3 edges	0.5
Rounded on 3 edges to radius of 1/12 barrel dimension	0.2
Wingwalls at 30° to 75° to barrel	
Square-edged at crown	0.4
Crown edge rounded to radius of 1/12 barrel dimension	0.2
Wingwalls at 10° to 25° to barrel	
Square-edged at crown	0.5
Wingwalls parallel (extension of sides)	
Square-edged at crown	0.7

(c) Friction Head (H_f)

The friction head (H_f) is the energy required to overcome the roughness of the culvert barrel. H_f can be expressed in several ways. Since most engineers are familiar with Manning's n the following expression is used:

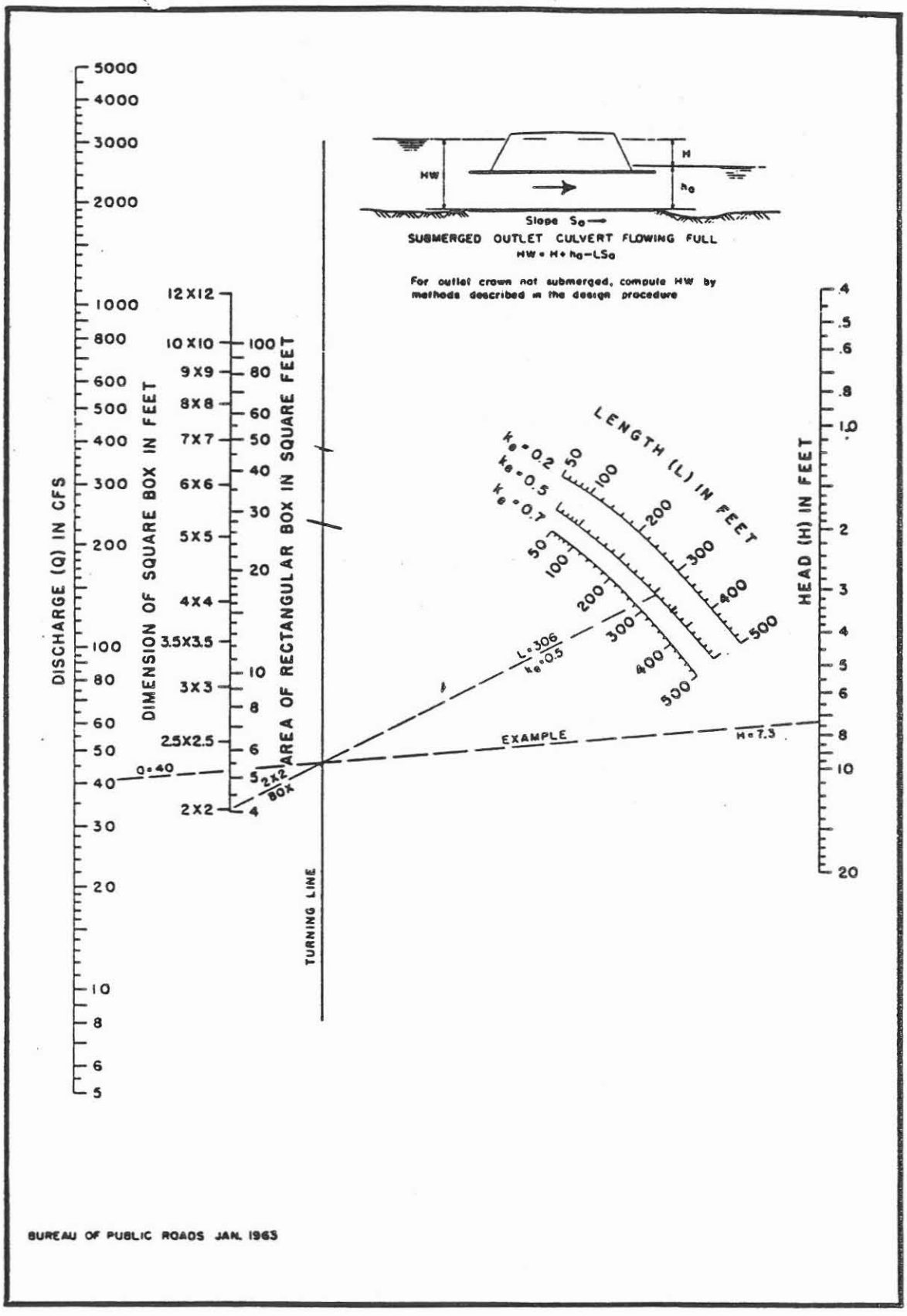


Figure C-7 Head for Concrete Box Culvert Flowing Full n = 0.012

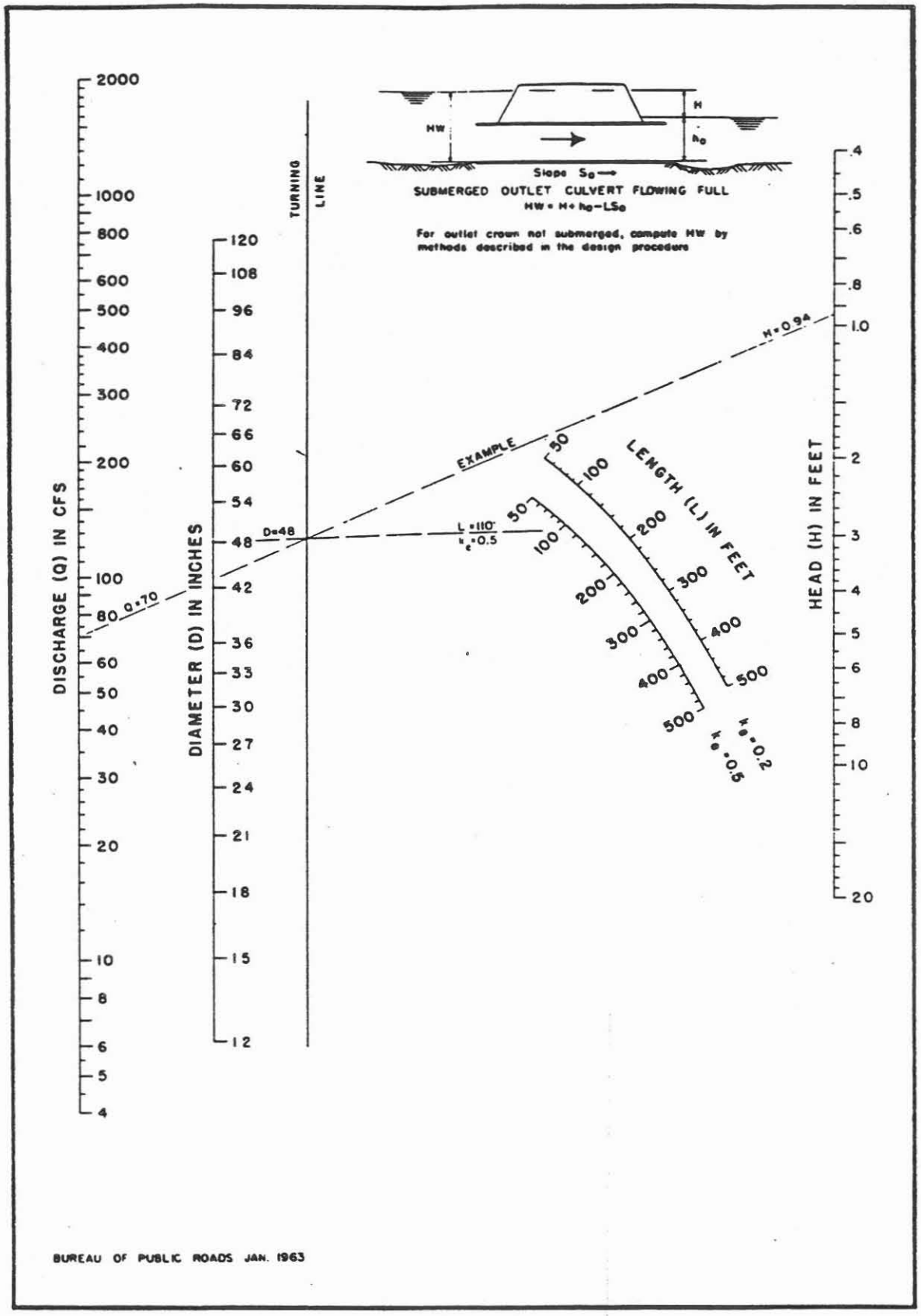


Figure C-8 Head for Concrete Pipe Culverts Flowing Full n = 0.012

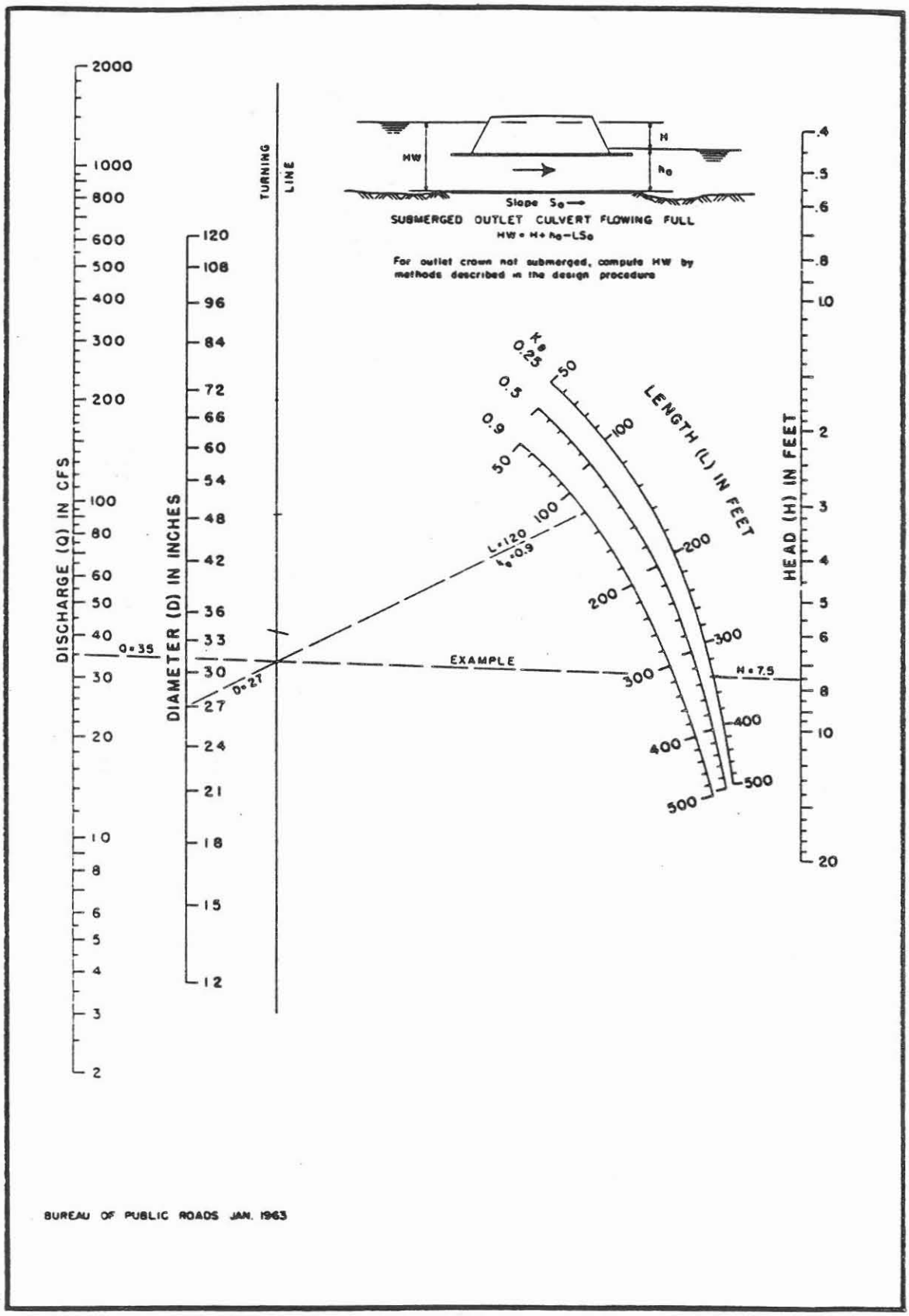


Figure C-9 Head for Standard C. M. Pipe Culverts Flowing Full n = 0.024

APPENDIX H

Appendix H contains the calculation sheets showing development of the conversion factor used to relate total area of all Highway 60 drainage openings within a subbasin to a composite culvert area. The composite culvert area was used in the study to prepare an outlet rating curve for performing reservoir routing across Highway 60.

APPENDIX I

Culvert Conversion and Highway Rating Curve

APPENDIX I

Appendix I contains the printout of a Super Calc file showing calculation of composite culvert areas for all concentration points where reservoir routing was performed across Highway 60. This appendix also contains a detailed example of the calculation procedure used to develop a rating curve for reservoir routing across Highway 60. The example used is for concentration point V10A, which is the routing reach at the downstream end of subbasin V9 (and at the upstream end of subbasin V10). To review rating curves that were developed for the other reservoir routing reaches across Highway 60, the HEC-1 listing presented in Appendix B can be consulted.

CONSTRUCT A STAGE - OUT FLOW CURVE
FOR CONCENTRATION POINT V10A

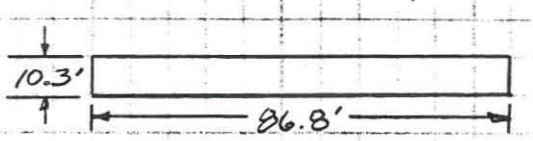
I.) FLOW THROUGH COMPOSITE BOX CULVERT

* AREA = 894.0 FT.^{2}
* CROWN ELEV. - SET AT WEIGHTED CROWN ELEVATION
= 1783.3 FT.
* INVERT ELEV. - SET AT WEIGHTED INVERT ELEVATION
= 1773.0 FT.

∴ WIDTH OF COMPOSITE BOX CULVERT IS CALCULATED AS FOLLOWS:

WIDTH = AREA / HEIGHT
= 894.0 FT.^{2} / (1783.3 - 1773.0) FT.
= (894.0 / 10.30)
= 86.8 FT.

*



COMPOSITE BOX CULVERT SECTION [NOT TO SCALE]

DETERMINE FLOW THROUGH BOX CULVERT (AS OPEN-CHANNEL FLOW)

ASSUME:
$S = 0.001$
$n = 0.012$

COMPUTE AS: $Q = \dfrac{K D'^{8/3} S^{1/2}}{n}$ (KING & BRATER PG. 7-13)

WHERE: D' = DEPTH OF FLOW (ft.)
b = CHANNEL BOTTOM WIDTH (ft.)
= 86.8'
DETERMINE K COEFFICIENT FROM TABLE 7-10 (IBID)
(REFER TO SHT. No. 12)

* REFER TO SHT. No. 2 FOR COMPOSITE AREA CULVERT DATA

COMPOSITE AREA CULVERT CALCULATIONS

SB	CULV.#	AREA (ft^2)	INVERT ELEV.	CROWN ELEV.	TOTAL AREA (ft^2)	WEIGHTED INVERT	WEIGHTED CROWN	HEIGHT (ft)	WIDTH (ft)	COMPOSITE AREA (ft^2)	CENTER LINE ELEVATION	LENGTH (ft)	HYDRAULIC RADIUS
V5													
	34	360	1736	1743									
	35	240	1743.5	1747.5									
	36	42	1749.5	1756.5									
					642.0	1739.7	1745.6	5.9	101.0	593.9	1742.6	52	2.8
V9													
	37	3.14	1766.5	1768.5									
	38	16.13	1771.5	1775.8									
	39	42	1767	1774									
	40	3.14	1776	1778									
	41	3.14	1784	1786									
	42	4.91	1783.5	1786									
	43	7.07	1779.5	1781.9									
	44	42	1777	1784									
	45	840	1773	1784									
	46	4.91	1779	1781.5									
					966.4	1773.0	1783.3	10.3	86.8	894.0	1778.2	66	4.6
V11													
	47	56	1773.7	1780.7									
					56.0	1773.7	1780.7	7	7.4	51.8	1777.2	66	1.8
V13													
	48	80	1785	1790									
	49	12.57	1789.5	1793.5									
	50	25.13	1789.5	1793.5									
	51	25.13	1789	1793									
					142.8	1786.9	1791.5	4.6	29.0	132.1	1789.2	52	2.0
V15													
	52	12.57	1793	1797									
	53	25	1786	1791									
	54	3.14	1791.5	1793.5									
	55	80	1783	1791									
	57	56	1786	1793									
	58	7.07	1795	1798									
	59	7.07	1796.5	1799.5									
					190.9	1786.0	1792.6	6.6	26.8	176.5	1789.3	69	2.6
V19													
	60	1020	1795	1803.5									
	61	14.14	1803	1806									
	62	200	1803	1808									
					1234.1	1796.4	1804.3	7.9	145.1	1141.6	1800.3	50.0	3.7

R1												
	63	180	1805.5	1811.5								
	64	14.5	1818.5	1821.5								
	65	25.13	1821	1825								
	66	16.13	1827.5	1829.8								
	67	15.9	1827	1831.5								
					251.1	1810.6	1815.9	5	44.0	232.8	1815.2	61	2.4
R3												
	68	25.13	1830	1834								
	69	112	1824.7	1831.7								
	70	31.81	1832	1836.5								
	71	25.13	1834	1838								
					194.1	1827.8	1833.6	6	30.9	179.5	1830.7	79	2.4
R8												
	72	528	1829.5	1836								
					528.0	1829.5	1836.0	7	75.1	488.4	1832.8	50	3.0
R12												
	73	10.76	1830	1832.6								
	74	84	1820	1827								
	75	14.14	1824	1827								
	76	7.07	1823	1826								
	77	1023	1816.5	1827.5								
	78	15.9	1852	1856.5								
	79	3.14	1856	1858								
	80	60	1854	1860								
					1218.0	1819.4	1829.6	10	110.9	1126.7	1824.5	50	4.7

OPEN-CHANNEL FLOW

ELEV. (FT.)	D' (FT.)	D'/b	K	$D'^{8/3}$	Q (CFS)
1775.0	2	0.02	72.4	6.35	1211
1777.0	4	0.05	27.9	40.32	2964
1779.0	6	0.07	19.5	118.87	6108
1781.0	8	0.09	14.8	256.00	9984
1783.3	10.3	0.12	10.73	502.23	14,201

DETERMINE FLOW THROUGH THE BOX CULVERT
(AS ORIFICE FLOW)

ASSUME:

OUTLET CONTROL (TYPE 6 FLOW)

* $n = 0.012$
$Z = 0.05 = (L)(D)$
$h_3 = (80\%)\, h_1$
$h_3 = h_4$
h_1 = HEAD (FT.) ABOVE THE INLET INVERT ELEV.
$L = 50$ FT.

THE WATER SURFACE IS ASSUMED TO BE AT THE TOP OF THE CULVERT AT THE OUTLET, BUT THE CULVERT IS NOT SUBMERGED AND FREE OUTFALL PREVAILS.

A.) • COMPUTE THE RATIO OF h_1/D

• SELECT THE DISCHARGE COEFFICIENT C, THAT IS APPLICABLE TO THE CULVERT GEOMETRY FROM TABLE 5. OF SHEET 9.

ASSUMED CULVERT GEOMETRY:
- CONCRETE BOX CULVERT
- $\omega = 0.3$ FT.
- SET FLUSH IN A VERTICAL HEADWALL

* REFER TO SHEETS 6, 7, 8, 9 & 10 FOR THE METHOD USED TO CALCULATE ORIFICE FLOW.

ELEV. (FT.)	h_1 (FT.)	D (FT.)	h_1/D	h_4 (FT.)	$(h_1-z)/D \geq 1.5$	
1788.5	15.5	10.3	1.50	12.4	1.50	✓
1789.5	16.5	"	1.60	13.2	1.60	✓

WITH $\omega/D = 0.3/10.3$
$= 0.03$

$\therefore C = 0.90$

B.) • FROM FIGURE 17, PAGE 10, DETERMINE THE VALUE OF $Q/A_o\sqrt{D}$ CORRESPONDING TO $29n^2L/R_o^{4/3} = 1$

$29n^2L/R_o^{4/3}$	h_1/D	R_o	$Q/A_o\sqrt{D}$	COMPUTED RATIO $29n^2L/R_o^{4/3}$
1	1.5	4.6	3.9	0.03
1	1.6	4.6	4.1	0.03

C.) • FROM FIGURE 17, PAGE 10, USING THE COMPUTED RATIO, FROM PART B, AND THE COEFFICIENT C, FROM PART A, FIND THE CORRECTION FACTOR: K_f

$K_f \approx 1.59$

D.) • MULTIPLY THE VALUE OF $Q/A_o\sqrt{D}$ FROM PART B BY THE VALUE OF K_f, THUS DETERMINING AN ADJUSTED RATIO $Q/A_o\sqrt{D}$.

$Q/A_o\sqrt{D}$	K_f	RATIO
3.9	1.59	6.20
4.1	1.59	6.52

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BY E. JUNOD DATE 4/21/89 CLIENT MARICOPA F.C.D. SHEET 5 OF 14

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E.) · DETERMINE THE VALUE OF Q FROM THE ADJUSTED RATIO OF PART D.

$Q = \text{RATIO}\,(A_o\sqrt{D})$

ELEV. (FT.)	H (FT)	A_o (FT^2)	$\sqrt{D}$ (FT)	$A_o\sqrt{D}$ (FT^3)	RATIO	Q (CFS)
1788.5	15.5	894	3.21	2869.17	6.20	17,789
1789.5	16.5	894	3.21	2869.17	6.52	18,707

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Techniques of Water-Resources Investigations
of the United States Geological Survey

Chapter A3

MEASUREMENT OF PEAK DISCHARGE AT CULVERTS BY INDIRECT METHODS

By G. L. Bodhaine

Book 3
APPLICATIONS OF HYDRAULICS

SYMBOLS AND UNITS

Symbol	Definition	Unit
A	Area.	ft^2
A_0	Area of culvert barrel.	ft^2
A_c	Area of section of flow at critical depth.	ft^2
b	Width of contracted flow section for box culvert.	ft
C	Coefficient of discharge; also, coefficient for computing various culvert properties; subscripts refer to specific items, as a for area, k for conveyance, m for mean depth, p for wetted perimeter, q for discharge, r for hydraulic radius, and t for top width.	
D	Maximum inside vertical dimension of culvert barrel, or the inside diameter of a circular section. (For corrugated pipes, D is measured as the minimum inside diameter.)	ft
D_m	Maximum inside diameter of pipe culvert at entrance.	ft
d	Depth of flow measured from the lowest point in the cross section for culverts.	ft
d_c	Maximum depth in critical-flow section.	ft
d_m	Mean depth.	ft
F	Froude number.	
g	Gravitational constant (acceleration).	ft/sec^2
H_0	Specific energy.	ft
h	Static or piezometric head above an arbitrary datum.	ft
h_c	d_c+z for type 1 culvert flow.	ft
h_e	Head loss due to entrance contraction.	ft
h_f	Head loss due to friction.	ft
h_v	Velocity head at a section.	ft
K	Conveyance of a section.	ft^3/sec
K_c	Conveyance of critical depth section.	ft^3/sec
K_0	Conveyance of full culvert barrel.	ft^3/sec
k	Adjustment factor; subscripts refer to specific items, as a for skewed abutments with dikes, L for length, r and R for radius, w for length of wingwalls, and θ for wingwall angle.	
L	Length of culvert barrel, bridge abutment, or broad-crested weir in direction of flow.	ft
L_p	Distance a culvert barrel projects beyond a headwall or embankment.	ft
L_w	Distance from approach section to entrance of culvert, upstream side of contraction, or crest of weir.	ft
m	Channel-contraction ratio.	
n	Manning roughness of coefficient.	$ft^{1/6}$
n_c	Composite value of roughness coefficient.	$ft^{1/6}$
P	Wetted perimeter of cross section of flow.	ft
P_p	Wetted perimeter of the paved invert of a culvert.	ft
Q	Total discharge.	ft^3/sec
R	Hydraulic radius.	ft
R_0	Hydraulic radius of a culvert barrel.	ft
r	Radius of entrance rounding.	ft
S	Friction slope.	
S_c	Bed slope of culvert for which the normal depth and the critical depth are equal.	
S_0	Bed slope of culvert barrel.	
T	Width of a section at the water surface.	ft
V	Mean velocity of flow in a section.	ft/sec
V_0	Full culvert velocity.	ft/sec
w	Measure of the length of a wingwall or chamfer.	ft
x	Length of part-full flow.	ft
z	Elevation of a point above a datum.	ft
$_{1,2}$	Subscripts which denote the location of cross sections or section properties in downstream order.	
α	Velocity-head coefficient.	
θ	Acute angle between a wingwall and plane of contraction or headwall; and the bevel angle.	
$<$	Less than.	
$\leq$	Equal to or less than.	
$>$	Greater than.	
$\geq$	Equal to or greater than.	

the entrance; the culvert entrance; the culvert barrel; the culvert outlet, the farthest downstream section of the barrel; and the tailwater representing the getaway channel.

The change in the water-surface profile in the approach channel reflects the effect of acceleration due to contraction of the cross-sectional area. Loss of energy near the entrance is related to the sudden contraction and subsequent expansion of the live stream within the barrel, and entrance geometry has an important influence on this loss. Loss of energy due to barrel friction is usually minor, except in long rough barrels on flat slopes. The important features that control the stage-discharge relationship at the approach section can be the occurrence of critical depth in the culvert, the elevation of the tailwater, the entrance or barrel geometry, or a combination of these.

The peak discharge through a culvert is determined by application of the continuity equation and the energy equation between the approach section and a section within the culvert barrel. The location of the downstream section depends on the state of flow in the culvert barrel. For example, if critical flow occurs at the culvert entrance, the headwater elevation is not a function of either the barrel friction loss or the tailwater elevation, and the terminal section is located at the upstream end of the culvert.

Information obtained in the field survey includes the peak elevation of the water surface upstream and downstream from the culvert and the geometry of the culvert and approach channel. Reliable high-water marks can rarely be found in the culvert barrel; therefore, the type of flow that occurred during the peak flow cannot always be determined directly from field data, and classification becomes a trial-and-error procedure.

General classification of flow

For convenience in computation, culvert flow has been classified into six types on the basis of the location of the control section and the relative heights of the headwater and tailwater elevations. The six types of flow are illustrated in figure 2, and pertinent characteristics of each type are given in table 1. From this information

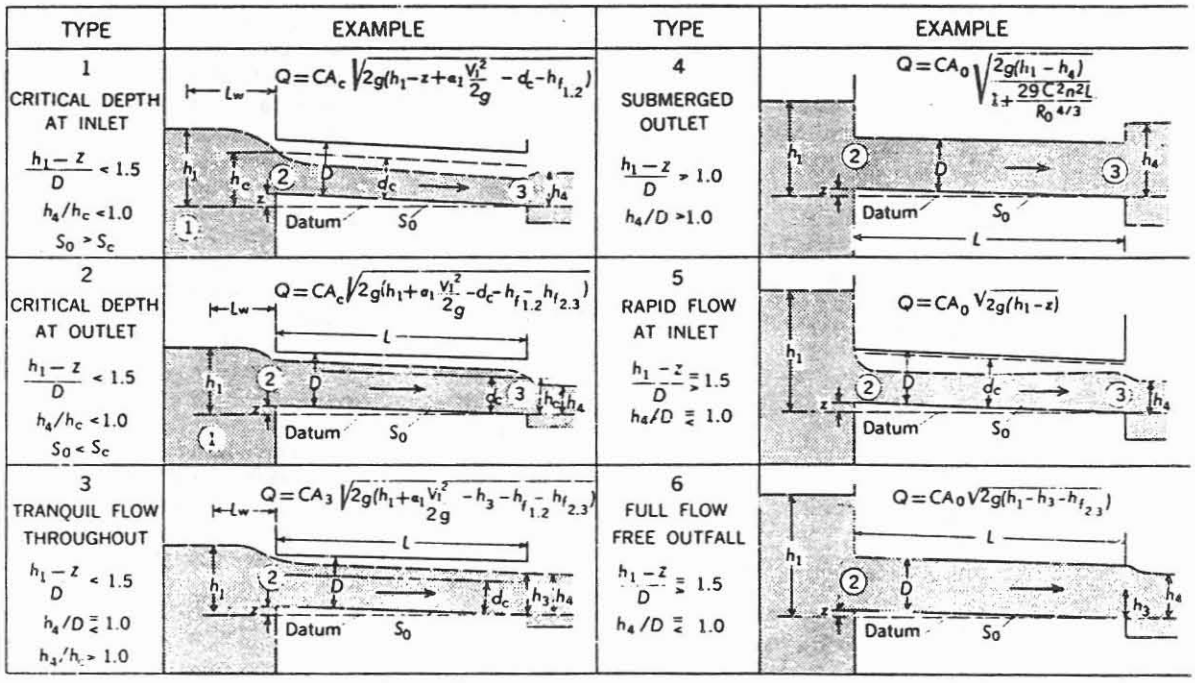

Figure 2.—Classification of culvert flow.

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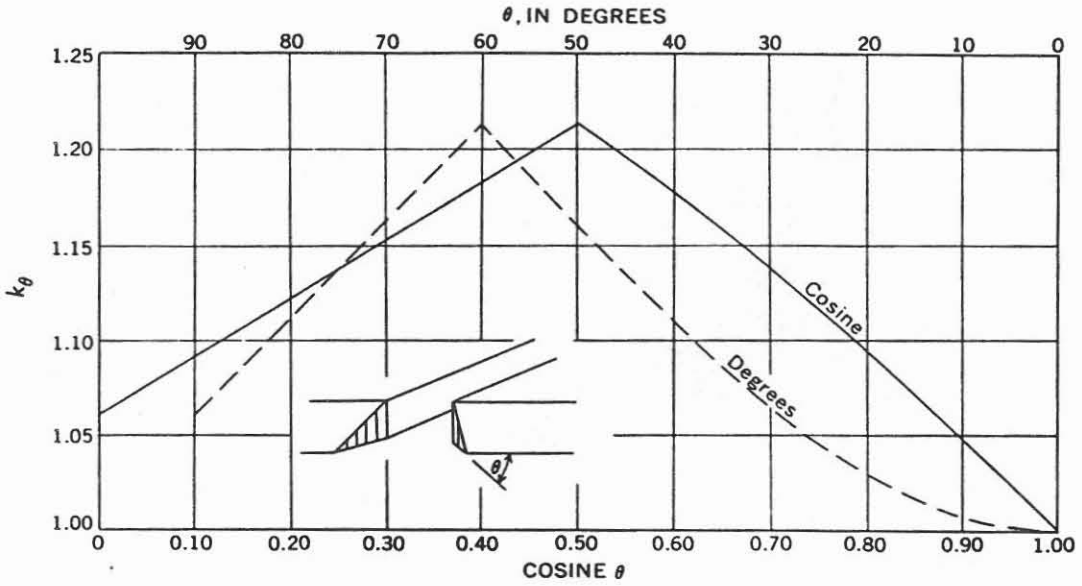

Figure 24.—Variation of discharge coefficient with wingwall angle, types 1, 2, and 3 flow in box culverts with wingwall set flush with sloping embankment.

following list presents values of k_L for various values of L_p/D.

L_p/D	k_L	L_p/D	k_L
0.00	1.00	0.0	1.00
.01	.99	.1	.92
.02	.98	.2	.92
.03	.98	.3	.92
.04	.97	.4	.91
.05	.96	.5	.91
.06	.95	.6	.91
.07	.94	.7	.91
.08	.94	.8	.90
.09	.93	.9	.90
.10	.92	≥1.0	.90

Concrete pipes with beveled end

The discharge coefficient for projecting entrances for concrete pipes with a beveled end is the same as for flush entrances.

Mitered pipe set flush with sloping embankment

The discharge coefficient for mitered pipes set flush with a sloping embankment is a function of the ratio of headwater height to pipe diameter and can be determined from figure 25.

For a projecting mitered pipe with a thin wall (like corrugated metal), adjust the discharge coefficient in the same manner as any other projecting barrel. Do not adjust for rounding or beveling.

Types 4 and 6 flow

Flush setting in vertical headwall

Box or pipe culverts

Select the discharge coefficient for box or pipe culverts set flush in a vertical headwall from table 5. This includes square-ended pipes or boxes, corrugated pipes, corrugated pipe-arches, corrugated pipes with a standard conical entrance, concrete pipes with a beveled or bellmouthed end, and box culverts with rounded or beveled sides.

Table 5.—Discharge coefficients for box or pipe culverts set flush in a vertical headwall; types 4 and 6 flow

r/h, w/h, w/D, or r/D	C
0	0.84
.02	.88
.04	.91
.06	.94
.08	.96
.10	.97
.12	.98

The discharge coefficient for flared pipe end sections is 0.90 for all diameters and all values of $(h_1-z)/D$.

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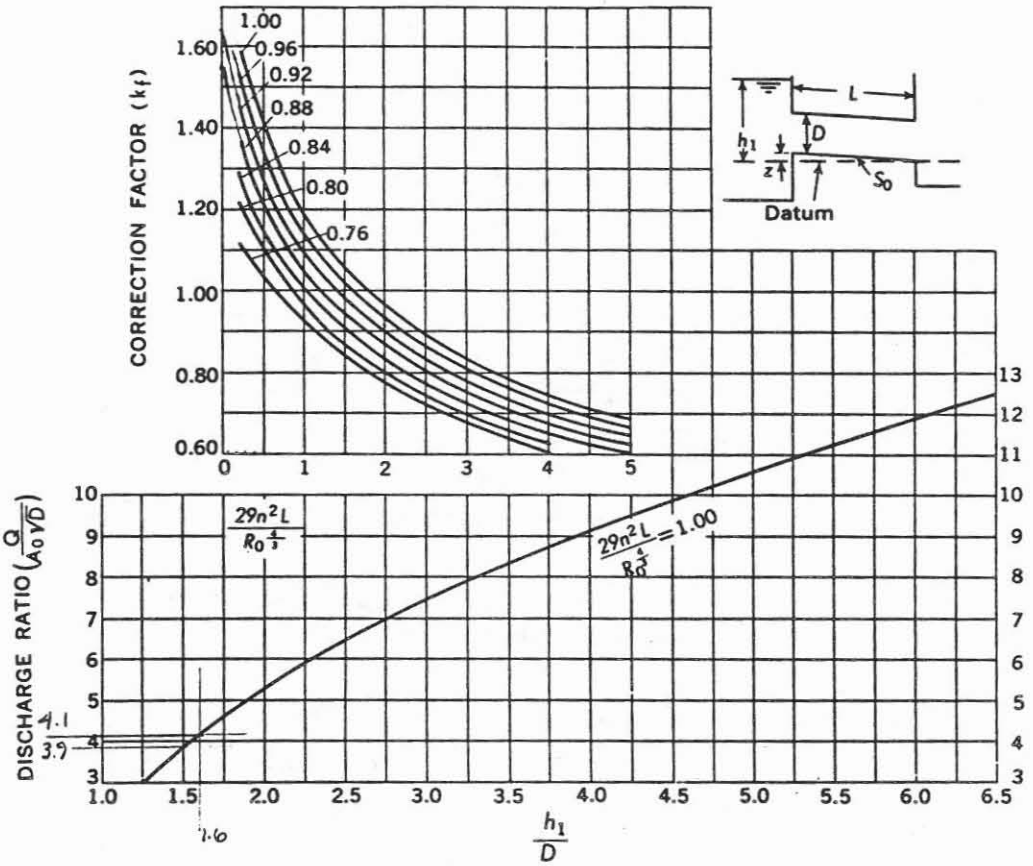

Figure 17.—Relation between head and discharge for type 6 flow.

gradient upstream to the headwater elevation using the computed discharge. If the computed and known elevation there do not agree, assume another critical depth and repeat the procedure.

2. For types 3 and 4 flow (flow with backwater), the discharge is assumed. Then starting with the known tailwater elevation, the energy gradient is routed upstream to the headwater elevation. If the computed headwater elevation differs from that known, repeat the computations using other assumed discharges until agreement is reached.
3. For type 5 flow (flow under high head), the controlling feature is the entrance geometry. The routing procedure cannot be applied here.
4. For type 6 flow (flow under high head), the same procedure is followed as for type 3, except that the starting point for the piezometric head (h_3) must be estimated in some manner. In type 6 flow, h_3 is not measured to the water surface.
   (1) For box culverts the line of piezometric head at the outlet may be considered to lie slightly below the centerline for high Froude numbers, gradually increasing to a level about halfway between centerline and top of barrel for a Froude number approaching unity. An average h_3 of $0.65D$ may be used for the range of Froude numbers ordinarily encountered in culvert flow in the field.
   (2) For pipe culverts of circular section it is known that the piezometric head usually lies between $0.5D$ and $1.0D$. An average h_3 of $0.75D$ may be used for the range of Froude numbers ordinarily encountered under field conditions. A more exact value, based

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HANDBOOK OF HYDRAULICS

for the Solution of Hydrostatic and Fluid-flow Problems

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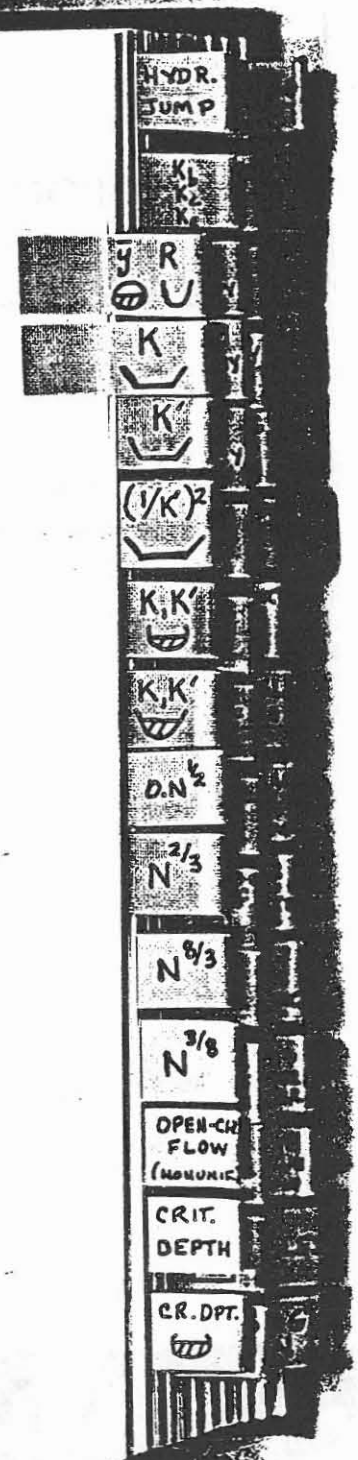
Table 7-10. Values of K in Formula $Q = \frac{K}{n} D^{5/3} s^{1/2}$ for Trapezoidal Channels

D = depth of water b = bottom width of channel

$\frac{D}{b}$	Side slopes of channel, ratio of horizontal to vertical									
	Vertical	¼–1	½–1	¾–1	1–1	1½–1	2–1	2½–1	3–1	4–1
.01	146.7	147.2	147.6	148.0	148.3	148.8	149.2	149.5	149.9	150.5
.02	72.4	72.9	73.4	73.7	74.0	74.5	74.9	75.3	75.6	76.3
.03	47.6	48.2	48.6	49.0	49.3	49.8	50.2	50.6	50.9	51.6
.04	35.3	35.8	36.3	36.6	36.9	37.4	37.8	38.2	38.6	39.3
.05	27.9	28.4	28.9	29.2	29.5	30.0	30.5	30.9	31.2	32.0
.06	23.0	23.5	23.9	24.3	24.6	25.1	25.5	26.0	26.3	27.1
.07	19.5	20.0	20.4	20.8	21.1	21.6	22.0	22.4	22.8	23.6
.08	16.8	17.3	17.8	18.1	18.4	18.9	13.4	19.8	20.2	21.0
.09	14.8	15.3	15.7	16.1	16.4	16.9	17.4	17.8	18.2	19.0
.10	13.2	13.7	14.1	14.4	14.8	15.3	15.7	16.2	16.6	17.4
.11	11.83	12.33	12.76	13.11	13.42	13.9	14.4	14.9	15.3	16.1
.12	10.73	11.23	11.65	12.00	12.31	12.8	13.3	13.8	14.2	15.0
.13	9.80	10.29	10.71	11.06	11.37	11.9	12.4	12.8	13.3	14.1
.14	9.00	9.49	9.91	10.26	10.57	11.1	11.6	12.0	12.5	13.4
.15	8.32	8.80	9.22	9.57	9.88	10.4	10.9	11.4	11.8	12.7
.16	7.72	8.20	8.61	8.96	9.27	9.81	10.29	10.75	11.20	12.1
.17	7.19	7.67	8.08	8.43	8.74	9.28	9.77	10.23	10.68	11.6
.18	6.73	7.20	7.61	7.96	8.27	8.81	9.30	9.76	10.21	11.1
.19	6.31	6.78	7.19	7.54	7.85	8.39	8.88	9.34	9.80	10.7
.20	5.94	6.40	6.81	7.16	7.47	8.01	8.50	8.97	9.43	10.3
.21	5.60	6.06	6.47	6.82	7.12	7.67	8.16	8.63	9.09	10.00
.22	5.30	5.76	6.16	6.51	6.82	7.36	7.86	8.33	8.79	9.70
.23	5.02	5.48	5.87	6.22	6.53	7.08	7.58	8.05	8.51	9.43
.24	4.77	5.22	5.62	5.96	6.27	6.82	7.32	7.79	8.26	9.18
.25	4.54	4.98	5.38	5.73	6.04	6.58	7.08	7.56	8.03	8.95
.26	4.32	4.77	5.16	5.51	5.82	6.37	6.87	7.35	7.81	8.74
.27	4.13	4.57	4.96	5.31	5.62	6.17	6.67	7.15	7.62	8.54
.28	3.95	4.38	4.77	5.12	5.43	5.98	6.48	6.96	7.43	8.36
.29	3.78	4.21	4.60	4.95	5.25	5.81	6.31	6.79	7.26	8.19
.30	3.62	4.05	4.44	4.78	5.09	5.64	6.15	6.63	7.10	8.04
.31	3.48	3.90	4.29	4.63	4.94	5.49	6.00	6.48	6.96	7.89
.32	3.34	3.77	4.15	4.49	4.80	5.35	5.86	6.34	6.82	7.75
.33	3.21	3.64	4.02	4.36	4.67	5.22	5.73	6.21	6.69	7.62
.34	3.09	3.51	3.89	4.23	4.54	5.10	5.60	6.09	6.56	7.50
.35	2.98	3.40	3.78	4.12	4.43	4.98	5.49	5.97	6.45	7.39
.36	2.88	3.29	3.67	4.01	4.31	4.87	5.38	5.86	6.34	7.28
.37	2.78	3.19	3.57	3.90	4.21	4.76	5.27	5.76	6.24	7.18
.38	2.68	3.09	3.47	3.81	4.11	4.67	5.17	5.66	6.14	7.09
.39	2.59	3.00	3.38	3.71	4.02	4.57	5.08	5.57	6.05	6.99
.40	2.51	2.92	3.29	3.62	3.93	4.48	4.99	5.48	5.96	6.91
.41	2.43	2.83	3.20	3.54	3.85	4.40	4.91	5.40	5.88	6.83
.42	2.36	2.76	3.13	3.46	3.77	4.32	4.83	5.32	5.80	6.75
.43	2.29	2.68	3.05	3.38	3.69	4.24	4.76	5.25	5.73	6.67
.44	2.22	2.61	2.98	3.31	3.62	4.17	4.68	5.17	5.66	6.60
.45	2.15	2.55	2.91	3.24	3.55	4.10	4.61	5.11	5.59	6.54



II.) FLOW OVER TOP OF ROAD

SET TOP OF ROAD AT CULVERT CROWN PLUS 2.0 FT.

= (1783.3 FT + 2.0 FT)
= 1785.3 FT.

COMPUTE FLOW OVER TOP OF DAM AS:

$$Q = CLH^{3/2}$$

WHERE: C = COEFF. ≈ 3.3
L = WEIR LENGTH
H = HEAD OVER WEIR

ELEV. [FT.]	H [FT.]	* WEIR LENGTH [FT.]	Q [CFS]
* 1788.5	3.20	2400	45,337
1789.5	4.20	2400	68,171

III.) RATING CURVE

ELEV. [FT.]	FLOWS [CFS.]		
	CULVERT	ROAD	TOTAL
1775.0	1211	0	1211
1779.0	6108	0	6108
1783.3	14,201	0	14,201
1788.5	17,789	45,337	63,126
1789.5	18,707	68,171	86,878

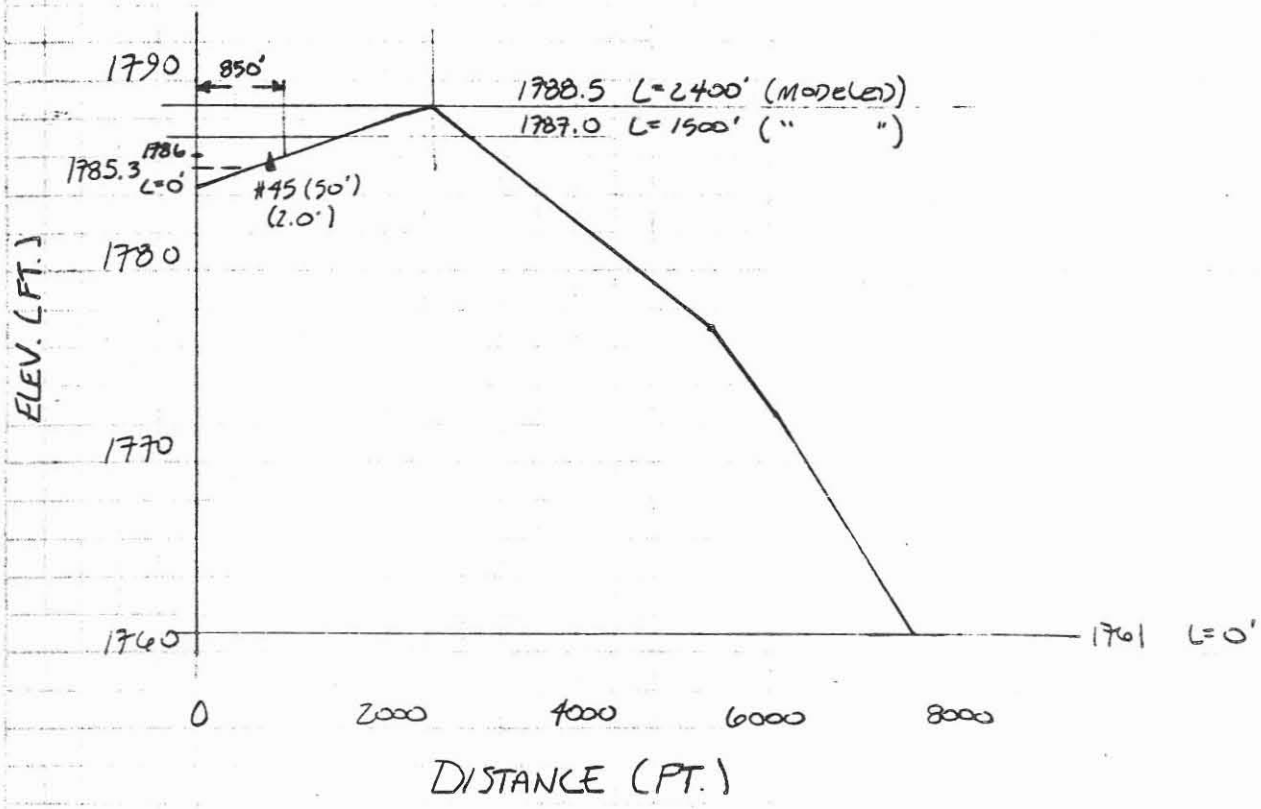
* REFER TO SHEET No. 14 FOR WEIR LENGTH DETERMINATIONS.

JMM JAMES M. MONTGOMERY, CONSULTING ENGINEERS, INC.

BY E. JUNOD DATE 4/21/87 CLIENT _____ SHEET 14 OF 14

CHKD. BY F. Dunn DESCRIPTION DAM OVERTOPPING INPUT HWY 60 ROUTING JOB NO. 1213.0020

SUB BASIN V10A



* THIS GRAPH DEPICTS THE ROADWAY, (HWY 60) WESTBOUND, PAVEMENT SURFACE. THE DATA POINTS WERE OBTAINED FROM AS-BUILT DRAWINGS OF HWY. 60 FROM ADOT.

∴ TOP OF DAM = CULVERT CROWN + 2.0 FT.
= (1783.3 + 2.0) FT.
= 1785.3 FT

∴ SPILLWAY ELEVATION = 1785.2 FT.

* EXAMPLE:

@ ELEV. = 1786.0

THE WOR LENGTH = 850' (HORIZONTAL PROJECTION)